

PROPOSED MODEL SAFETY EVALUATION FOR PLANT-SPECIFIC ADOPTION OF
TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER TSTF-545, REVISION 2,
“TS INSERVICE TESTING PROGRAM REMOVAL & CLARIFY SR USAGE RULE
APPLICATION TO SECTION 5.5 TESTING,”
USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS

1.0 INTRODUCTION

By letter dated [DATE], [LICENSEE] (the licensee) requested changes to the Technical Specifications (TS) for [PLANT] (Agencywide Documents Access and Management System (ADAMS) Accession No. xxxxxxxxxx). Specifically, the licensee requested to adopt U.S. Nuclear Regulatory Commission (NRC)-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications (STS) Change Traveler TSTF-545, Revision 2, “TS Inservice Testing [IST] Program Removal & Clarify [Surveillance Requirement] SR Usage Rule Application to Section 5.5 Testing” (ADAMS Accession No. ML15093A470), dated April 3, 2015.

The proposed change requests a revision to the TS to eliminate TS [5.5.7 or 5.5.8], “Inservice Testing Program.” A new defined term, “Inservice Testing Program (IST),” is requested to be added to TS Section 1.1, “Definitions.” Also, existing uses of the term “Inservice Testing Program” in the TS are requested to be capitalized throughout to indicate that it is now a defined term.

The licensee stated that the license amendment request is consistent with NRC-approved Traveler TSTF-545, Rev. 2. The availability of this TS improvement was announced in the *Federal Register* on [date (XX FR XXXX)] as part of the consolidated line item improvement process (CLIIP).

2.0 REGULATORY EVALUATION

2.1 Background

The purpose of TS [5.5.7 or 5.5.8], “Inservice Testing Program (IST),” is to provide a table defining some of the IST frequencies and to describe the relationship between the TS and the Inservice Testing requirements. Specifically, the purpose of TS [5.5.7 or 5.5.8] is to provide controls for inservice testing of American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 components including specific testing frequencies and exceptions to these frequencies.

2.2 Technical Specifications Changes

The proposed change requests the deletion of TS [5.5.7 or 5.5.8], “Inservice Testing Program (IST),” from the licensee’s TS. A new defined term, “Inservice Testing Program (IST),” is requested to be added to TS Section 1.1, “Definitions.” Also, existing uses of the term “Inservice Testing Program” in the TS are requested to be capitalized to indicate that it is now a defined term.

2.3 Regulatory Requirements, Licensing Information, Guidance Documents

As described in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.90, whenever a holder of an operating license desires to amend the license, application for an amendment must be filed with the Commission fully describing the changes desired, and following as far as applicable, the form prescribed for original applications. For TS, 10 CFR 50.36(a)(1) states that each applicant for an operating license shall include in the application proposed TS in accordance with the requirements of 10 CFR 50.36. Also, 10 CFR 50.36(a)(1) states that a summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the TS.

The categories of items required to be in the TS are provided in 10 CFR 50.36(c). As required by 10 CFR 50.36(c)(5), the TS will include items in the category of administrative controls, which are “the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner.”

Pursuant to 10 CFR 50.92(a), in determining whether an amendment to a license will be issued to the applicant, the Commission will be guided by the considerations which govern the issuance of initial licenses to the extent applicable and appropriate. The issuance of operating licenses is addressed by 10 CFR 50.57(a), and requires the Commission to find, among other things, that “[t]here is reasonable assurance (i) that the activities authorized by the operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations in this chapter.” It also requires a finding that “[t]he issuance of the license will not be inimical to the common defense and security or to the health and safety of the public.”

Per 10 CFR 50.36(b), each license authorizing operation of a utilization facility will include TS. The TS will be derived from the analyses and evaluations included in the safety analysis report, and amendments thereto, submitted pursuant to 10 CFR 50.34 (describing the technical information to be included in applications for an operating license). The Commission may include such additional TS as the Commission finds appropriate.

The NRC staff's guidance for review of the TS is in Chapter 16, “Technical Specifications,” of NUREG-0800, “Standard Review Plan,” Revision 3, dated March 2010 (ADAMS Accession No. ML100351425). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared STS (NUREG 1430 to NUREG 1434) for each of the light-water reactor nuclear steam supply systems (NSSSs) and associated balance-of-plant equipment systems. Accordingly, the NRC staff's review includes consideration of whether the proposed TS are consistent with the applicable reference TS (i.e., the current STS). Special attention is given to TS provisions that depart from the reference TS to determine whether proposed differences are justified by uniqueness in plant design or other considerations so that 10 CFR 50.36 is met.

Pursuant to 10 CFR 50.54, the applicable requirements of 10 CFR 50.55a are conditions in every nuclear power reactor operating license issued under 10 CFR Part 50. 10 CFR 50.55a(f) addresses IST and requires that systems and components of boiling and pressurized water-cooled nuclear power reactors must meet the requirements of the ASME Boiler and

Pressure Vessel (BPV) Code and ASME Code for Operation and Maintenance (OM) of Nuclear Power Plants as specified in 10 CFR 50.55a(f)(1) to (f)(6).

{NOTE: Based on the plant-specific permitting, keep the paragraph that applies and delete the ones that do not apply.}

Since [PLANT] was issued a construction permit (CP) in [DATE], the provisions of 10 CFR 50.55a(f)(1) apply, which state:

Inservice testing requirements for older plants (pre-1971 CPs). For a boiling or pressurized water-cooled nuclear power facility whose construction permit was issued prior to January 1, 1971, pumps and valves must meet the test requirements of paragraphs (f)(4) and (5) of this section to the extent practical. Pumps and valves that are part of the reactor coolant pressure boundary must meet the requirements applicable to components that are classified as ASME Code Class 1. Other pumps and valves that perform a function to shut down the reactor or maintain the reactor in a safe shutdown condition, mitigate the consequences of an accident, or provide overpressure protection for safety-related systems (in meeting the requirements of the 1986 Edition, or later, of the BPV or OM Code) must meet the test requirements applicable to components that are classified as ASME Code Class 2 or Class 3.

Since [PLANT] was issued a construction permit (CP) in [DATE], the provisions of 10 CFR 50.55(f)(2) apply, which state:

Design and accessibility requirements for performing inservice testing in plants with CPs issued between 1971 and 1974. For a boiling or pressurized water-cooled nuclear power facility whose construction permit was issued on or after January 1, 1971, but before July 1, 1974, pumps and valves that are classified as ASME Code Class 1 and Class 2 must be designed and provided with access to enable the performance of inservice tests for operational readiness set forth in editions and addenda of Section XI of the ASME BPV incorporated by reference in paragraph (a)(1)(ii) of this section (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147, Revision 17, or Regulatory Guide 1.192, Revision 1, that are incorporated by reference in paragraphs (a)(3)(ii) and (iii) of this section, respectively) in effect 6 months before the date of issuance of the construction permit. The pumps and valves may meet the inservice test requirements set forth in subsequent editions of this Code and addenda that are incorporated by reference in paragraph (a)(1)(ii) of this section (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147, Revision 17; or

Regulatory Guide 1.192, Revision 1, that are incorporated by reference in paragraphs (a)(3)(ii) and (iii) of this section, respectively), subject to the applicable conditions listed therein.

Since [PLANT] was issued a construction permit (CP) in [DATE], the provisions of 10 CFR 50.55 (f)(3) apply, which state:

Design and accessibility requirements for performing inservice testing in plants with CPs issued after 1974. For a boiling or pressurized water-cooled nuclear power facility whose construction permit under this part or design approval, design certification, combined license, or manufacturing license under part 52 of this chapter was issued on or after July 1, 1974:

(i)–(ii) [Reserved]

(iii) IST design and accessibility requirements: Class 1 pumps and valves. (A) Class 1 pumps and valves: First provision. In facilities whose construction permit was issued before November 22, 1999, pumps and valves that are classified as ASME Code Class 1 must be designed and provided with access to enable the performance of inservice testing of the pumps and valves for assessing operational readiness set forth in the editions and addenda of Section XI of the ASME BPV Code incorporated by reference in paragraph (a)(1)(ii) of this section (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147, Revision 17, or Regulatory Guide 1.192, Revision 1, that are incorporated by reference in paragraphs (a)(3)(ii) and (iii) of this section, respectively) applied to the construction of the particular pump or valve or the summer 1973 Addenda, whichever is later.

(B) Class 1 pumps and valves: Second provision. In facilities whose construction permit under this part, or design certification, design approval, combined license, or manufacturing license under part 52 of this chapter, issued on or after November 22, 1999, pumps and valves that are classified as ASME Code Class 1 must be designed and provided with access to enable the performance of inservice testing of the pumps and valves for assessing operational readiness set forth in editions and addenda of the ASME OM Code (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.192, Revision 1, that are incorporated by reference in paragraph (a)(3)(iii) of this section), incorporated by reference in paragraph (a)(1)(iv) of this section at the time the construction permit, combined license, manufacturing license, design certification, or design approval is issued.

(iv) IST design and accessibility requirements: Class 2 and 3 pumps and valves.

(A) Class 2 and 3 pumps and valves: First provision. In facilities whose construction permit was issued before November 22, 1999, pumps and valves that are classified as ASME Code Class 2 and Class 3 must be designed and be provided with access to enable the performance of inservice testing of the pumps and valves for assessing operational readiness set forth in the editions and addenda of Section XI of the ASME BPV Code incorporated by reference in paragraph (a)(1)(ii) of this section (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147, Revision 17, that are incorporated by reference in paragraph (a)(3)(ii) of this section) applied to the construction of the particular pump or valve or the Summer 1973 Addenda, whichever is later.

(B) Class 2 and 3 pumps and valves: Second provision. In facilities whose construction permit under this part, or design certification, design approval, combined license, or manufacturing license under part 52 of this chapter, issued on or after November 22, 1999, pumps and valves that are classified as ASME Code Class 2 and 3 must be designed and provided with access to enable the performance of inservice testing of the pumps and valves for assessing operational readiness set forth in editions and addenda of the ASME OM Code (or the optional ASME OM Code Cases listed in NRC Regulatory Guide 1.192, Revision 1, that are incorporated by reference in paragraph (a)(3)(iii) of this section), incorporated by reference in paragraph (a)(1)(iv) of this section at the time the construction permit, combined license, or design certification is issued.

(v) IST design and accessibility requirements: Meeting later IST requirements. All pumps and valves may meet the test requirements set forth in subsequent editions of codes and addenda or portions thereof that are incorporated by reference in paragraph (a) of this section, subject to the conditions listed in paragraph (b) of this section.

The NRC staff's guidance for functional design, qualification, and Inservice Testing Program for pumps, valves, and dynamic restraints is in Section 3.9.6 of NUREG-0800, "Standard Review Plan," Revision 3, dated March 2007 (ADAMS Accession No. ML070720041). As part of the review for the Inservice Testing Program for pumps, the staff will review the IST frequencies and test parameters. The frequency of IST and test parameters are acceptable if the provisions of Subsection ISTB-3000 of the OM Code are met. As described therein, the licensee's IST program is found to be acceptable if the program meets the requirements of the ASME Code, Section XI, or the ASME OM Code as incorporated by reference in 10 CFR 50.55a.

The NRC staff's guidance for compliance with the codes and standards in 10 CFR 50.55a is in Section 5.2.1.1 of NUREG-0800, Rev. 3, dated March 2007 (ADAMS Accession No. ML070040003). As stated therein, acceptance criteria are based in part on meeting 10 CFR 50.55a.

The NRC staff's guidance for review of inservice inspection and testing of Class 2 and Class 3 components is in Section 6.6 of NUREG-0800, Revision 2, dated March 2007 (ADAMS Accession No. ML070550071). As stated therein, acceptance criteria are based on meeting the relevant parts of 10 CFR 50.55a as it pertains to the specification of the preservice and periodic inspection and testing requirements of the ASME Code for Class 2 and 3 systems and components.

3.0 TECHNICAL EVALUATION

To review the license amendment request, the NRC staff considered generally the guidance on acceptance criteria of the SRP sections described in Section 2.3 of this safety evaluation, and, in particular, the acceptance criteria in Chapter 16, "Technical Specifications," of NUREG-0800, Revision 3. Additionally, the NRC staff evaluated the proposed changes to the TS against what is required to be in the TS under 10 CFR 50.36(c)(5).

Last, while recognizing that the amendment request did not reduce what is required by 10 CFR 50.54 and 50.55a, the NRC staff surveyed what requirements concerning inservice testing would remain in the license if the NRC staff deleted the inservice testing program from the administrative controls section of the TS. As explained below, the NRC staff concluded that no additional license requirements beyond those imposed by 10 CFR 50.54 and 50.55a were necessary.

3.1 Requested Changes

The licensee proposed to delete TS [5.5.7 or 5.5.8], "Inservice Testing Program (IST)," which currently states:

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program shall include the following:

- a. Testing frequencies applicable to the ASME Code for Operations and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as follows:

ASME OM Code and applicable Addenda terminology for Inservice testing activities	Required Frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days

Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

- b. The provisions of SR 3.0.2 are applicable to the above required Frequencies and to other normal and accelerated Frequencies specified as 2 years or less in the Inservice Testing Program for performing inservice testing activities,
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities, and
- d. Nothing in the ASME OM Code shall be construed to supersede the requirements of any TS.

In addition, the existing references to the IST Program are requested to be revised to reference a new TS Section 1.1 defined term, "Inservice Testing Program (IST)," which states: "The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f)." This change in capitalization of the term is also requested to be made throughout the TS as referenced.

3.2 Assessment of Requested Deletion of TS [5.5.7 or 5.5.8] Inservice Testing Program

Presently, TS [5.5.7 or 5.5.8], "Inservice Testing Program (IST)," addresses inservice testing through four items. First, TS [5.5.7a or 5.5.8a] describes how to interpret monthly, quarterly, and other time periods used in testing. Second, TS [5.5.7b or 5.5.8b] describes when a licensee can avail itself of the provisions of SR 3.0.2 and thereby change the required testing schedule. Third, TS [5.5.7c or 5.5.8c] allows usage of SR 3.0.3, which describes how a licensee is to treat a situation where it discovers that a surveillance requirement was not performed within its specified frequency. Last, TS [5.5.7d or 5.5.8d] states that nothing in the ASME OM Code shall be construed to supersede the requirements of any TS.

Historically, TS [5.5.7 or 5.5.8] was added to the STS in Revision 0. Although it added operational flexibility, TS [5.5.7 or 5.5.8] was not added based upon a determination that it was necessary to assure operation of the facility in a safe manner. The NRC staff has not identified any possibility for operation in an unsafe manner based upon the deletion of the TS.

Furthermore, the NRC staff notes that the licensee's IST, which is required by 10 CFR 50.54 and 50.55a(f), and which is outside the scope of this amendment request, already contains requirements and considerations similar to those of TS [5.5.7 or 5.5.8]. First, the NRC staff finds that the proposed deletion of TS [5.5.7a or 5.5.8a] is acceptable on the basis that each licensee has its self-contained IST program developed and implemented in accordance with the requirements of the ASME OM Code. Including testing frequencies and TS [5.5.7a or 5.5.8a] is duplicative of the requirements in the ASME OM Code as required by 10 CFR 50.55a(f). Second, contrary to TS [5.5.7b or 5.5.8b], the NRC regulations and ASME OM Code did not

make available test allowances similar to SR 3.0.2. Therefore, the NRC staff finds the proposed deletion of TS [5.5.7b or 5.5.8b] acceptable on the basis that the changes eliminate the conflict between TS and IST program, as required by 10 CFR 50.55a and the ASME OM Code, and are in compliance with 10 CFR 50.55a(f)(5)(ii). Third, contrary to TS [5.5.7c or 5.5.8c], the NRC regulations and ASME OM Code do not make available test delays similar to SR 3.0.3. Therefore, the NRC staff finds the proposed deletion of TS [5.5.7c or 5.5.8c] acceptable on the basis that the changes eliminate an inconsistency between TS and IST program with regard to test delays and are in conformance with 10 CFR 50.55a(f)(5)(ii). Last, concerning any conflict between IST Code requirements and TS, 10 CFR 50.55a(f)(5)(ii) already specifies that, if a revised inservice test program for a facility conflicts with the TS, then the licensee must apply for an appropriate amendment.

3.2 Addition of Defined Term in TS Section 1.1

A new defined term, "Inservice Testing Program (IST)," is requested to be added to TS Section 1.1, "Definitions." It states, "The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f)." In addition, the existing uses of the term "Inservice Testing Program" are requested to be capitalized throughout the TS to indicate that it is a defined term. The NRC staff finds the proposed addition of the defined term, "Inservice Testing Program (IST)," acceptable on the basis that it is consistent with the format of the licensee's TS. Although the change is insignificant in terms of any actual changes to how the plant operates, the change maintains consistency throughout the TS. Accordingly, the requested change is consistent with the guidance of Chapter 16, "Technical Specifications," of NUREG-0800, "Standard Review Plan," Revision 3, dated March 2010 (ADAMS Accession No. ML100351425).

4.0 STATE CONSULTATION

{NOTE: Per LIC-101, the PM is responsible for contacting the state official and completing the bracketed information appropriately.}

In accordance with the Commission's regulations, the [Name of State] State official was notified of the proposed issuance of the amendment. The State official had [no] comments. [If comments were provided, they should be addressed here].

5.0 ENVIRONMENTAL CONSIDERATION

{NOTE: Caution per LIC-101: The environmental consideration discussed below is written for a categorical exclusion based on 10 CFR 51.22(c)(9). The PM is responsible to ensure that this is accurate for the specific amendment being issued.}

The amendment changes requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 or changes SRs. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment

involves no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on [date (XX FR XXXX)]. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

{NOTE: the PM is responsible for ensuring the current LIC-101 wording is used.}

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations; and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES [Optional section to be prepared by the PM or primary reviewers.]

Principal Contributor: [Model SE prepared by C. Tilton]

Date: September 9, 2015

ATTACHMENT

PROPOSED CHANGES TO THE STANDARD TECHNICAL SPECIFICATIONS BASES

This attachment documents the NRC staff's bases for accepting the proposed changes to the Standard Technical Specifications (STS) Bases provided in Technical Specifications Task Force (TSTF) STS Change Traveler TSTF-545, Revision 2, "TS Inservice Testing [IST] Program Removal & Clarify [Surveillance Requirement] SR Usage Rule Application to Section 5.5 Testing" (ADAMS Accession No. ML15093A470), dated April 3, 2015. Plant-specific safety evaluations will not include this attachment.

In addition to the changes described in the Model Safety Evaluation, Traveler TSTF-545, Revision 2, proposed changes to the SR 3.0.2 and SR 3.0.3 STS Bases to clarify the application of these usage rules to testing required by the specifications in STS Section 5.5, "Programs and Manuals." The SR 3.0.2 STS Bases are also revised to clarify the application of SR 3.0.2 to inservice tests.

In reviewing the proposed TSTF-545, Revision 2, the NRC staff reviewed the history behind the development of the STS chapters to determine if unintended consequences were created when Section 3.0, "Surveillance Requirement Applicability," provisions were made applicable to Section 5.0. The NRC staff agrees that tests performed as part of the IST Program have specific restrictions in place for applying SR 3.0.2 and SR 3.0.3, as discussed in Section 3.2 of the model safety evaluation. However, the original versions (Revision 0, September 1992) of the STS, NUREG-1430, "Standard Technical Specifications Babcock and Wilcox Plants," NUREG-1431, "Standard Technical Specifications Westinghouse Plants," NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants," NUREG 1433, "Standard Technical Specifications General Electric Plants BWR/4," and NUREG-1434, "Standard Technical Specifications General Electric Plants, BWR/6," all had various programs under Section 5.0 where the NRC staff-approved the application of SR 3.0.2 and/or SR 3.0.3 to tests conducted under those programs, even though the tests were not associated with a limiting condition for operation or an SR. These programs include: "Pre-Stressed Concrete Containment Tendon Surveillance Program," "Steam Generator Tube Surveillance Program," "Ventilation System Testing Program," and "Explosive Gas and Storage Tanks Radioactivity Monitoring Program." While the language of SR 3.0.2 and SR 3.0.3 does not seem to be applicable to tests that are not related to Section 3 SRs, it is evident that the NRC staff always intended the flexibility allowed by SR 3.0.2 and SR 3.0.3 be applied to testing conducted under these STS Section 5.0 programs, and that the misapplication was limited to the IST Program.

Accordingly, TSTF-545, Revision 2, proposes to modify the STS Bases for SR 3.0.2 and SR 3.0.3 to reflect how the NRC staff expects SR 3.0.2 and SR 3.0.3 to be used by the licensee when referenced in the Administrative Controls Program section of its TS. These STS Bases changes are acceptable. Since these STS Bases changes reflect both the NRC staff's and industry's original understanding of how SR 3.0.2 and SR 3.0.3 are applied in Section 5.0 programs, the changes simply represent a clarification of meaning, and are not a change in the TS requirement itself.

ATTACHMENT