

March 22, 2022

TSTF-22-04  
PROJ0753Attn: Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: Transmittal of TSTF-591, Revision 0, "Revise Risk Informed Completion Time (RICT) Program"

Enclosed for NRC review is TSTF-591, Revision 0, "Revise Risk Informed Completion Time (RICT) Program."

The following information is provided to assist the NRC staff in prioritizing their review of TSTF-591:

- **Applicability:** TSTF-591 is applicable to all Pressurized Water Reactor and Boiling Water Reactor plants that have adopted TSTF-505, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b."
- **Classification:** TSTF-591 revises the Risk Informed Completion Time Program," to reference Regulatory Guide (RG) 1.200, Revision 3, instead of Revision 2, and to make other changes.
- **Specialized Resource Availability:** TSTF-591 is a high priority change. The TSTF requests that TSTF-591 be reviewed within 12 months and be made available for adoption under the Consolidated Line Item Improvement Process (CLIIP).

The Technical Specifications Task Force should be billed for the review of the traveler.

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



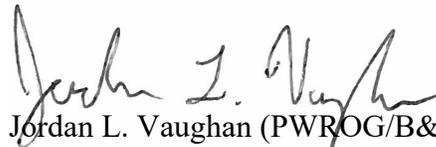
Andrew M. Richards, Jr. (PWROG/W)



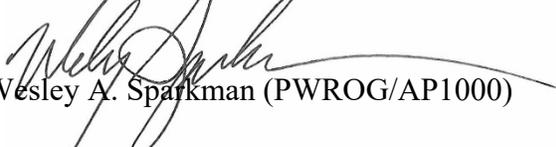
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cc: Michelle Honcharik, Technical Specifications Branch  
Victor Cusumano, Technical Specifications Branch

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## Technical Specifications Task Force Improved Standard Technical Specifications Change Traveler

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### Revise Risk Informed Completion Time (RICT) Program

NUREGs Affected:  1430  1431  1432  1433  1434  2194

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Classification: 1) Technical Change

Recommended for CLIP?: Yes

Correction or Improvement: Improvement

NRC Fee Status: Not Exempt

Benefit: Prevents Unnecessary Actions

Changes Marked on ISTS Rev 5.0

PWROG RISD & PA (if applicable): PA-LSC-1922

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See attached.

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### Revision History

#### OG Revision 0

**Revision Status: Active**

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Revision Proposed by: TSTF

Revision Description:  
Original Issue

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#### Owners Group Review Information

Date Originated by OG: 07-Oct-21

Owners Group Comments  
(No Comments)

Owners Group Resolution: Approved Date: 22-Oct-21

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#### TSTF Review Information

TSTF Received Date: 07-Mar-22

Date Distributed for Review 07-Mar-22

TSTF Comments:  
(No Comments)

TSTF Resolution: Approved

Date: 22-Mar-22

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#### NRC Review Information

NRC Received Date: 22-Mar-22

NRC Comments:

The TSTF provided a draft of TSTF-591 to the NRC in November 2021, and the NRC and TSTF held a teleconference on January 26, 2022, to discuss the draft. The NRC had three comments:

1. The NRC was concerned that the term "approaches" in the proposed paragraph e could be confusing as the term is used differently in RG 1.200, Rev. 3. The TSTF worked with industry PRA experts to revise paragraph e. to no longer use that term.

2. The NRC emphasized that newly developed methods with open findings on the method could not be

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22-Mar-22

**OG Revision 0****Revision Status: Active**

used. The industry stated that is in the committed guidance. However, a new paragraph was added as the penultimate paragraph in Section 3.1 of the traveler justification emphasizing that the endorsed guidance does not permit the use of newly developed methods with open peer review findings without prior NRC approval.

3.The NRC is still considering the time frame for submittal of the report. The industry and NRC agreed that submittal of the traveler did not need to wait on this issue, and it can be resolved during NRC review.

On February 2, 2022, the NRC made public an internal memorandum titled, "Staff Response to Nuclear Energy Institute's Proposed Technical Specification Changes Associated with the Use of Newly Developed Methods for Risk-Informed Completion Times." The memorandum provided recommended wording for the TS Risk Informed Completion Time Program that differed slightly from the 2021 NRC recommendation. To facilitate the NRC's review of the traveler, Appendix A of the traveler was revised to compare the travelers' proposed wording to both the NRC's 2021 and 2022 proposals.

**Affected Technical Specifications**

5.5.20	Risk Informed Completion Time Program	NUREG(s)- 1430 1431 1432 Only
5.6.8	Risk Informed Completion Time (RICT) Program Upgrade Report	NUREG(s)- 1430 1431 1432 Only
5.5.17	Risk Informed Completion Time Program	NUREG(s)- 1433 1434 Only
5.6.6	Risk Informed Completion Time (RICT) Program Upgrade Report	NUREG(s)- 1433 Only
5.6.7	Risk Informed Completion Time (RICT) Program Upgrade Report	NUREG(s)- 1434 Only

22-Mar-22

## 1. SUMMARY DESCRIPTION

The proposed change revises the Technical Specifications (TS) Section 5.5 Program, "Risk Informed Completion Time Program," to reference Regulatory Guide (RG) 1.200, Revision 3, instead of Revision 2, and to make other changes. A new report is added to TS Section 5.6, "Reporting Requirements," to inform the NRC of the use of newly developed probabilistic risk assessment (PRA) methods to calculate a Risk Informed Completion Time (RICT). The proposed change affects the Standard Technical Specifications (STS) in NUREG-1430, NUREG-1431, NUREG-1432, NUREG-1433, and NUREG-1434<sup>1</sup>.

## 2. DETAILED DESCRIPTION

### 2.1. Current Technical Specifications Requirements

The Risk Informed Completion Time Program (RICT Program) was added by TSTF-505, Revision 2, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18183A493), which was approved by the Nuclear Regulatory Commission (NRC) on November 21, 2018 (ADAMS Accession No. ML18269A041).

Paragraph e of the RICT Program, states:

The risk assessment approaches and methods shall be acceptable to the NRC. The plant PRA shall be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant, as specified in Regulatory Guide 1.200, Revision 2. Methods to assess the risk from extending the Completion Times must be PRA methods used to support this license amendment, or other methods approved by the NRC for generic use; and any change in the PRA methods to assess risk that are outside these approval boundaries require prior NRC approval.

### 2.2. Reason for the Proposed Change

Prior to the approval of TSTF-505, Revision 2, the NRC and the industry agreed that some terms used in Paragraph e of the RICT Program, such as, "approaches," "methods," and "approved by NRC for generic use," were not well defined. As a result, the TS requirements were unclear regarding when prior NRC approval would be needed in order to use a new or different method or approach. However, many licensees were anxious to submit license amendment requests (LARs) based on TSTF-505, Revision 2, and the industry and NRC agreed that the NRC should

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<sup>1</sup> NUREG-1430 provides the STS for Babcock & Wilcox plant designs.

NUREG-1431 provides the STS for Westinghouse plant designs.

NUREG-1432 provides the STS for Combustion Engineering plant designs.

NUREG-1433 provides the STS for BWR/4 plant designs, but is also representative of the BWR/2, BWR/3, and, in this case, BWR/5 design.

NUREG-1434 provides the STS for BWR/6 plant designs, and is representative, in some cases, of the BWR/5 plant design.

approve Revision 2 and the industry and NRC would continue to work on clarification of Paragraph e.

The industry and NRC held a series of public meetings and teleconferences in 2019, 2020, and 2021 discussing changes to Paragraph e. In late 2020, the NRC determined that the revised language should reference RG 1.200, Revision 3, which was under development. RG 1.200, Revision 3, was issued in December 2020. In January 2021 the industry proposed wording for Paragraph e that referenced RG 1.200, Revision 3.

In April 2021 the NRC proposed a different TS reference to RG 1.200, Revision 3. The industry responded in May 2021. A teleconference was held with the NRC on June 3, 2021, and the NRC suggested that the industry submit a TSTF traveler with the proposed revisions to the RICT Program and the associated reporting requirement in order to facilitate closure of the issue.

### **2.3. Description of the Proposed Change**

The RICT Program is Specification 5.5.20 in NUREG-1430, NUREG-1431, and NUREG-1432, Revision 5, and Specification 5.5.17 in NUREG-1433 and NUREG-1434, Revision 5. Paragraph e of the RICT Program is replaced with the following:

- e. A RICT calculation must include the following hazard groups: [list specific hazards and the associated PRA models or alternate means of assessing the hazard for each applicable hazard group approved by NRC. For example, internal flood and internal events PRA model, internal fire PRA model, and seismic penalty factor]. Changes to these means of assessing the hazard groups require prior NRC approval.

New paragraphs f and g are added that state:

- f. The PRA models used to calculate a RICT shall be maintained and upgraded in accordance with the processes endorsed in the regulatory positions of Regulatory Guide 1.200, Revision 3, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities."
- g. A report shall be submitted in accordance with Specification 5.6.[X] before a newly developed method is used to calculate a RICT.

A new reporting requirement is added to TS Section 5.6, "Reporting Requirements." The new report is Specification 5.6.8 in NUREG-1430, NUREG-1431, and NUREG-1432; Specification 5.6.6 in NUREG-1433; and Specification 5.6.7 in NUREG-1434. It states:

#### **5.6.[8] Risk Informed Completion Time (RICT) Program Upgrade Report**

A report describing newly developed methods and their implementation must be submitted following a probabilistic risk assessment (PRA) upgrade associated with newly developed methods and prior to the first use of those methods to calculate a RICT. The report shall include:

- a. The PRA models upgraded to include newly developed methods;

- b. A description of the acceptability of the newly developed methods consistent with Section 5.2 of PWROG-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer Review;"
- c. Any open findings from the peer-review of the implementation of the newly developed methods and how those findings were dispositioned; and
- d. All changes to key assumptions related to newly developed methods or their implementation.

Both the RICT Program and the RICT Program Upgrade Report are bracketed in the Standard Technical Specifications (STS), indicating that the specifications only apply to licensees that have adopted TSTF-505 by license amendment.

A model application is attached. The model may be used by licensees desiring to adopt the traveler following NRC approval.

### **3. TECHNICAL EVALUATION**

#### **3.1. Change From Referencing RG 1.200, Revision 2, To Revision 3**

The primary change in this traveler is to replace a requirement to maintain and upgrade the PRA in accordance with RG 1.200, Revision 2, with a reference to RG 1.200, Revision 3.

RG 1.200, Revision 3, was issued in December 2020 and addresses new industry guidance and issues identified since Revision 2 was issued. Specifically, Revision 3:

- Endorses, with staff exceptions and clarifications, the requirements in ASME/ANS RA-S Case 1, "Case for ASME/ANS RA-Sb-2013 Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment of Nuclear Power Plant Applications," dated November 22, 2017;
- Endorses Nuclear Energy Institute (NEI) 17-07, Revision 2, "Performance of PRA Peer Reviews Using the ASME/ANS PRA Standard," issued August 2019;
- Endorses the following portions of the Pressurized Water Reactor Owners Group (PWROG) report, PWROG-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer Review," issued July 2020:
  - Requirements for the peer review of newly developed methods;
  - Process for determining whether a change to a PRA is classified as PRA maintenance or a PRA upgrade;
  - Definitions related to newly developed methods, PRA maintenance, and PRA upgrade.
- Enhances guidance related to key assumptions and sources of uncertainty;

- Provides a glossary of key terms; and
- Provides a list of hazards to be considered in the development and use of PRA.

A significant improvement in RG 1.200, Revision 3, is the inclusion of guidance that enables peer-reviewers to evaluate newly developed methods. NEI 17-07, Revision 2, discusses peer review of PRA upgrades that include newly develop methods.

These changes permit licensees to revise their PRA models used to calculate a RICT to incorporate most newly developed methods in accordance with the requirements of the ASME/ANS PRA Standard without prior NRC approval, while giving the NRC oversight capability. The documents endorsed in RG 1.200, Rev. 3, provide clear definitions of what constitutes a PRA method and what is a newly developed method (NDM) (i.e., a method that has been developed separately from a state-of-practice method or that involves a fundamental change to a state-of-practice model). RG 1.200 Regulatory Position C.2.2.2.2, states "An acceptable approach to performing a peer review for an NDM is the guidance in NEI 17-07, Revision 2. In particular, NEI 17-07, Revision 2, states, in part, that, if an NDM is deemed not technically acceptable in the NDM peer review report, or if at least one finding-level F&O [facts and observations] on the NDM remain open, a licensee or applicant may not use it in a PRA supporting risk-informed licensing applications. If open finding-level F&Os from an NDM peer review cannot be successfully closed via an NRC-endorsed peer review process, the NDM could be submitted to the NRC to determine the acceptability of the NDM. Submitted applications that use NDMs with open finding-level F&Os related to the NDM will be subject to review by the NRC to determine acceptability of the NDM, its implementation in the PRA, and its potential impact on the application." Therefore, an NDM with open finding-level F&Os cannot be used by a licensee without prior NRC approval. The licensee's implementation of the NDM may have open finding-level F&Os, but those finding-level F&Os must be dispositioned, as described in Section 3.3.

The proposed TS requirements ensure that changes to the PRA models used in the RICT program, including changes involving newly-developed methods, are properly evaluated. To provide the NRC with oversight, a required report will be submitted to the NRC when a newly developed method is used in the RICT Program.

### **3.2. RICT Program Changes**

The current RICT Program, Paragraph e, begins by stating, "The risk assessment approaches and methods shall be acceptable to the NRC." It also states, "Methods to assess the risk from extending the Completion Times must be PRA methods used to support this license amendment, ... and any change in the PRA methods to assess risk that are outside these approval boundaries require prior NRC approval." These sentences are replaced because the phrases, "risk assessment approaches and methods," "this license amendment," and "outside these approval boundaries," are undefined or unclear when used within a plant's TS.

The proposed Paragraph e states, "A RICT calculation must include the following hazard groups: [list specific hazards and the associated PRA models or alternate means of assessing the hazard for each applicable hazard group approved by NRC. For example, internal flood and internal

events PRA model, internal fire PRA model, and seismic penalty factor]. Changes to these means of assessing the hazard groups require prior NRC approval." The proposed requirement clearly states the types of changes that require prior NRC approval. For example, if a licensee's TSTF-505 submittal described a Seismic Margins Analysis used to calculate a RICT and the licensee desires to use a seismic PRA, prior NRC approval is required. The proposed TS encompass the current Paragraph e requirements that the PRA models must be acceptable to the NRC, that they must be those used to support the TSTF-505 license amendment, and that prior NRC approval is needed to change those models.

The Paragraph e phrase, "other methods approved by the NRC for generic use" is deleted. There is no established regulatory process for the NRC to approve a PRA method for generic use.

The current RICT Program, Paragraph e, states, "The plant PRA shall be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant, as specified in Regulatory Guide 1.200, Revision 2." It is replaced by a new Paragraph f which states, "The PRA models used to calculate a RICT shall be maintained and upgraded in accordance with the processes endorsed in the regulatory positions of Regulatory Guide 1.200, Revision 3, 'Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities'." The reference to the "as-built, as-operated, and maintained plant," is unnecessary because it is incorporated in RG 1.200, Revision 3. RG 1.200, Revision 3, Staff Regulatory Position C.1, states, "The base PRA serves as the foundational representation of the as-built and as-operated plant necessary to support an application." The term "maintained" does not appear in RG 1.200, Rev. 3, in this context and is not necessary because "maintained" is encompassed within "as-operated." The proposed change refers to the regulatory positions in RG 1.200, Revision 3. RG 1.200, Revision 3, contains other information that does not convey the regulatory positions; which are only contained in Section C of the RG.

Separating the proposed Paragraph f from Paragraph e conveys meaning. The proposed Paragraph e describes when prior NRC approval is required. The proposed Paragraph f describes PRA model maintenance and upgrade in accordance with RG 1.200, Rev. 3, which does not typically require prior NRC approval.

As described in Section 3.1, Revision 3 of RG 1.200 discusses the use of newly developed methods. If a licensee uses a newly developed method in the RICT Program, a report is required to be submitted to the NRC. Paragraph g requires the report and references a new reporting requirement in Section 5.6, of the TS.

### **3.3. Addition of a TS Reporting Requirement**

The proposed change adds a new reporting requirement to Section 5.6 of the TS titled, "Risk Informed Completion Time (RICT) Program Upgrade Report." The report is required to be submitted by the Section 5.5 RICT Program if a newly developed method is to be used. The details of the reporting requirement are in Section 5.6.

The proposed report must be submitted following a PRA upgrade associated with a newly developed method and prior to using that method to calculate a RICT.

The proposed report must include:

- The PRA models upgraded to include newly developed methods;
- A description of the acceptability of the newly developed methods consistent with Section 5.2 of PWROG-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer Review;"
- Any open findings from the peer-review of the implementation of the newly developed methods and how those findings were dispositioned; and
- All changes to key assumptions related to newly developed methods or their implementation.

In accordance with Title 10 of the Code of Federal Regulations, Part 50.4, all reports from a licensee to the Nuclear Regulatory Commission must be sent to the Document Control Desk using the specified address.

### **3.4. Comparison to NRC Proposals**

In April 2021 the NRC provided proposed TS wording referencing RG 1.200, Revision 3, for industry comment. In February 2022, the NRC provided an alternate recommendation (ADAMS Accession No. ML19226A207). Appendix A provides a comparison of the NRC's proposals to the proposed traveler.

## **4. REGULATORY EVALUATION**

The regulation at Title 10 of the Code of Federal Regulations (10 CFR) Section 50.36(b) requires:

Each license authorizing operation of a ... utilization facility ... will include technical specifications. The technical specifications will be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto, submitted pursuant to [10 CFR] 50.34 ["Contents of applications; technical information"]. The Commission may include such additional technical specifications as the Commission finds appropriate.

Per 10 CFR 50.90, whenever a holder of a 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.

Per 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.

Section IV, "The Commission Policy," of the "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (58FR39132), dated July 22, 1993, states in part that improved STS have been developed and will be maintained for each NSSS

owners group. The Commission Policy encourages licensees to use the improved STS as the basis for plant-specific Technical Specifications." The industry's proposal of travelers and the NRC's approval of travelers is the method used to maintain the improved STS as described in the Commission's Policy. Following NRC approval, licensees adopt travelers into their plant-specific technical specifications following the requirements of 10 CFR 50.90. Therefore, the traveler process facilitates the Commission's policy while satisfying the requirements of the applicable regulations.

The regulation at 10 CFR 50.36(a)(1) also requires the application to include a "summary statement of the bases or reasons for such specifications, other than those covering administrative controls." The proposed traveler does not affect the Bases and, therefore, does not affect compliance with 10 CFR 50.36(a)(1).

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

## **5. REFERENCES**

1. TSTF-505, Revision 2, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b," July 2, 2018, NRC ADAMS Accession No. ML18183A493.
2. Final Revised Model Safety Evaluation of Traveler TSTF-505, Revision 2, "Provide Risk-Informed Extended Completion Times – RITSTF Initiative 4b," November 21, 2018, ADAMS Accession No. ML18269A041.
3. Regulatory Guide 1.200, Revision 3, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities," December 2020.

**Model Application**

[DATE]

10 CFR 50.90

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

DOCKET NO.PLANT NAME

[50]-[xxx]

SUBJECT: Application to Revise Technical Specifications to Adopt  
TSTF-591, "Revise Risk Informed Completion Time (RICT)  
Program"

Pursuant to 10 CFR 50.90, [LICENSEE] is submitting a request for an amendment to the Technical Specifications (TS) for [PLANT NAME, UNIT NOS.].

[LICENSEE] requests adoption of TSTF-591, "Revise Risk Informed Completion Time (RICT) Program," which is an approved change to the Standard Technical Specifications (STS), into the [PLANT NAME, UNIT NOS] TS. TSTF-591 revises the Technical Specifications (TS) Section 5.5 Program, "Risk Informed Completion Time Program," to reference Regulatory Guide (RG) 1.200, Revision 3, instead of Revision 2, and to make other changes. A new report is added to TS Section 5.6, "Reporting Requirements," to inform the NRC of newly developed methods used to calculate a RICT.

The enclosure provides a description and assessment of the proposed changes. Attachment 1 provides the existing TS pages marked to show the proposed changes. Attachment 2 provides revised (clean) TS pages. The proposed change does not affect the TS Bases.

[LICENSEE] requests that the amendment be reviewed under the Consolidated Line Item Improvement Process (CLIIP). Approval of the proposed amendment is requested within 6 months of completion of the NRC's acceptance review. Once approved, the amendment shall be implemented within [90] days.

There are no regulatory commitments made in this application.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated [STATE] Official.

If you should have any questions regarding this submittal, please contact [NAME, TELEPHONE NUMBER].

[In accordance with 10 CFR 50.30(b), a license amendment request must be executed in a signed original under oath or affirmation. This can be accomplished by attaching a notarized affidavit confirming the signature authority of the signatory, or by including the following statement in the cover letter: "I declare under penalty of perjury that the foregoing is true and correct.

Executed on (date)." The alternative statement is pursuant to 28 USC 1746. It does not require notarization.]

Sincerely,

[Name, Title]

Enclosure: Description and Assessment

Attachments: 1. Proposed Technical Specification Changes (Mark-Up)  
2. Revised Technical Specification Pages

[The attachments are to be provided by the licensee and are not included in the model application.]

cc: NRC Project Manager  
NRC Regional Office  
NRC Resident Inspector  
State Contact

## ENCLOSURE

## DESCRIPTION AND ASSESSMENT

## 1.0 DESCRIPTION

[LICENSEE] requests adoption of TSTF-591, "Revise Risk Informed Completion Time (RICT) Program," which is an approved change to the Standard Technical Specifications (STS), into the [PLANT NAME, UNIT NOS] TS. TSTF-591 revises the Technical Specifications (TS) Section 5.5 Program, "Risk Informed Completion Time Program," to reference Regulatory Guide (RG) 1.200, Revision 3, instead of Revision 2, and to make other changes. A new report is added to TS Section 5.6, "Reporting Requirements," to inform the NRC of newly developed methods used to calculate a RICT.

## 2.0 ASSESSMENT

## 2.1 Applicability of Safety Evaluation

[LICENSEE] has reviewed the safety evaluation for TSTF-591 provided to the Technical Specifications Task Force in a letter dated [DATE]. This review included the NRC staff's evaluation, as well as the information provided in TSTF-591. [LICENSEE] has concluded that the justifications presented in TSTF-591 and the safety evaluation prepared by the NRC staff are applicable to [PLANT, UNIT NOS.] and justify this amendment for the incorporation of the changes to the [PLANT] TS.

## 2.2 Variations

[LICENSEE is not proposing any variations from the TS changes described in TSTF-591 or the applicable parts of the NRC staff's safety evaluation.] [LICENSEE is proposing the following variations from the TS changes described in TSTF-591 or the applicable parts of the NRC staff's safety evaluation:]

[The [PLANT] TS utilize different [numbering][and][titles] than the STS on which TSTF-591 was based. Specifically, [describe differences between the plant-specific TS numbering and/or titles and the TSTF-591 numbering and titles.] These differences are administrative and do not affect the applicability of TSTF-591 to the [PLANT] TS.]

[The [PLANT] TS contain requirements that differ from the STS on which TSTF-591 was based but are encompassed in the TSTF-591 justification. [Describe differences and why TSTF-591 is still applicable.]

[The [PLANT] Risk Informed Completion Time Program, Paragraph e, is different from the TSTF-505, Revision 2, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b," wording used as the starting point in TSTF-591. These differences do not affect the applicability of the proposed change.]

[The [PLANT] license contains a condition that serves the same purpose as Paragraph e in TSTF-505, Revision 2, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative

4b." [LICENSEE] proposes to remove the license condition and to insert the proposed Paragraph e of the Risk Informed Completion Time Program. [Describe the differences between the license condition and the TSTF-505, Revision 2, Paragraph e and why they do not affect the applicability of TSTF-591.]

### 3.0 REGULATORY ANALYSIS

#### 3.1 No Significant Hazards Consideration Analysis

[LICENSEE] requests adoption of TSTF-591, "Revise Risk Informed Completion Time (RICT) Program," which is an approved change to the Standard Technical Specifications (STS), into the [PLANT NAME, UNIT NOS] Technical Specifications (TS). TSTF-591 revises the Technical Specifications (TS) Section 5.5 Program, "Risk Informed Completion Time Program," to reference Regulatory Guide (RG) 1.200, Revision 3, instead of Revision 2, and to make other changes. A new report is added to TS Section 5.6, "Reporting Requirements," to inform the NRC of newly developed methods used to calculate a RICT.

[LICENSEE] has evaluated if a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change updates the standard for maintaining and updating PRA models used to calculate a RICT from NRC-approved Regulatory Guide 1.200, Revision 2, to NRC-approved Regulatory Guide 1.200, Revision 3. A new report is added to inform the NRC when a newly developed method is used.

The proposed change does not involve a significant increase in the probability of an accident previously evaluated because the change involves no change to the plant or its modes of operation. The proposed change does not increase the consequences of an accident because the design-basis mitigation function of the affected systems is not changed and the consequences of an accident during the extended Risk Informed Completion Time are no different from those during the existing Completion Time. The submittal of information-only reports has no effect on the initiators or consequences of any accidents previously evaluated.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed change updates the standard for maintaining and updating PRA models used to calculate a RICT from NRC-approved Regulatory Guide 1.200, Revision 2, to NRC-approved Regulatory Guide 1.200, Revision 3. A new report is added to inform the NRC when a newly developed method is used.

The proposed change does not change a design function or method of operation of the plant. The proposed change does not involve a physical alteration of the plant (no new or different kind of equipment will be installed).

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No

The proposed change updates the standard for maintaining and updating PRA models used to calculate a RICT from NRC-approved Regulatory Guide 1.200, Revision 2, to NRC-approved Regulatory Guide 1.200, Revision 3. A new report is added to inform the NRC when a newly developed method is used.

The proposed change supports the extension of Completion Times provided risk is assessed and managed in accordance with the NRC-approved RICT Program. The proposed change does not alter any design basis or safety limits. The proposed change affects the standard used to maintain the PRA models used in the RICT Program by changing from one NRC-approved standard to a later NRC-approved version and requiring submittal of an information-only report. The RICT Program will continue to assure that adequate margins of safety are maintained.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, [LICENSEE] concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

### 3.2 Conclusion

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) 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.

### 4.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in

10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

**Appendix A**

**Comparison of NRC April 2021 and February 2, 2022, Proposed TS Wording to the  
Traveler Proposed Wording**

NRC 4/20/21 Proposal	NRC 2/2/2022 Memorandum	TSTF-591 Proposal	Discussion
<b>5.5.X</b>	<b>5.5.X</b>	<b>5.5.X</b>	
<p>e. A RICT must be calculated using [list specific approaches used (e.g., internal events probabilistic risk assessment (PRA), fire PRA, addition of bounding seismic risk to RICT calculations, etc.)] based on the as-built, as-operated, and as-maintained plant.</p>	<p>e. A risk-informed completion time (RICT) must be calculated using the following techniques [list specific probabilistic risk assessment (PRA) and non-PRA techniques such as FIVE, Seismic Margins] used in the license amendment request. Changes to these PRA and non-PRA techniques require prior U.S. Nuclear Regulatory Commission (NRC) approval.</p>	<p>e. A RICT calculation must include the following hazard groups: [list specific hazards and the associated PRA models or alternate means of assessing the hazard for each applicable hazard group approved by NRC. For example, internal flood and internal events PRA model, internal fire PRA model, and seismic penalty factor]. Changes to these means of assessing the hazard groups require prior NRC approval.</p>	<ul style="list-style-type: none"> <li>• It is not necessary to define RICT in paragraph e as it is defined in the first paragraph of the program.</li> <li>• The NRC's 2022 proposal uses the term "in the license amendment request." This is inappropriate for a TS requirement as there is no indication which license amendment request is being referenced.</li> <li>• In the NRC 2021 proposal, there is no explicit requirement for NRC prior approval. It's implied that a license amendment is required if the parenthetical TS description is changed.</li> <li>• In the NRC 2021 proposal, the first sentence states on how a RICT is calculated and also discusses maintenance (as-built, as-operated, as-maintained plant), which is confusing, and duplicative of RG 1.200, Regulatory Position</li> </ul>

NRC 4/20/21 Proposal	NRC 2/2/2022 Memorandum	TSTF-591 Proposal	Discussion
			C.1.
<p>f. PRA models used to calculate a RICT shall be maintained and upgraded in accordance with processes described in Regulatory Positions C.1, C.2, C.3, and C.4 in Regulatory Guide (RG) 1.200, Revision 3, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities."</p>	<p>f. PRA models used to calculate a RICT shall be maintained and upgraded to reflect the as-built, as-operated, and as-maintained plant in accordance with processes described in Regulatory Positions C.1, C.2, C.3, and C.4 in Regulatory Guide (RG) 1.200, Revision 3, "Acceptability of Probabilistic Assessment Results for Risk-Informed Activities," issued December 2020.</p>	<p>f. The PRA models used to calculate a RICT shall be maintained and upgraded in accordance with the processes endorsed in the regulatory positions of Regulatory Guide 1.200, Revision 3, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities."</p>	<ul style="list-style-type: none"> <li>• Reg Guide 1.200, Rev. 3, only has 4 regulatory positions (C.1 - C.4). Therefore, stating Regulatory Positions C.1-C.4 is unnecessary.</li> <li>• It not necessary to state, "to reflect the as-built, as-operated, and as-maintained plant," as that requirement is included in the regulatory positions of RG 1.200, Rev. 3, Regulatory Position C.1.</li> <li>• It is not necessary to state the date of the Reg Guide if the revision is specified.</li> </ul>
<p>f. Use of any newly developed methods, as defined in RG 1.200, Revision 3, must meet all applicable review requirements in Tables 1-7.2-2 through 1-7.2-7 of Pressurized-Water Reactor Owners Group (PWROG)-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer</p>	<p>g. Before use by the licensee, NDMs, as defined in RG 1.200, Revision 3, must be subjected to a peer review process. The NDMs used in the licensee's PRA model must meet all applicable review requirements in Tables 1-7.2-2 through 1-7.2-7 of Pressurized-Water Reactor Owners Group (PWROG)-19027-NP,</p>		<ul style="list-style-type: none"> <li>• The details in the NRC's 2021 proposal Paragraph f and 2022 proposal Paragraph g duplicate requirements in RG 1.200, regulatory positions C.1 through C.4. This is unnecessary and repetitive. As a result, there is no need to specifically discuss the review requirements for newly developed methods</li> </ul>

NRC 4/20/21 Proposal	NRC 2/2/2022 Memorandum	TSTF-591 Proposal	Discussion
<p>Review," in accordance with the process in NEI 17-07, Revision 2, "Performance of PRA Peer Reviews Using the ASME/ANS PRA Standard." The peer review report described in Section 9.1 of NEI 17-07, Revision 2 for both the acceptability and implementation of the newly developed method must be available to the NRC for oversight and inspection activities.</p>	<p>Revision 2, "Newly Developed Method Requirements and Peer Review," issued July 2020. The licensee must use the peer review process in Nuclear Energy Institute (NEI) 17-07, Revision 2, "Performance of PRA Peer Reviews Using the ASME/ANS PRA Standard," issued August 2019. All peer review findings on NDM must be closed using an NRC-endorsed process prior to use in calculating a RICT. If any applicable requirements in Tables 1-7.2-2 through 1-7.2-7 of PWROG-19027-NP, Revision 2, are not met, use of the NDM requires prior NRC approval. The peer review report described in Section 9.1 of NEI 17-07, Revision 2, for both the acceptability and implementation of the NDM must be retained.</p>		<p>in the TS. The correspondence between the NRC's proposal and RG 1.200, Rev. 3, is detailed below.</p> <ul style="list-style-type: none"> <li>• Regulatory Position C.2.2.2.1 states that NEI 17-07, Rev. 2, is endorsed for peer review of a PRA upgrade (which includes newly developed methods).</li> <li>• Regulatory Position C.2.2.2.2 states "An acceptable set of requirements against which the adequacy of a newly developed method can be assessed is provided in PWROG-19027-NP, Revision 2."</li> <li>• PWROG-19027-NP, Revision 2, states, "The generic expectation is that newly developed methods satisfy the set of requirements discussed in this section," which includes Table 1-7.2-2 through 1-7.2-7.</li> <li>• Regulatory position</li> </ul>

NRC 4/20/21 Proposal	NRC 2/2/2022 Memorandum	TSTF-591 Proposal	Discussion
			<p>C.2.2.2.2 recognizes that Section 5.2 of PWROG-19027-NP states that the peer review report must be publicly available.</p> <ul style="list-style-type: none"> <li>• Regulatory Guide 1.200, Revision 3, Regulatory Position C.2.2.2.2 states that if NDM is deemed not technically acceptable in the NDM peer review report, or if at least one finding-level F&amp;O on the NDM remain open, a licensee or applicant may not use it in a PRA supporting risk-informed licensing applications.</li> <li>• It is not necessary to state that if it is desired to not meet a TS requirement, prior NRC approval is required.</li> </ul>
<p>g. A summary report describing the newly developed method and its implementation must be submitted in accordance with Section 5.6.x .</p>		<p>g. A report shall be submitted in accordance with Specification 5.6.[X] before a newly developed method is used to calculate a RICT.</p>	<ul style="list-style-type: none"> <li>• The term "summary" is confusing.</li> <li>• Revised to include the restriction on use until after the report is submitted to avoid it being missed.</li> </ul>

NRC 4/20/21 Proposal	NRC 2/2/2022 Memorandum	TSTF-591 Proposal	Discussion
<b>5.6.X</b>		<b>5.6.X</b>	
<p>A summary report describing the newly developed method and its implementation shall be submitted to the NRC following a PRA upgrade unless it has already been submitted to the NRC by a licensee.</p> <p>A summary report shall also be submitted if the licensee uses an already submitted newly developed method with exceptions, deviations, or clarifications from the precedent.</p> <p>A summary report describing a newly developed method and its implementation must be submitted following a PRA upgrade associated with a newly developed method prior to using that method in the RICT program or within 60 days after completing the focused peer review, whichever date occurs sooner. The summary report shall</p>	<p>A summary report describing the NDM and its implementation shall be submitted to the NRC following a PRA upgrade.</p> <p>The summary report must be submitted following a PRA upgrade associated with an NDM before using that method in the RICT program or within 60 days after the licensee completes disposition of all peer review comments, whichever date occurs sooner. The summary report shall describe the scope of the upgrade and shall include the following:</p>	<p>A report describing newly developed methods and their implementation must be submitted following a probabilistic risk assessment (PRA) upgrade associated with newly developed methods and prior to the first use of those methods to calculate a RICT.</p>	<ul style="list-style-type: none"> <li>• The term "summary" is confusing.</li> <li>• The first three paragraphs of the NRC's 2021 proposal appear to be redundant to each other and to the proposed paragraph "g".</li> <li>• A "newly developed method" that has been previously submitted by a licensee no longer satisfies the definition of a "newly developed method" and a report is not required. If a licensee takes an exception or deviation from the already submitted method, it is a "newly developed method." Therefore, it is not required to be stated in the TS.</li> <li>• The proposed schedules for submitting a report, before use in the RICT program or within 60 days after the focused peer review, whichever is sooner, have</li> </ul>

NRC 4/20/21 Proposal	NRC 2/2/2022 Memorandum	TSTF-591 Proposal	Discussion
<p>describe the scope of the upgrade and shall include:</p> <ul style="list-style-type: none"> <li>a. The PRA models upgraded, and the newly developed method used;</li> <li>b. A description of the acceptability of the newly developed method consistent with Section 5.2 of PWROG-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer Review;"</li> <li>c. All open finding and how those findings from the newly developed method implementation and how those findings were resolved<sup>1</sup> or demonstrated not to have a significant impact on the PRA;</li> </ul>	<ul style="list-style-type: none"> <li>a. the PRA models upgraded, and the NDM used</li> <li>b. a description of the acceptability of the NDM consistent with Section 5.2 of PWROG-19027-NP, Revision 2</li> <li>c. all open findings and how those findings from the NDM implementation were closed or were demonstrated not to have a significant impact on the PRA</li> </ul>	<p>The report shall include:</p> <ul style="list-style-type: none"> <li>a. The PRA models upgraded to include newly developed methods;</li> <li>b. A description of the acceptability of the newly developed methods consistent with Section 5.2 of PWROG-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer Review;"</li> <li>c. Any open findings from the peer-review of the implementation of the newly developed methods and how those findings were dispositioned; and</li> </ul>	<p>different purposes (before use of the method versus submittal of a "for information" report). The RICT program is not affected by a new method that is not used to calculate a RICT, so the report timing should be based on that purpose.</p> <ul style="list-style-type: none"> <li>• Item c is revised to refer to the impact on the RICT calculation, not the PRA. Only impacts on the RICT calculation are relevant to the report.</li> <li>• The 2022 NRC recommendation to describe how open findings are closed is not included as closed findings do not need to be described. The term "dispositioned" is used</li> </ul>

NRC 4/20/21 Proposal	NRC 2/2/2022 Memorandum	TSTF-591 Proposal	Discussion
<p>and</p> <p>d. All changes to key assumptions related to the newly developed method or its implementation.</p> <p>Footnote 1: For PRA peer reviews, the terms "resolving a finding" and "closing a finding" have different meanings. A peer review finding may only be "closed" using a process endorsed by the NRC. All NDM related findings shall be "closed" prior to the use of that NDM in a RICT program.</p>	<p>d. all changes to key assumptions related to the NDM or its implementation</p>	<p>d. All changes to key assumptions related to newly developed methods or their implementation.</p>	<p>which is equivalent to "demonstrated to not have a significant effect" on the RICT.</p> <ul style="list-style-type: none"> <li>Footnotes are not used in the Administrative Controls. Item c was changed from "resolved" to "dispositioned" to address the issue in the footnote.</li> </ul>

**Technical Specifications Changes**

## 5.5 Programs and Manuals

5.5.20 Risk Informed Completion Time Program (continued)

## ----- REVIEWER'S NOTE -----

The Risk Informed Completion Time is only applicable in MODES supported by the licensee's PRA. Licensees applying the RICT Program to MODES other than MODES 1 and 2 must demonstrate that they have the capability to calculate a RICT in those MODES or that the risk indicated by their MODE 1 and 2 PRA model is bounding with respect to the lower MODE conditions.

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- b. A RICT may only be utilized in MODE 1, 2 [, and 3, and MODE 4 while relying on steam generators for heat removal];
  - c. When a RICT is being used, any change to the plant configuration, as defined in NEI 06-09-A, Appendix A, must be considered for the effect on the RICT.
    - 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
    - 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
    - 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
  - d. For emergent conditions, if the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:
    - 1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or
    - 2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.

## 5.5 Programs and Manuals

5.5.20 Risk Informed Completion Time Program (continued)

- ~~e. The risk assessment approaches and methods shall be acceptable to the NRC. The plant PRA shall be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant, as specified in Regulatory Guide 1.200, Revision 2. Methods to assess the risk from extending the Completion Times must be PRA methods used to support this license amendment, or other methods approved by the NRC for generic use; and any change in the PRA methods to assess risk that are outside these approval boundaries require prior NRC approval.]~~
- e. A RICT calculation must include the following hazard groups: [list specific hazards and the associated PRA models or alternate means of assessing the hazard for each applicable hazard group approved by NRC. For example, internal flood and internal events PRA model, internal fire PRA model, and seismic penalty factor]. Changes to these means of assessing the hazard groups require prior NRC approval.**
- f. The PRA models used to calculate a RICT shall be maintained and upgraded in accordance with the processes endorsed in the regulatory positions of Regulatory Guide 1.200, Revision 3, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities."**
- g. A report shall be submitted in accordance with Specification 5.6.[X] before a newly developed method is used to calculate a RICT. ]**

[ 5.5.21 Spent Fuel Storage Rack Neutron Absorber Monitoring Program

This Program provides controls for monitoring the condition of the neutron absorber used in the spent fuel pool storage racks to verify the Boron-10 areal density is consistent with the assumptions in the spent fuel pool criticality analysis. The program shall be in accordance with NEI 16-03-A, "Guidance for Monitoring of Fixed Neutron Absorbers in Spent Fuel Pools," Revision 0, May 2017 [, with the following exceptions:

1. . . . ]]

## 5.6 Reporting Requirements

5.6.7 Steam Generator Tube Inspection Report (continued)

2. The location, orientation (if linear), measured size (if available), and voltage response for each indication. For tube wear at support structures less than 20 percent through-wall, only the total number of indications needs to be reported;
3. A description of the condition monitoring assessment and results, including the margin to the tube integrity performance criteria and comparison with the margin predicted to exist at the inspection by the previous forward-looking tube integrity assessment;
4. The number of tubes plugged [or repaired] during the inspection outage; and
- [5. The repair methods utilized and the number of tubes repaired by each repair method.]
- d. An analysis summary of the tube integrity conditions predicted to exist at the next scheduled inspection (the forward-looking tube integrity assessment) relative to the applicable performance criteria, including the analysis methodology, inputs, and results;
- e. The number and percentage of tubes plugged [or repaired] to date, and the effective plugging percentage in each SG;
- f. The results of any SG secondary side inspections; and
- [g. Insert any plant-specific reporting requirements, if applicable.]

5.6.8 Risk Informed Completion Time (RICT) Program Upgrade Report

**A report describing newly developed methods and their implementation must be submitted following a probabilistic risk assessment (PRA) upgrade associated with newly developed methods and prior to the first use of those methods to calculate a RICT. The report shall include:**

- a. **The PRA models upgraded to include newly developed methods;**
- b. **A description of the acceptability of the newly developed methods consistent with Section 5.2 of PWROG-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer Review;"**
- c. **Any open findings from the peer-review of the implementation of the newly developed methods and how those findings were dispositioned; and**

- d. All changes to key assumptions related to newly developed methods or their implementation.**
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## 5.5 Programs and Manuals

5.5.20 Risk Informed Completion Time Program (continued)

- a. The RICT may not exceed 30 days;

----- REVIEWER'S NOTE -----

The Risk Informed Completion Time is only applicable in MODES supported by the licensee's PRA. Licensees applying the RICT Program to MODES other than MODES 1 and 2 must demonstrate that they have the capability to calculate a RICT in those MODES or that the risk indicated by their MODE 1 and 2 PRA model is bounding with respect to the lower MODE conditions.

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- b. A RICT may only be utilized in MODE 1, 2 [, and 3, and MODE 4 while relying on steam generators for heat removal];
- c. When a RICT is being used, any change to the plant configuration, as defined in NEI 06-09-A, Appendix A, must be considered for the effect on the RICT.
1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
  2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
  3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- d. For emergent conditions, if the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:
1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or
  2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.

## 5.5 Programs and Manuals

5.5.20 Risk Informed Completion Time Program (continued)

- ~~e. The risk assessment approaches and methods shall be acceptable to the NRC. The plant PRA shall be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant, as specified in Regulatory Guide 1.200, Revision 2. Methods to assess the risk from extending the Completion Times must be PRA methods used to support this license amendment, or other methods approved by the NRC for generic use; and any change in the PRA methods to assess risk that are outside these approval boundaries require prior NRC approval.]~~
- e. A RICT calculation must include the following hazard groups: [list specific hazards and the associated PRA models or alternate means of assessing the hazard for each applicable hazard group approved by NRC. For example, internal flood and internal events PRA model, internal fire PRA model, and seismic penalty factor]. Changes to these means of assessing the hazard groups require prior NRC approval.**
- f. The PRA models used to calculate a RICT shall be maintained and upgraded in accordance with the processes endorsed in the regulatory positions of Regulatory Guide 1.200, Revision 3, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities."**
- g. A report shall be submitted in accordance with Specification 5.6.[X] before a newly developed method is used to calculate a RICT.]**

[ 5.5.21 Spent Fuel Storage Rack Neutron Absorber Monitoring Program

This Program provides controls for monitoring the condition of the neutron absorber used in the spent fuel pool storage racks to verify the Boron-10 areal density is consistent with the assumptions in the spent fuel pool criticality analysis. The program shall be in accordance with NEI 16-03-A, "Guidance for Monitoring of Fixed Neutron Absorbers in Spent Fuel Pools," Revision 0, May 2017 [, with the following exceptions:

1. . . . .]

## 5.6 Reporting Requirements

5.6.7 Steam Generator Tube Inspection Report (continued)

2. The location, orientation (if linear), measured size (if available), and voltage response for each indication. For tube wear at support structures less than 20 percent through-wall, only the total number of indications needs to be reported;
3. A description of the condition monitoring assessment and results, including the margin to the tube integrity performance criteria and comparison with the margin predicted to exist at the inspection by the previous forward-looking tube integrity assessment;
4. The number of tubes plugged [or repaired] during the inspection outage; and
- [5. The repair methods utilized and the number of tubes repaired by each repair method.]
- d. An analysis summary of the tube integrity conditions predicted to exist at the next scheduled inspection (the forward-looking tube integrity assessment) relative to the applicable performance criteria, including the analysis methodology, inputs, and results;
- e. The number and percentage of tubes plugged [or repaired] to date, and the effective plugging percentage in each SG;
- f. The results of any SG secondary side inspections; and
- [g. Insert any plant-specific reporting requirements, if applicable.]

5.6.8 Risk Informed Completion Time (RICT) Program Upgrade Report

**A report describing newly developed methods and their implementation must be submitted following a probabilistic risk assessment (PRA) upgrade associated with newly developed methods and prior to using those methods to calculate a RICT. The report shall include:**

- a. **The PRA models upgraded to include newly developed methods;**
- b. **A description of the acceptability of the newly developed methods consistent with Section 5.2 of PWROG-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer Review;"**
- c. **Any open findings from the peer-review of the implementation of the newly developed methods and how those findings were dispositioned; and**

- d. All changes to key assumptions related to newly developed methods or their implementation.**
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## 5.5 Programs and Manuals

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### 5.5.20 Risk Informed Completion Time Program (continued)

----- REVIEWER'S NOTE -----

The Risk Informed Completion Time is only applicable in MODES supported by the licensee's PRA. Licensees applying the RICT Program to MODES other than MODES 1 and 2 must demonstrate that they have the capability to calculate a RICT in those MODES or that the risk indicated by their MODE 1 and 2 PRA model is bounding with respect to the lower MODE conditions.

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- b. A RICT may only be utilized in MODE 1, 2 [, and 3, and MODE 4 while relying on steam generators for heat removal];
- c. When a RICT is being used, any change to the plant configuration, as defined in NEI 06-09-A, Appendix A, must be considered for the effect on the RICT.
  - 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
  - 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
  - 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- d. For emergent conditions, if the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:
  - 1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or
  - 2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.

## 5.5 Programs and Manuals

5.5.20 Risk Informed Completion Time Program (continued)

- ~~e. The risk assessment approaches and methods shall be acceptable to the NRC. The plant PRA shall be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant, as specified in Regulatory Guide 1.200, Revision 2. Methods to assess the risk from extending the Completion Times must be PRA methods used to support this license amendment, or other methods approved by the NRC for generic use; and any change in the PRA methods to assess risk that are outside these approval boundaries require prior NRC approval.]~~
- e. A RICT calculation must include the following hazard groups: [list specific hazards and the associated PRA models or alternate means of assessing the hazard for each applicable hazard group approved by NRC. For example, internal flood and internal events PRA model, internal fire PRA model, and seismic penalty factor]. Changes to these means of assessing the hazard groups require prior NRC approval.**
- f. The PRA models used to calculate a RICT shall be maintained and upgraded in accordance with the processes endorsed in the regulatory positions of Regulatory Guide 1.200, Revision 3, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities."**
- g. A report shall be submitted in accordance with Specification 5.6.[X] before a newly developed method is used to calculate a RICT.]**

[ 5.5.21 Spent Fuel Storage Rack Neutron Absorber Monitoring Program

This Program provides controls for monitoring the condition of the neutron absorber used in the spent fuel pool storage racks to verify the Boron-10 areal density is consistent with the assumptions in the spent fuel pool criticality analysis. The program shall be in accordance with NEI 16-03-A, "Guidance for Monitoring of Fixed Neutron Absorbers in Spent Fuel Pools," Revision 0, May 2017 [, with the following exceptions:

1. . . . .]

## 5.6 Reporting Requirements

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### 5.6.7 Steam Generator Tube Inspection Report (continued)

2. The location, orientation (if linear), measured size (if available), and voltage response for each indication. For tube wear at support structures less than 20 percent through-wall, only the total number of indications needs to be reported;
  3. A description of the condition monitoring assessment and results, including the margin to the tube integrity performance criteria and comparison with the margin predicted to exist at the inspection by the previous forward-looking tube integrity assessment;
  4. The number of tubes plugged [or repaired] during the inspection outage; and
  - [5. The repair methods utilized and the number of tubes repaired by each repair method.]
- d. An analysis summary of the tube integrity conditions predicted to exist at the next scheduled inspection (the forward-looking tube integrity assessment) relative to the applicable performance criteria, including the analysis methodology, inputs, and results;
  - e. The number and percentage of tubes plugged [or repaired] to date, and the effective plugging percentage in each SG;
  - f. The results of any SG secondary side inspections; and
  - [g. Insert any plant-specific reporting requirements, if applicable.]

### 5.6.8 Risk Informed Completion Time (RICT) Program Upgrade Report

**A report describing newly developed methods and their implementation must be submitted following a probabilistic risk assessment (PRA) upgrade associated with newly developed methods and prior to the first use of those methods to calculate a RICT. The report shall include:**

- a. **The PRA models upgraded to include newly developed methods;**
- b. **A description of the acceptability of the newly developed methods consistent with Section 5.2 of PWROG-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer Review;"**
- c. **Any open findings from the peer-review of the implementation of the newly developed methods and how those findings were dispositioned; and**

- d. All changes to key assumptions related to newly developed methods or their implementation.**
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## 5.5 Programs and Manuals

[ 5.5.17 Risk Informed Completion Time Program

This program provides controls to calculate a Risk Informed Completion Time (RICT) and must be implemented in accordance with NEI 06-09-A, Revision 0, "Risk-Managed Technical Specifications (RMTS) Guidelines." The program shall include the following:

- a. The RICT may not exceed 30 days;

----- REVIEWER'S NOTE -----

The Risk Informed Completion Time is only applicable in MODES supported by the licensee's PRA. Licensees applying the RICT Program to MODES other than MODES 1 and 2 must demonstrate that they have the capability to calculate a RICT in those MODES or that the risk indicated by their MODE 1 and 2 PRA model is bounding with respect to the lower MODE conditions.

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- b. A RICT may only be utilized in MODE 1, 2 [, and 3, and MODE 4 while relying on steam generators for heat removal];
- c. When a RICT is being used, any change to the plant configuration, as defined in NEI 06-09-A, Appendix A, must be considered for the effect on the RICT.
1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
  2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
  3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- d. For emergent conditions, if the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:
1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or
  2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.

## 5.5 Programs and Manuals

5.5.17 Risk Informed Completion Time Program (continued)

- ~~e. The risk assessment approaches and methods shall be acceptable to the NRC. The plant PRA shall be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant, as specified in Regulatory Guide 1.200, Revision 2. Methods to assess the risk from extending the Completion Times must be PRA methods used to support this license amendment, or other methods approved by the NRC for generic use; and any change in the PRA methods to assess risk that are outside these approval boundaries require prior NRC approval.]~~
- e. A RICT calculation must include the following hazard groups: [list specific hazards and the associated PRA models or alternate means of assessing the hazard for each applicable hazard group approved by NRC. For example, internal flood and internal events PRA model, internal fire PRA model, and seismic penalty factor]. Changes to these means of assessing the hazard groups require prior NRC approval.**
- f. The PRA models used to calculate a RICT shall be maintained and upgraded in accordance with the processes endorsed in the regulatory positions of Regulatory Guide 1.200, Revision 3, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities."**
- g. A report shall be submitted in accordance with Specification 5.6.[X] before a newly developed method is used to calculate a RICT.]**

[ 5.5.18 Spent Fuel Storage Rack Neutron Absorber Monitoring Program

This Program provides controls for monitoring the condition of the neutron absorber used in the spent fuel pool storage racks to verify the Boron-10 areal density is consistent with the assumptions in the spent fuel pool criticality analysis. The program shall be in accordance with NEI 16-03-A, "Guidance for Monitoring of Fixed Neutron Absorbers in Spent Fuel Pools," Revision 0, May 2017 [, with the following exceptions:

1. . . . .]

## 5.6 Reporting Requirements

5.6.4 RCS PRESSURE AND TEMPERATURE LIMITS REPORT (continued)

6. The minimum temperature requirements of Appendix G to 10 CFR Part 50 shall be incorporated into the pressure and temperature limit curves.
7. Licensees who have removed two or more capsules should compare for each surveillance material the measured increase in reference temperature ( $RT_{NDT}$ ) to the predicted increase in  $RT_{NDT}$ ; where the predicted increase in  $RT_{NDT}$  is based on the mean shift in  $RT_{NDT}$  plus the two standard deviation value ( $2\sigma_{\Delta}$ ) specified in Regulatory Guide 1.99, Revision 2. If the measured value exceeds the predicted value (increase  $RT_{NDT} + 2\sigma_{\Delta}$ ), the licensee should provide a supplement to the PTLR to demonstrate how the results affect the approved methodology.

5.6.5 Post Accident Monitoring Report

When a report is required by Condition B or F of LCO 3.3.[3.1], "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

-----REVIEWER'S NOTE-----  
 These reports may be required covering inspection, test, and maintenance activities. These reports are determined on an individual basis for each unit and their preparation and submittal are designated in the Technical Specifications.  
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5.6.6 Risk Informed Completion Time (RICT) Program Upgrade Report

**A report describing newly developed methods and their implementation must be submitted following a probabilistic risk assessment (PRA) upgrade associated with newly developed methods and prior to the first use of those methods to calculate a RICT. The report shall include:**

- a. **The PRA models upgraded to include newly developed methods;**
- b. **A description of the acceptability of the newly developed methods consistent with Section 5.2 of PWROG-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer Review;"**
- c. **Any open findings from the peer-review of the implementation of the newly developed methods and how those findings were dispositioned; and**
- d. **All changes to key assumptions related to newly developed methods or their implementation.**

## 5.5 Programs and Manuals

5.5.17 Risk Informed Completion Time Program (continued)

## ----- REVIEWER'S NOTE -----

The Risk Informed Completion Time is only applicable in MODES supported by the licensee's PRA. Licensees applying the RICT Program to MODES other than MODES 1 and 2 must demonstrate that they have the capability to calculate a RICT in those MODES or that the risk indicated by their MODE 1 and 2 PRA model is bounding with respect to the lower MODE conditions.

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- b. A RICT may only be utilized in MODE 1, 2 [, and 3, and MODE 4 while relying on steam generators for heat removal];
  - c. When a RICT is being used, any change to the plant configuration, as defined in NEI 06-09-A, Appendix A, must be considered for the effect on the RICT.
    - 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
    - 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
    - 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
  - d. For emergent conditions, if the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:
    - 1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or
    - 2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.

## 5.5 Programs and Manuals

5.5.17 Risk Informed Completion Time Program (continued)

- ~~e. The risk assessment approaches and methods shall be acceptable to the NRC. The plant PRA shall be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant, as specified in Regulatory Guide 1.200, Revision 2. Methods to assess the risk from extending the Completion Times must be PRA methods used to support this license amendment, or other methods approved by the NRC for generic use; and any change in the PRA methods to assess risk that are outside these approval boundaries require prior NRC approval.]~~
- e. A RICT calculation must include the following hazard groups: [list specific hazards and the associated PRA models or alternate means of assessing the hazard for each applicable hazard group approved by NRC. For example, internal flood and internal events PRA model, internal fire PRA model, and seismic penalty factor]. Changes to these means of assessing the hazard groups require prior NRC approval.**
- f. The PRA models used to calculate a RICT shall be maintained and upgraded in accordance with the processes endorsed in the regulatory positions of Regulatory Guide 1.200, Revision 3, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities."**
- g. A report shall be submitted in accordance with Specification 5.6.[X] before a newly developed method is used to calculate a RICT. ]**

[ 5.5.18 Spent Fuel Storage Rack Neutron Absorber Monitoring Program

This Program provides controls for monitoring the condition of the neutron absorber used in the spent fuel pool storage racks to verify the Boron-10 areal density is consistent with the assumptions in the spent fuel pool criticality analysis. The program shall be in accordance with NEI 16-03-A, "Guidance for Monitoring of Fixed Neutron Absorbers in Spent Fuel Pools," Revision 0, May 2017 [, with the following exceptions:

1. . . . .]

## 5.6 Reporting Requirements

5.6.4 RCS PRESSURE AND TEMPERATURE LIMITS REPORT (continued)

6. The minimum temperature requirements of Appendix G to 10 CFR Part 50 shall be incorporated into the pressure and temperature limit curves.
7. Licensees who have removed two or more capsules should compare for each surveillance material the measured increase in reference temperature ( $RT_{NDT}$ ) to the predicted increase in  $RT_{NDT}$ ; where the predicted increase in  $RT_{NDT}$  is based on the mean shift in  $RT_{NDT}$  plus the two standard deviation value ( $2\sigma_{\Delta}$ ) specified in Regulatory Guide 1.99, Revision 2. If the measured value exceeds the predicted value (increase in  $RT_{NDT} + 2\sigma_{\Delta}$ ), the licensee should provide a supplement to the PTLR to demonstrate how the results affect the approved methodology.

5.6.5 Post Accident Monitoring Report

When a Special Report is required by Condition B or F of LCO 3.3.[3.1], "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

5.6.6 [ Tendon Surveillance Report

Any abnormal degradation of the containment structure detected during the tests required by the Pre-Stressed Concrete Containment Tendon Surveillance Program shall be reported to the NRC within 30 days. The report shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and the corrective action taken. ]

-----REVIEWER'S NOTE-----  
 These reports may be required covering inspection, test, and maintenance activities. These reports are determined on an individual basis for each unit and their preparation and submittal are designated in the Technical Specifications.  
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5.6.7 Risk Informed Completion Time (RICT) Program Upgrade Report

**A report describing newly developed methods and their implementation must be submitted following a probabilistic risk assessment (PRA) upgrade associated with newly developed methods and prior to the first use of those methods to calculate a RICT. The report shall include:**

- a. **The PRA models upgraded to include newly developed methods;**

- b. A description of the acceptability of the newly developed methods consistent with Section 5.2 of PWROG-19027-NP, Revision 2, "Newly Developed Method Requirements and Peer Review;"**
  - c. Any open findings from the peer-review of the implementation of the newly developed methods and how those findings were dispositioned; and**
  - d. All changes to key assumptions related to newly developed methods or their implementation.**
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