May 10, 2017

TSTF-17-07
PROJ0753

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

SUBJECT: Transmittal of TSTF-563, "Revise Instrument Testing Definitions to Incorporate the Surveillance Frequency Control Program"

Enclosed for NRC review is TSTF-563, "Revise Instrument Testing Definitions to Incorporate the Surveillance Frequency Control Program."

The following information is provided to assist the NRC staff in prioritizing their review of TSTF-563:

- Applicability: TSTF-563 is applicable to all plant designs, including Babcock & Wilcox, Combustion Engineering, Westinghouse, General Electric, and Westinghouse AP1000® plants.

- Classification: TSTF-563 will revise the current Technical Specification instrumentation testing definitions to permit determination of the appropriate frequency to perform the Surveillance Requirement based on the devices being tested in each step, for those plants that have implemented a Surveillance Frequency Control Program. The current definitions, which require testing all devices based on the characteristics of the most limiting device, can result in over-testing, increased unavailability, and unnecessary personnel radiation dose.

- Specialized Resource Availability: The TSTF requests approval of the traveler within one year. NRC approval of TSTF-563 will reduce the burden on licensees and potentially reduce personnel radiation dose.

The Pressurized Water Reactor Owners Group and the Boiling Water Reactors Owners' Group should be billed for the review of the traveler.

11921 Rockville Pike, Suite 100, Rockville, MD 20852
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PWROG
PWR Owners Group
BWR OWNERS' GROUP

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

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

**Revise Instrument Testing Definitions to Incorporate the Surveillance Frequency Control Program**

NUREGs Affected: ☑ 1430 ☑ 1431 ☑ 1432 ☑ 1433 ☑ 1434 ☑ 2194

Classification: 1) Technical Change
Recommended for CLIIP?: Yes

Correction or Improvement: Improvement
NRC Fee Status: Not Exempt

Changes Marked on ISTS Rev: 4.0

## Revision History

### OG Revision 0 Revision Status: Active

Revision Proposed by: PWROG

Revision Description:
Original Issue

### Owners Group Review Information

Date Originated by OG: 19-Sep-16

Owners Group Comments:
Presubmittal teleconference held on March 30, 2017.

Owners Group Resolution: Approved Date: 21-Dec-16

### TSTF Review Information

TSTF Received Date: 19-Apr-17 Date Distributed for Review: 19-Apr-17

TSTF Comments:
(No Comments)

TSTF Resolution: Approved Date: 10-May-17

### NRC Review Information

NRC Received Date: 10-May-17

## Affected Technical Specifications

1.1 Definitions NUREG(s)- 1430 1432 1433 1434 Only

Change Description: Channel Calibration and Channel Functional Test Definitions

| | | |
|---|---|---|
| 1.1 | Definitions | NUREG(s)- 1431 2194 Only |
| | Change Description: | Channel Calibration, Channel Operational Test, and Trip Actuating Device Operational Test Definitions |

## 1. SUMMARY DESCRIPTION

The Technical Specification (TS) definitions of Channel Calibration, Channel Functional Test, Channel Operational Test, and Trip Actuating Device Operational Test, which currently permit performance by any series of sequential, overlapping, or total channel steps, are revised. For those licensees that have adopted TSTF-425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control - RITSTF Initiative 5b," the definitions are revised to allow the required frequency for testing the components or devices in each step to be determined in accordance with the TS Surveillance Frequency Control Program.

The proposed change modifies the definitions in NUREG-1430, "Standard Technical Specifications - Babcock & Wilcox plants," NUREG-1431, "Standard Technical Specifications - Westinghouse plants," NUREG-1432, "Standard Technical Specifications - Combustion Engineering plants," NUREG-1433, "Standard Technical Specifications - General Electric BWR/4 Plants[1]," NUREG-1434, "Standard Technical Specifications, General Electric BWR/6 Plants," and NUREG-2194, "Standard Technical Specifications - Westinghouse Advanced Passive 1000 (AP1000®) plants."

## 2. DETAILED DESCRIPTION

### 2.1. Surveillance Frequency Control Program

TSTF-425 (References 1 and 2) revises the TS to relocate all periodic Surveillance Requirement (SR) Frequencies to licensee control. Changes to the relocated SR Frequencies are made in accordance with a new TS program, the Surveillance Frequency Control Program (SFCP). This TS program requires that changes to the relocated Frequencies be made in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1 (References 3 and 4). NEI 04-10, Revision 1, was approved by the NRC on September 19, 2007 (Reference 4).

NEI 04-10 describes an evaluation process and a multi-disciplinary plant decision-making panel that considers the detailed evaluation of proposed SR Frequency revisions. The evaluations are based on operating experience, test history, manufacturers' recommendations, codes and standards, and other deterministic factors, in conjunction with risk insights. The evaluation considers all components being tested by the SR. Process elements are included for determining the cumulative risk impact of the changes, updating the licensee's probabilistic risk assessment (PRA) models, and for imposing corrective actions, if necessary, following implementation of a revised Frequency.

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[1] NUREG 1433 is based on the BWR/4 plant design, but is also representative of the BWR/2, /3, and, in some cases, BWR/5 designs. NUREG 1434 is based on the BWR/6 plant design, and is representative, in some cases, of the BWR/5 design.

## 2.2. Current Technical Specifications Requirements

The various instrumentation functions in the TS require Surveillance Requirements (SRs) to verify the correct functioning of the instrument channel. These include the Channel Calibration and the Channel Functional Test. In the Westinghouse and AP1000® TS, the Channel Functional Test is replaced with two tests: the Channel Operational Test (COT) and the Trip Actuating Device Operational Test (TADOT).

The TS definition of Channel Calibration in all TS except the Westinghouse and AP1000® TS, states:

> A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps.

The Westinghouse and AP1000® plant definitions (NUREG-1431 and NUREG-2194) are the same as that listed above but do not include the phrase "and the CHANNEL FUNCTIONAL TEST."

The TS definition of Channel Functional Test in NUREG-1430 (Babcock & Wilcox plants) states:

> A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY.
>
> The ESFAS CHANNEL FUNCTIONAL TEST shall also include testing of ESFAS safety related bypass functions for each channel affected by bypass operation. The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total steps.

The TS definition of Channel Functional Test in NUREG-1432 (Combustion Engineering plants) states:

> A CHANNEL FUNCTIONAL TEST shall be:
>
> a. Analog and bistable channels - the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY, and
>
> b. Digital computer channels - the use of diagnostic programs to test digital computer hardware and the injection of simulated process data into the channel to

> verify OPERABILITY of all devices in the channel required for channel OPERABILITY.
>
> The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps

The TS definition of Channel Functional Test in NUREG-1433 and NUREG-1434 (Boiling Water Reactor plants) states:

> A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY. The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps.

The TS definition of Channel Operational Test (COT) in NUREG-1431 (Westinghouse plants) and NUREG-2194 (Westinghouse AP1000® plants) states:

> A COT shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY. The COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints required for channel OPERABILITY such that the setpoints are within the necessary range and accuracy. The COT may be performed by means of any series of sequential, overlapping, or total channel steps.

The TS definition of Trip Actuating Device Operational Test (TADOT) in NUREG-1431 (Westinghouse plants) and NUREG-2194 (Westinghouse AP1000® plants) states:

> A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of all devices in the channel required for trip actuating device OPERABILITY. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the necessary accuracy. The TADOT may be performed by means of any series of sequential, overlapping, or total channel steps.

The sentence in the definitions that states, "The [test] may be performed by means of any series of sequential, overlapping, or total channel steps," means that the SR encompasses all the required devices described in the definition, but the devices are not required to be tested at the same time. The definition allows portions of the SR to be tested in steps, if the steps, when taken together, perform the SR on all the required devices. The entire SR must be performed within specified Frequency.

### 2.3. Reason for the Proposed Change

The TS requires the Surveillance Requirements to be performed within the specified Frequency. For example, if the Channel Calibration SR for a function has a Frequency of 18 months, all components in the channel must be tested every 18 months (plus the 25% allowance provided by SR 3.0.2), using any series of sequential, overlapping, or total channel steps. The SFCP allows a

new SR Frequency to be determined for the channel, but that Frequency must consider all components in the channel and applies to the entire channel. For example, if an 18-month Frequency is to be justified for a channel, every component in the channel must be capable of operating for that Frequency between Channel Calibrations.

A typical instrument channel consists of many different components, such as sensors, rack modules, and indicators. These devices have different short-term and long-term performance (drift) characteristics, resulting in the potential for different Channel Calibration frequency requirements. Under the current TS, the most limiting component Channel Calibration frequency for the channel must be chosen when a revised frequency is considered under the SFCP. As a result, all components that makeup a channel must be calibrated at a frequency equal to the channel component with the shortest (i.e., most frequent) surveillance Frequency.

Recent evaluations have determined that the performance characteristics of some channel components, such as pressure transmitters, could support a substantially longer calibration frequency than the other components in the channel. At many plants, the affected instrumentation SRs are already performed in steps (e.g., a pressure sensor or transmitter is calibrated during a refueling outage and the rack signal conditioning modules are calibrated while operating at power). The proposed change extends this concept to permit the surveillance frequency of each step to be determined under the SFCP based on the component(s) surveilled in the step instead of all components in the channel. This will allow each component to be tested at the appropriate frequency based on the component's long-term performance characteristics.

Allowing an appropriate SR Frequency for performing a Channel Calibration on each component or group of components could reduce radiation dose associated with in-place calibration of sensors, reduce wear on equipment, reduce unnecessary burden on plant staff, and reduce opportunities for calibration errors.

For most plant designs, the Channel Calibration testing explicitly includes the Channel Functional Test. Therefore, applying the same allowance to determine the appropriate Frequency based on the components tested in each Channel Functional Test step avoids potential conflicts between the definitions.

The NUREG-1431 (Westinghouse plants) and NUREG-2194 (Westinghouse AP1000® plants) Channel Calibration definitions do not include an explicit reference to the Channel Functional Test. However, the NUREG-1431 and NUREG-2194 COT and TADOT tests are equivalent to the Channel Functional Test. For consistency between the ISTS, the same allowance is proposed for those definitions.

## 2.4. Description of the Proposed Change

The last sentence of the TS definitions of Channel Calibration, Channel Functional Test, COT, and TADOT are revised as shown. Inserted text is in italics.

> The [test] may be performed by means of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*.

Only plants that have adopted a Surveillance Frequency Control Program via a previous license amendment may request adoption of the bracketed text.

A model application is included in the proposed change as Enclosure 1. The model may be used by licensees desiring to adopt the traveler following NRC approval.

## 3. TECHNICAL EVALUATION

Revising the frequency of a Channel Calibration, Channel Functional Test, COT, and TADOT instrument channel under the Surveillance Frequency Control Program requires assurance that component performance characteristics, such as drift between each test, will not result in undetected instrument errors that exceed the assumptions of the safety analysis and supporting instrument loop uncertainty calculations. These requirements are consistent with the methodology described in NEI 04-10, which the Surveillance Frequency Control Program requires to be followed. The Surveillance Frequency Control Program does not permit changes to the Technical Specifications Allowable Values or Nominal Trip Setpoints; only the Surveillance Frequency may be changed. Therefore, prior to extending the test intervals for an instrument channel component or components associated with a given calibration step, the component performance characteristics must be evaluated to verify the Allowable Value or Nominal Trip Setpoint will still be valid and to establish a firm technical basis supporting the extension. In addition, each calculation must be reviewed to ensure the applicable uncertainty allowances are conservative (bounding); e.g., sensor drift, rack drift, indictor drift.

Section 3.0 of NEI 04-10 identifies five key safety principles that must be evaluated before changing any surveillance frequency. Principle 3 requires confirmation of the maintenance of safety margins, which, in this case, includes performance of deterministic evaluations to verify preservation of instrumentation trip setpoint and indication safety margins. A common method to assess the instrumentation safety margins is to apply the guidance in NRC Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle." The Generic Letter describes specific evaluations, including drift, when extending calibration intervals for protection and indication instrumentation systems.

The evaluation methodology specified in NEI 04-10 also requires consideration of common cause failure effects and monitoring of the instrument channel component performance following the frequency change to ensure channel performance is consistent with the analysis to support an extended Frequency.

The method of evaluating a proposed SR Frequency change is not dependent on the number of components in the channel. For a given channel step, the applicable performance characteristics of each component tested in the step will be evaluated and the limiting characteristics used to determine the SR frequency for that step. The proposed change to permit changing the testing frequency of channel component(s) does not affect the test method or evaluation method. The requirement to perform a Channel Calibration, Channel Function Test, COT, or TADOT on the entire channel is not changed.

For example, assume a channel is divided into sensors, rack modules for signal conditioning, setpoint comparators, and indicators. An evaluation in accordance with NEI 04-10 and the

licensee's instrument loop/setpoint uncertainty methodology determines that the sensors should be calibrated every 48 months, the rack modules should be calibrated every 30 months, and the indicators should be calibrated every 24 months. Under the current TS requirements, all devices in the channel must be calibrated every 24 months. However, under the proposed change, sensors, rack modules, and indicators would be calibrated at the appropriate frequency for the tested devices. As required by the Channel Calibration definition, the test would still encompass all devices in the channel required for channel operability.

## 4. REGULATORY EVALUATION

The following NRC requirements and guidance documents are applicable to the proposed change.

The regulations at Title 10 of the Code of Federal Regulations (10 CFR) Part 50.36 "Technical specifications," establish the requirements related to the content of the TS. Section 50.36(c)(3) states:

> *Surveillance requirements*. Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

The regulatory requirements in 10 CFR 50.36 are not specific regarding the frequency of performing surveillance tests. The proposed change only affects the frequency of performance and does not affect the surveillance testing method or acceptance criteria. Therefore, the proposed change is consistent with the surveillance testing requirements of 10 CFR 50.36.

The regulatory requirements of 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," and 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," and the monitoring required by the TS requirement to follow NEI 04-10, Revision 1, ensure the surveillance frequencies are sufficient to assure that the requirements of 10 CFR 50.36 are satisfied and that any performance deficiencies will be identified and appropriate corrective actions taken.

Appendix A of 10 CFR 50 provides General Design Criteria (GDC) for nuclear power plants. Plant-specific design criteria are described in the plant's Updated Final Safety Analysis Report (UFSAR).

> *Criterion 13*— Instrumentation and Control. Instrumentation shall be provided to monitor variables and systems over their anticipated ranges for normal operation, for anticipated operational occurrences, and for accident conditions as appropriate to assure adequate safety, including those variables and systems that can affect the fission process, the integrity of the reactor core, the reactor coolant pressure boundary, and the containment and its associated systems. Appropriate controls shall be provided to maintain these variables and systems within prescribed operating ranges.

> *Criterion 21*— Protection System Reliability and Testability. The protection system shall be designed for high functional reliability and inservice testability commensurate with the safety functions to be performed. Redundancy and independence designed into the protection system shall be sufficient to assure that (1) no single failure results in loss of the protection function and (2) removal from service of any component or channel does not result in loss of the required minimum redundancy unless the acceptable reliability of operation of the protection system can be otherwise demonstrated. The protection system shall be designed to permit periodic testing of its functioning when the reactor is in operation, including a capability to test channels independently to determine failures and losses of redundancy that may have occurred.

Most plants have a plant-specific design criterion similar to GDC 13 and GDC 21. The proposed change has no effect on the design, fabrication, use, or methods of testing the instrumentation channels and will not affect the ability of the instrumentation to perform the functions assumed in the safety analysis. Therefore, compliance with the design criteria is not affected.

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-425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control - RITSTF Initiative 5b," (NRC Agency Documents Access and Management System (ADAMS) Accession No. ML090850642).

2. Federal Register 74FR31996, dated July 6, 2009, "Notice of Availability of Technical Specification Improvement To Relocate Surveillance Frequencies to Licensee Control - Risk-Informed Technical Specification Task Force (RITSTF) Initiative 5b, Technical Specification Task Force-425, Revision 3."

3. NEI 04-10, Revision 1, "Risk-Informed Method for Control of Surveillance Frequencies," (ADAMS Accession No. ML071360456).

4. NRC Letter, "Final Safety Evaluation for Nuclear Energy Institute (NEI) Topical Report (TR) 04-10, Revision 1, 'Risk-Informed Technical Specification Initiative 5b, Risk-Informed Method for Control of Surveillance Frequencies'," dated September 19, 2007 (ADAMS Accession No. ML072570267).

**Enclosure 1**

**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-563, "Revise Instrument Testing Definitions to Incorporate the Surveillance Frequency Control 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-563, "Revise Instrument Testing Definitions to Incorporate the Surveillance Frequency Control Program." TSTF-563 revises the Technical Specification (TS) definitions of Channel Calibration, [and Channel Functional Test][Channel Operational Test, and Trip Actuating Device Operational Test], which currently permit performance by any series of sequential, overlapping, or total channel steps, to allow the required frequency for testing the components or devices in each step to be determined in accordance with the TS Surveillance Frequency Control Program.

Attachment 1 provides a description and assessment of the proposed changes. Attachment 2 provides the existing TS pages marked to show the proposed changes. Attachment 3 provides revised (clean) TS pages.

Approval of the proposed amendment is requested by [date]. Once approved, the amendment shall be implemented within [ ] days.

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

[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.]

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

Sincerely,

[Name, Title]

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

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

ATTACHMENT 1 - DESCRIPTION AND ASSESSMENT

1.0 DESCRIPTION

[LICENSEE] requests adoption of TSTF-563, "Revise Instrument Testing Definitions to Incorporate the Surveillance Frequency Control Program." TSTF-563 revises the Technical Specification (TS) definitions of Channel Calibration, [and Channel Functional Test][Channel Operational Test, and Trip Actuating Device Operational Test], which currently permit performance by any series of sequential, overlapping, or total channel steps, to allow the required frequency for testing the components or devices in each step to be determined in accordance with the TS Surveillance Frequency Control Program.

2.0 ASSESSMENT

2.1 Applicability of Safety Evaluation

[LICENSEE] has reviewed the safety evaluation for TSTF-563 provided to the Technical Specifications Task Force in a letter dated [DATE]. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-563. [As described herein,] [LICENSEE] has concluded that the justifications presented in TSTF-563 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.

A Surveillance Frequency Control Program was incorporated into the [PLANT] TS in a license amendment dated [DATE] (NRC Agency Documents Access and Management System (ADAMS) Accession No. XXXXXXXXXX).

2.2 Optional Changes and Variations

[LICENSEE is not proposing any variations from the TS changes described in the TSTF-563 or the applicable parts of the NRC staff's safety evaluation dated [DATE].] [LICENSEE is proposing the following variations from the TS changes described in the TSTF-563 or the applicable parts of the NRC staff's safety evaluation: describe the variations]

[The [PLANT] TS utilize different [numbering][and][titles] than the Standard Technical Specifications on which TSTF-563 was based. Specifically, [describe differences between the plant-specific TS numbering and/or titles and the TSTF-563 numbering and titles.] These differences are administrative and do not affect the applicability of TSTF-563 to the [PLANT] TS.]

[The [PLANT] TS contain requirements that differ from the Standard Technical Specifications on which TSTF-563 was based, but are encompassed in the TSTF-563 justification. [Describe differences and why TSTF-563 is still applicable.]]

[The traveler and Safety Evaluation discuss the applicable regulatory requirements and guidance, including the 10 CFR 50, Appendix A, General Design Criteria (GDC). [PLANT] was not licensed to the 10 CFR 50, Appendix A, GDC. The [PLANT] equivalents of the referenced GDC are [reference including UFSAR location, if applicable]. [Discuss the equivalence of the

referenced plant-specific requirements to the Appendix A GDC as related to the proposed change.] This difference does not alter the conclusion that the proposed change is applicable to [PLANT].]

## 3.0 REGULATORY ANALYSIS

### 3.1 No Significant Hazards Consideration Analysis

[LICENSEE] requests adoption of TSTF-563, "Revise Instrument Testing Definitions to Incorporate the Surveillance Frequency Control Program." TSTF-563 revises the Technical Specification (TS) definitions of Channel Calibration, [and Channel Functional Test][Channel Operational Test, and Trip Actuating Device Operational Test], which currently permit performance by any series of sequential, overlapping, or total channel steps, to allow the required frequency for testing the components or devices in each step to be determined in accordance with the TS Surveillance Frequency Control Program.

[LICENSEE] has evaluated whether or not 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 revises the TS definitions of Channel Calibration, [and Channel Functional Test][Channel Operational Test, and Trip Actuating Device Operational Test] to allow the frequency for testing the components or devices in each step to be determined in accordance with the TS Surveillance Frequency Control Program. All components in the channel continue to be calibrated. The frequency at which a channel calibration is performed is not an initiator of any accident previously evaluated, so the probability of an accident is not affected by the proposed change. The channels surveilled in accordance with the affected definitions continue to be required to be operable and the acceptance criteria of the surveillances are unchanged. As a result, any mitigating functions assumed in the accident analysis will continue to be performed.

   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 previously evaluated?

   Response: No

   The proposed change revises the TS definitions of Channel Calibration, [and Channel Functional Test][Channel Operational Test, and Trip Actuating Device Operational Test] to allow the frequency for testing the components or devices in each step to be determined in accordance with the TS Surveillance Frequency Control Program. The

design function or operation of the components involved are not affected and there is no physical alteration of the plant (i.e., no new or different type of equipment will be installed). No credible new failure mechanisms, malfunctions, or accident initiators not considered in the design and licensing bases are introduced. The changes do not alter assumptions made in the safety analysis. The proposed changes are consistent with the safety analysis assumptions.

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

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

Response: No

The proposed change revises the TS definitions of Channel Calibration, [and Channel Functional Test][Channel Operational Test, and Trip Actuating Device Operational Test] to allow the frequency for testing the components or devices in each step to be determined in accordance with the TS Surveillance Frequency Control Program. The Surveillance Frequency Control Program assures sufficient safety margins are maintained, and that that design, operation, surveillance methods, and acceptance criteria specified in applicable codes and standards (or alternatives approved for use by the NRC) will continue to be met as described in the plants' licensing basis. The proposed change does not adversely affect existing plant safety margins or the reliability of the equipment assumed to operate in the safety analysis. As such, there are no changes being made to safety analysis assumptions, safety limits, or limiting safety system settings that would adversely affect plant safety as a result of the proposed change. Margins of safety are unaffected by method of determining surveillance test intervals under an NRC-approved licensee-controlled program.

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.

5.1. 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 EVALUATION

The proposed change 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 change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or 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 change 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 change.

**Enclosure 2**

**Technical Specifications Proposed Changes**

# 1.0 USE AND APPLICATION

## 1.1 Definitions

----------NOTE----------
The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.
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| Term | Definition |
|---|---|
| ACTIONS | ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times. |
| ALLOWABLE THERMAL POWER | ALLOWABLE THERMAL POWER shall be the maximum reactor core heat transfer rate to the reactor coolant permitted by consideration of the number and configuration of reactor coolant pumps (RCPs) in operation. |
| AXIAL POWER IMBALANCE | AXIAL POWER IMBALANCE shall be the power in the top half of the core, expressed as a percentage of RATED THERMAL POWER (RTP), minus the power in the bottom half of the core, expressed as a percentage of RTP. |
| AXIAL POWER SHAPING RODS (APSRs) | APSRs shall be control components used to control the axial power distribution of the reactor core. The APSRs are positioned manually by the operator and are not trippable. |
| CHANNEL CALIBRATION | A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps *[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |
| CHANNEL CHECK | A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the |

## 1.1 Definitions

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| CHANNEL FUNCTIONAL TEST | A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY.<br><br>The ESFAS CHANNEL FUNCTIONAL TEST shall also include testing of ESFAS safety related bypass functions for each channel affected by bypass operation. The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total steps *[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |
| CONTROL RODS | CONTROL RODS shall be all full length safety and regulating rods that are used to shut down the reactor and control power level during maneuvering operations. |
| CORE OPERATING LIMITS REPORT (COLR) | The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific limits shall be determined for each reload cycle in accordance with Specification 5.6.3. Plant operation within these limits is addressed in individual Specifications. |
| DOSE EQUIVALENT I-131 | DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries/gram) that alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in [Table III of TID-14844, AEC, 1962, "Calculation of Distance Factors for Power and Test Reactor Sites," or those listed in Table E-7 of Regulatory Guide 1.109, Rev. 1, NRC, 1977, or ICRP 30, Supplement to Part 1, page 192-212, table titled, "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity"]. |
| $\bar{E}$ - AVERAGE DISINTEGRATION ENERGY | $\bar{E}$ shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives > [15] minutes, making up at least 95% of the total noniodine activity in the coolant. |

# 1.0 USE AND APPLICATION

## 1.1 Definitions

----------NOTE----------
The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.
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| Term | Definition |
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| ACTIONS | ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times. |
| ACTUATION LOGIC TEST | An ACTUATION LOGIC TEST shall be the application of various simulated or actual input combinations in conjunction with each possible interlock logic state required for OPERABILITY of a logic circuit and the verification of the required logic output. The ACTUATION LOGIC TEST, as a minimum, shall include a continuity check of output devices. |
| AXIAL FLUX DIFFERENCE (AFD) | AFD shall be the difference in normalized flux signals between the [top and bottom halves of a two section excore neutron detector]. |
| CHANNEL CALIBRATION | A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |
| CHANNEL CHECK | A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter. |

1.1 Definitions

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| CHANNEL OPERATIONAL TEST (COT) | A COT shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY. The COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints required for channel OPERABILITY such that the setpoints are within the necessary range and accuracy. The COT may be performed by means of any series of sequential, overlapping, or total channel steps *[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |
| CORE OPERATING LIMITS REPORT (COLR) | The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits shall be determined for each reload cycle in accordance with Specification 5.6.3. Plant operation within these limits is addressed in individual Specifications. |
| DOSE EQUIVALENT I-131 | DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries/gram) that alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in [Table III of TID-14844, AEC, 1962, "Calculation of Distance Factors for Power and Test Reactor Sites," or those listed in Table E-7 of Regulatory Guide 1.109, Rev. 1, NRC, 1977, or ICRP 30, Supplement to Part 1, page 192-212, Table titled, "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity"]. |
| $\bar{E}$ - AVERAGE DISINTEGRATION ENERGY | $\bar{E}$ shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives > [15] minutes, making up at least 95% of the total noniodine activity in the coolant. |

1.1 Definitions

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| [ STAGGERED TEST BASIS | A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function. ] |
| THERMAL POWER | THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant. |
| TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT) | A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of all devices in the channel required for trip actuating device OPERABILITY. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the necessary accuracy. The TADOT may be performed by means of any series of sequential, overlapping, or total channel steps *[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |

## 1.0 USE AND APPLICATION

### 1.1 Definitions

----------NOTE----------
The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.
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| Term | Definition |
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| ACTIONS | ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times. |
| AXIAL SHAPE INDEX (ASI) | ASI shall be the power generated in the lower half of the core less the power generated in the upper half of the core, divided by the sum of the power generated in the lower and upper halves of the core.<br><br>ASI = (LOWER - UPPER) / (LOWER + UPPER) |
| AZIMUTHAL POWER TILT ($T_q$) - Digital | AZIMUTHAL POWER TILT shall be the power asymmetry between azimuthally symmetric fuel assemblies. |
| AZIMUTHAL POWER TILT ($T_q$) - Analog | AZIMUTHAL POWER TILT shall be the maximum of the difference between the power generated in any core quadrant (upper or lower) ($P_{quad}$) and the average power of all quadrants ($P_{avg}$) in that half (upper or lower) of the core, divided by the average power of all quadrants in that half (upper or lower) of the core.<br><br>$T_q = Max \ | (P_{quad} - P_{avg}) / P_{avg} |$ |
| CHANNEL CALIBRATION | A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |

## 1.1 Definitions

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| CHANNEL CHECK | A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter. |
| CHANNEL FUNCTIONAL TEST | A CHANNEL FUNCTIONAL TEST shall be:<br><br>a. Analog and bistable channels - the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY, and<br><br>b. Digital computer channels - the use of diagnostic programs to test digital computer hardware and the injection of simulated process data into the channel to verify OPERABILITY of all devices in the channel required for channel OPERABILITY.<br><br>The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |
| CORE OPERATING LIMITS REPORT (COLR) | The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits shall be determined for each reload cycle in accordance with Specification 5.6.3. Plant operation within these limits is addressed in individual Specifications. |
| DOSE EQUIVALENT I-131 | DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries/gram) that alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in [Table III of TID-14844, AEC, 1962, "Calculation of Distance Factors for Power and Test Reactor Sites," or those listed in Table E-7 of Regulatory Guide 1.109, Rev. 1, NRC, 1977, or ICRP 30, Supplement to Part 1, page 192-212, Table titled, "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity"]. |

# 1.0 USE AND APPLICATION

## 1.1 Definitions

----------NOTE----------
The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.
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| Term | Definition |
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| ACTIONS | ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times. |
| AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR) | The APLHGR shall be applicable to a specific planar height and is equal to the sum of the [LHGRs] [heat generation rate per unit length of fuel rod] for all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle [at the height]. |
| CHANNEL CALIBRATION | A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |
| CHANNEL CHECK | A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter. |
| CHANNEL FUNCTIONAL TEST | A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY. The CHANNEL FUNCTIONAL TEST may be performed by means |

of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*.

# 1.0 USE AND APPLICATION

## 1.1 Definitions

----------NOTE----------
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| Term | Definition |
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| ACTIONS | ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times. |
| AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR) | The APLHGR shall be applicable to a specific planar height and is equal to the sum of the [LHGRs] [heat generation rate per unit length of fuel rod] for all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle [at the height]. |
| CHANNEL CALIBRATION | A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |
| CHANNEL CHECK | A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter. |
| CHANNEL FUNCTIONAL TEST | A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY. The CHANNEL FUNCTIONAL TEST may be performed by means |

of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*~~steps~~.

# 1.0 USE AND APPLICATION

## 1.1 Definitions

----------NOTE----------
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| Term | Definition |
|---|---|
| ACTIONS | ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times. |
| ACTUATION LOGIC TEST | An ACTUATION LOGIC TEST shall be the application of various simulated or actual input combinations in conjunction with each possible interlock logic state required for OPERABILITY of a logic circuit and the verification of the required logic output. The ACTUATION LOGIC TEST shall be conducted such that it provides component overlap with the actuated device. |
| AXIAL FLUX DIFFERENCE (AFD) | AFD shall be the difference in normalized flux signals between the top and bottom halves of a two-section excore neutron detector. |
| CHANNEL CALIBRATION | A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY.<br><br>Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |
| CHANNEL CHECK | A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of |

the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter.

1.1 Definitions

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| CHANNEL OPERATIONAL TEST (COT) | A COT shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY. The COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints required for channel OPERABILITY such that the setpoints are within the necessary range and accuracy. The COT may be performed by means of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |
| CORE OPERATING LIMITS REPORT (COLR) | The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits shall be determined for each reload cycle in accordance with Specification 5.6.3. Plant operation within these limits is addressed in individual Specifications. |
| DOSE EQUIVALENT I-131 | DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries per gram) that alone would produce the same committed effective dose equivalent as the quantity and isotopic mixture of I-130, I-131, I-132, I-133, I-134, and I-135 actually present. The dose conversion factors used for this calculation shall be those listed in Table 2.1 of EPA Federal Guidance Report No. 11, “Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion,” EPA-520/ 1-88-020, September 1988. |
| DOSE EQUIVALENT XE-133 | DOSE EQUIVALENT XE-133 shall be that concentration of Xe-133 (microcuries per gram) that alone would produce the same effective dose equivalent as the quantity and isotopic mixture of noble gases (Kr-85m, Kr-85, Kr-87, Kr-88, Xe-131m, Xe-133m, Xe-133, Xe-135m, Xe-135, and Xe-138) actually present. The dose conversion factors used for this calculation shall be those listed in Table III.1 of EPA Federal Guidance Report No. 12, “External Exposure to Radionuclides in Air, Water, and Soil,” EPA 402 R 93 081, September 1993. |

1.1 Definitions

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| STAGGERED TEST BASIS | A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during n Surveillance Frequency intervals, where n is the total number of systems, subsystems, channels, or other designated components in the associated function. |
| THERMAL POWER | THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant. |
| TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT) | A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of all devices in the channel required for trip actuating device OPERABILITY. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the necessary accuracy. The TADOT may be performed by means of any series of sequential, overlapping, or total channel steps*[, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step]*. |