Nuclear Operating Company
South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

March 18, 2003
NOC-AE-03001458
STI: 31544055
10CFR50.36

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Letter of Intent to Submit a Broad-Scope
Risk-Informed Technical Specification Amendment Request

Reference: Letter dated January 21, 2003 from Anthony R. Pietrangelo, NEI, to William D. Beckner, NRC, "Forwarding of TSTFs"

STP Nuclear Operating Company (STPNOC) proposes to submit a risk-informed set of Technical Specification changes. The proposed changes will be applied to a broad scope of Technical Specifications and will extensively employ a configuration risk management approach in lieu of the existing required completion times. The STPNOC submittal is provided as a pilot plant submittal for the industry.

This submittal is a "letter of intent" that includes all the elements and format typical of a license amendment. It is the initial submittal in the development of the STP full plant pilot as discussed in the referenced letter. Its purpose is to identify and resolve significant technical and policy issues prior to the formal submittal of a license amendment application. STPNOC and other industry representatives propose to meet with the NRC technical staff to discuss the proposed changes after the staff has had an opportunity to review the letter of intent. We believe the justifications and methodology for the final approved product will result in NRC guidance and criteria for the review of risk-informed applications that will be generically applicable to the industry. Following resolution of the significant technical and policy issues, STPNOC will formally submit a license amendment request.

STPNOC proposes this application as a pilot for DG 1122, "An Approach for Determining the Technical Adequacy of PRA Results for Risk-Informed Activities", and its associated Standard Review Plan Section 19.1. This risk-informed TS amendment request is a highly suitable and appropriate candidate for evaluating the process described in DG 1122 for determining application specific PRA quality. It is expected that this pilot effort will result in substantial benefit to both current and future nuclear power plants.

The NRC has indicated that review of pilot applications for DG 1122 are eligible for waiver of review fees and STPNOC requests that the subject review fees be waived for this application. This initial submittal does not include all the information required by DG 1122. STPNOC will supplement this application during the review.

The attached draft Technical Specification amendment was developed so that it conforms to the five risk-informed principles established by the NRC:

- It meets current regulations.
- It maintains defense in depth.
- It maintains sufficient safety margin.
- Any increase in core damage frequency (CDF) is small.
- The impact of the change can be monitored.

Details of how the proposed changes meet the five principles are provided in the attachments.

This set of proposed changes does not extend to surveillance testing requirements. STPNOC believes there are substantial benefits to be gained from risk-informing surveillance requirements; however, STPNOC currently intends to follow the other industry initiatives in this area.

By using STP's Probabilistic Risk Assessment (PRA) to calculate the risk (i.e., CDF, LERF) from the actual plant configuration and comparing it to pre-determined risk thresholds, the configuration risk management program will be capable of providing both a technical basis and robust calculation of an acceptable configuration-specific allowed outage time. The Configuration Risk Management Program (CRMP) will be the same tool that is currently used to perform the assessment of plant risk required by 10CFR50.65(a)(4).

This proposed change is considered fitting and timely for the following reasons:

- It is being submitted at the appropriate time in the overall industry plan for risk-informing the Technical Specifications. It is recognized by industry and NRC that this technological evolution of the Technical Specifications is needed for both current and future nuclear power plants and the state of-the-art in risk management technology makes it feasible now.
- It is consistent with the current STP practices for risk-informed configuration management. STP has been applying risk-informed configuration management technology for the past five years to manage plant maintenance configurations and has the capability to quantify incremental changes in plant risk required for the implementation of the proposed changes.
- It is consistent with the STP philosophy of optimizing safety by application of probabilistic risk technology.
- It complements industry risk-informed Technical Specification initiatives and is a pilot application for a broad use of risk-informed configuration management for allowed outage time determination.

- It effectively links the risk determination required by 10CFR50.65(a)(4) to a complementary Technical Specification allowed outage time.

STPNOC requests the review schedule include an objective of facilitating STPNOC's preparation and submittal of the formal license amendment request in the first quarter of 2004.

STPNOC recognizes that this proposed activity challenges the NRC, the industry and STPNOC itself, but passing this hurdle will be a significant milestone in risk-informed regulation. If you have any questions, please call Wayne Harrison at 361-972-7298 or me at 361-972-7136.

S. M. Head
Manager,
Licensing

Attachments:

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1. Description of Changes and Safety Evaluation
2. Technical Specification Mark-ups
3. Implementation
4. PRA Quality

cc:
(paper copy)

Ellis W. Merschoff
Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, Texas 76011-8064

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

Richard A. Ratliff
Bureau of Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, TX 78756-3189

Cornelius F. O'Keefe
U. S. Nuclear Regulatory Commission
P. O. Box 289, Mail Code: MN116
Wadsworth, TX 77483

C. M. Canady
City of Austin
Electric Utility Department
721 Barton Springs Road
Austin, TX 78704

(electronic copy)

A. H. Gutterman, Esquire
Morgan, Lewis & Bockius LLP

L. D. Blaylock/W. C. Gunst
City Public Service

Mohan C. Thadani
U. S. Nuclear Regulatory Commission

R. L. Balcom
Texas Genco, LP

A. Ramirez
City of Austin

C. A. Johnson
AEP Texas Central Company

Jon C. Wood
Matthews & Branscomb

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1. Description of the changes being proposed and the reasons for seeking the changes. **(**Back to Table of Contents**)**

STPNOC is proposing in this application to implement a risk-informed process for determining allowed outage times for STP Technical Specifications. The risk-informed process involves the application of the STP Configuration Risk Management Program (CRMP). The STP CRMP is a procedurally controlled program utilized by STPNOC for the implementation of 10CFR50.65(a)(4). The details of the proposed changes are described in Section 2 and in the mark-ups of the TS.

STPNOC is proposing this change as a pilot plant for the industry Risk-Informed Technical Specifications (RITS) and for evaluation of DG-1122, as described in the cover letter. The industry has been discussing the development of RITS with the NRC for about 3 years and has proposed eight initiatives. This particular initiative is commonly referred to as Initiative 4B, "Risk-Informed Technical Specifications with a Backstop." Initiative 6 addresses the applicability of Technical Specification 3.0.3. Because of plant-specific 3-train design features, a portion of the STP application necessarily addresses conditions where TS 3.0.3 currently applies. The STP TS typically do not have an action for conditions where more than one of the three required trains of a function are inoperable and TS 3.0.3 must be applied to those configurations. Consequently, STP's application includes a risk-informed action for configurations with more than one inoperable train. STP's application also includes a provision to apply the risk-management process to situations where more than one channel of instrumentation actuation logic are inoperable, provided that at least one of the channels is still functional. Because TS 3.0.3 previously applied to this situation, this is also an extension of Initiative 4B into Initiative 6. This is discussed in more detail in Section 4. The description of the changes will delineate to what extent the STPNOC application addresses TS 3.0.3/Initiative 6.

STPNOC believes it is appropriate for the CRMP to be able to determine the time that can be allowed in a configuration that previously required entry into TS 3.0.3. For many cases, the current TS would require application of TS 3.0.3 simply because the configuration is outside of that defined in the TS although the plant is unlikely to actually be in a seriously degraded condition. Even in unusual cases where all trains or channels of a system required by an LCO are inoperable, a risk assessment to determine the appropriate action time is preferable to application of TS 3.0.3. In such situations, there are often functionally redundant capabilities or the degree of degradation of the inoperable equipment would not prevent the plant level function from being achieved.

Industry Initiative 7 addresses conditions where a TS system might be declared inoperable for administrative reasons or for very low probability design-basis considerations but is otherwise able to perform its design-basis function. Application of the STPNOC configuration risk management program may consider the degree of functionality in the determination of the calculated allowed outage time (AOT). For instance, a component that is inoperable because it is disassembled (i.e., nonfunctional) may be calculated to have a shorter AOT than the same component that is inoperable solely because of a seismic design issue or an internal flooding issue. This is due to the fact that the component's functionality

is only called into question for a specific initiating event (e.g., seismic event). When the likelihood of the seismic event is incorporated into the calculation, the result is a longer AOT, since for all other initiators the component remains capable of performing its intended function(s).

This change proposes the establishment of a new specification, Technical Specification (TS) 3.13, to determine risk-informed allowed outage times applicable to a number of identified LCOs. The proposed new TS 3.13 would be a separate specification in the STP Technical Specifications and would be referred to in the ACTION statement of the referencing specification as an option to the "normal" required action. Complementary changes would be made to specific TS to reference TS 3.13 to allow for application of the CRMP to determine the allowed outage time.

STP's use of TS 3.13 is somewhat different in format from the proposed Improved Technical Specifications (ITS) format, which incorporates the description of the alternative action directly into each LCO in the scope of the change. TS 3.13 accomplishes the same purpose with a "shorthand" approach to accommodate the format difference between the "old" NUREG-0452 STP Standard Technical Specifications and the ITS. However, the concept and implementation are the same.

The operator will have the option of using the existing TS allowed outage time for routine plant activities and emergent conditions that would not be expected to require an extension of the allowed outage time. This existing allowed outage time will be referred to in this application as the "frontstop" time. The frontstop time also provides the operator sufficient time to determine and apply an appropriate extended time from the application of the CRMP for those situations where it is determined that an extended allowed outage time is necessary. Once the CRMP is applied and a component has exceeded its frontstop time, the CRMP must be applied to all subsequent inoperable TS components within the scope of the CRMP to determine the allowed outage time for the new configuration until no components are in ACTIONS beyond the frontstop time. Since the CRMP is the implementing process for 10CFR50.65(a)(4), this achieves consistency between the regulations and the Technical Specifications.

The CRMP establishes a "Non-Risk Threshold" of 1.0E-06 as the first level of threshold severity. At this threshold, the plant is required to initiate action to reduce or manage the risk associated with the configuration. The CRMP will establish a set of risk thresholds reflecting increasing risk significance with commensurate levels of severity and actions. These actions would range from restoring equipment to service, installing temporary modifications, or rescheduling maintenance activities, up to and including transition to safer plant operating modes. A "Potentially Risk-Significant Threshold" core damage probability (CDP) of 1.0E-05 will be established to define the limit for the allowed outage time extension. The allowed outage time would be calculated as the time required for the cumulative risk associated with a plant configuration to cross the threshold. Should the Potentially Risk-Significant Threshold be exceeded, TS 3.13 would immediately impose the required action of the most restrictive TS where the action time had been extended beyond its frontstop.

To facilitate the implementation of the proposed risk-informed TS changes, a number of the required actions associated with the Instrumentation TS are proposed. STPNOC proposes to revise the Instrumentation TS to direct the operator to apply actions associated with the equipment actuated by the instrumentation. These proposed changes will also make the requirements of the TS consistent with respect to plant level safety functions. This proposed change is an STP-specific change that is not part of the industry initiative; however, STP believes it facilitates the Configuration Risk Management Program and this proposed TS amendment because it makes the required action requirements consistent across the plant safety functions and TS sections. In so doing, it reduces opportunity for confusion and misapplication of the TS. The specific changes are listed in Table 2 and discussed in more detail in Section 4.

Specification 3.13 introduces the concept of overall plant configuration risk management into the Technical Specifications. Allowable action times would be replaced for the affected specifications with an action requirement for the overall plant configuration based on the CRMP. A backstop AOT limit of 30 days is provided in the new specifications for those cases where the risk analysis by itself would allow excessively long allowable outage times for a loss of function of a TS component. The 30-day backstop would be applied individually to each LCO for which TS 3.13 has been invoked.

The proposed change may be applied to those structures, systems, and components (SSCs) that are supported by a plant-specific configuration risk management program. All of the components within the scope of the proposed change are modeled in the PRA such that the revised allowed outage time can be calculated. The LCOs and ACTIONs to which this proposed specification applies would each be modified to reference TS 3.13. This submittal only addresses specifications that are applicable in operating modes 1 through 4 because an approved PRA model is not yet available to cover shutdown configurations.

Approval of the changes proposed in this submittal will allow the plant to concentrate efforts in restoring and maintaining plant SSCs with the objective of maintaining a lower overall risk profile and reducing the likelihood of plant transients. In this way, the focus and attention to items most impacting nuclear safety is enhanced. Maintenance actions can then be prioritized based on how to most effectively limit or reduce risk due to the specific plant configuration at a specific time. This ability represents a significant and substantive technological improvement over current TS methodology. With multiple SSCs out of service the operator would be able to prioritize efforts to address equipment that would have the biggest effect in reducing the incremental risk. Application of the Technical Specifications with the proposed changes would require plant transitions to lower operating modes once the overall risk accumulation exceeds the 1.0E-05 CDP level (Potentially Risk Significant Threshold).

In general, the implementation of the STP Risk-Informed Technical Specifications would be consistent with the guidance in the NEI Risk-Informed Technical Specifications Risk Management Guide.

STPNOC takes exception to the risk management guide's proscription against permitting all trains of a function to be inoperable. As shown in Table 2, STPNOC believes there are circumstances where it is appropriate to apply the CRMP when all trains of a function are inoperable.

Implementation is addressed in more detail with specific examples in Attachment 3.

2. Detailed Description of Proposed Changes

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Table 2 describes the proposed changes to the Technical Specifications. It includes the deterministic basis and the risk basis for each proposed change. The table also indicates where the STP application is extended to Industry Initiative 6 (TS 3.0.3 initiative).

The risk basis column provides calculated AOT for the inoperable condition existing with no other SSC within the scope of the CRMP (i.e., PRA) being inoperable. To illustrate the "risk margin" a number of the functions depict the AOT without the application of the proposed 30-day backstop. The AOTs in this column represent "base case" and are calculated using the 1.0E-05, potentially risk significant thresholds. When "inoperable" is used in this column, it means that SSC is not capable of performing its intended function. Application of the CRMP to those conditions where the function is degraded or where operator action can be procedurally credited to restore adequate capability could result in longer allowed outage time. Review of the information in this column provides a degree of insight on the available margin.

There are some configurations described in Table 2 for which the technical assessment or risk assessment has not been completed. STPNOC plans to complete those assessments prior to submittal of the formal license amendment request. Even though they are incomplete, they are still useful to demonstrate the full scope of the proposed risk-informed changes.

3. Background

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STPNOC is proposing in this application to implement a risk-informed process for determining allowed outage times for STP Technical Specifications. The risk-informed process involves the application of the STP Configuration Risk Management Program (CRMP). The STP CRMP is also utilized by STPNOC for the implementation of 10CFR50.65(a)(4).

The current South Texas Project Technical Specifications are based on Westinghouse Standard Technical Specifications (Draft NUREG-0452 Rev. 5), which assume a two-train Engineered Safety Features design. However, the South Texas Project utilizes a three-train Engineered Safety Features design. Therefore, although the South Texas Project maintains an additional ESF train above the standard Westinghouse design, the South Texas TS Limiting Conditions for Operation and associated Action Statements have not effectively addressed the availability of the third ESF train. Furthermore, traditional Technical

Specifications are component and system specific in the sense that the designated allowed outage times do not take into consideration the cumulative risk of various other components being in their associated individual Action Statements concurrently, rather each Action Statement is independent of the other.

The Configuration Risk Management and Maintenance Rule Programs establish the means and methods to assess the risk due to out of service equipment associated with various plant configurations, including those in which multiple Technical Specification related systems are affected. Therefore, the intent of the changes to the Technical Specifications proposed in this submittal is to integrate the availability of the third ESF train along with the insights provided by the Configuration Risk Management Program to establish risk-informed allowed outage times for selected Specifications and which take into consideration the cumulative risk associated with each entry into an Action Statement.

This submittal is presented in a format that addresses the Principles of Risk-Informed Decision-making set forth in Regulatory Guides 1.174 and 1.177. Specifically, justification is provided which demonstrates that:

1. The proposed change meets the current regulations. No exemption or rule change is being requested.

   The proposed changes provide a risk-informed methodology for determining the allowed outage times associated with selected Technical Specifications. The proposed changes are in compliance with current regulations. These evaluations provided in this application confirm that the proposed changes maintain adequate defense-in-depth, safety margin, and the capability to meet plant design-basis. Additionally, the risk-informed allowed outage times proposed are consistent with the Configuration Risk Management Program and the Maintenance Rule in ensuring adequate margin to core damage and/or radiation release. Therefore, the proposed changes to the Technical Specifications are in compliance with all current regulations while meeting all license conditions.

   Refer to Section 5.2 of this submittal for a detailed justification.

2. The proposed change is consistent with the defense-in-depth philosophy. Traditional engineering considerations have been used to demonstrate this consistency.

   The proposed Technical Specification changes preserve the existing balance between prevention of core damage, prevention of containment failure, and consequence mitigation by ensuring that allowed outage times are based upon the cumulative risk associated with the current plant configuration. The CRMP, in conjunction with the PRA, explicitly measures and accounts for the level of defense-in-depth from both an instantaneous and a cumulative basis. It considers plant design features, operating philosophy, and equipment capability. The ability of the CRMP to assess the level of defense-in-depth is a substantial technological improvement over current methods.

The risk assessment will adequately consider defense-in-depth, quantitatively in the PRA model and by a qualitative assessment of the specific configuration. For most plants, application of the risk assessment will allow sufficient extension of the frontstop time to meet station needs for maintenance and corrective action. Due to the availability of STP's third ESF train, in situations where TS 3.13 is applied, the CRMP will generally allow a significant extension of the frontstop completion time. However, for situations in which more than one Technical Specification SSC is inoperable, the allowed outage times will be similar in magnitude, and in some cases shorter, than existing allowed outage times.

Refer to Section 4 of this submittal for a detailed justification.

3. The proposed change maintains sufficient safety margin.

   The allowed outage time changes proposed represent a risk-neutral to risk-beneficial change. Therefore, sufficient margins are maintained as a result of the proposed changes. Since this is a risk-informed application, no change is proposed on design-basis features of the station. There are no changes to plant safety limits or setpoints.

   Refer to Section 4 of this submittal for a detailed justification.

4. The proposed change does not measurably change overall average core damage frequency for STP. In fact, the proposed change implements a mechanism to ensure any change from any modeled core damage contributor is identified and monitored. Therefore, it can be stated that the proposed change itself does not significantly impact core damage frequency and is consistent with the Commission's Safety Goal Policy Statement. In fact, the proposed changes will ensure that allowed outage times are based on and evaluated against established risk thresholds consistent with the Safety Goal Policy.

   Refer to Section 4 of this submittal for a detailed justification.

5. The impact of the change should be monitored using performance measurement strategies.

   Changes to core damage frequency and cumulative risk associated with Technical Specification related equipment being out of service will continue to be monitored in accordance with the Configuration Risk Management Program and Maintenance Rule Programs. Plant-specific performance indicators have already been identified and developed and have been in use for several years at STP.

   Refer to Section 4 of this submittal for a detailed justification.

4. Technical Analysis

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STPNOC proposes to apply a risk-informed process to determine the allowed outage time for a number of Technical Specifications. The risk-informed process would apply the Configuration Risk Management Program (CRMP) to evaluate plant configurations and determine the time required for the risk to exceed the Potentially Risk Significant Threshold of 1.0E-05 and establish the allowed outage time for the configuration based on that time. The CRMP would require the plant to initiate action to manage risk levels at the 1.0E-06 threshold. Because of the low risk significance of a number of components in the Technical Specifications, the process includes a "backstop" maximum allowed outage time of 30 days.

Compliance with Design and Licensing Basis

STPNOC is proposing a risk-informed method for determining configuration based allowed outage times in lieu of Technical Specification LCOs.

The proposal does not include new plant design features, new operating parameters, new operating configurations, new design analyses, or new analytical assumptions. No new accidents are postulated and the mitigation for existing design-basis accidents is unchanged.

Table 2 describes the basic deterministic basis for each of the requested changes and depicts the calculated times required to accrue risk to a 1.0E-5 incremental core damage probability (ICDP) threshold for the affected systems assuming no additional modeled systems are concurrently unavailable. For single items, these times are longer than the allowed outage times in the existing Technical Specifications. The longer calculated times are a result of the robust design and redundancy typical of nuclear plants, coupled with the low likelihood of design-basis initiating events.

STPNOC will continue to manage its maintenance practices to maintain the good material condition of plant components. STPNOC will not unnecessarily extend out-of-service times such that equipment availability and reliability is adversely affected or in conflict with maintenance rule requirements. Since 1996, STPNOC has been able to routinely quantify risk from maintenance configurations. In that time, STP's maintenance history has consistently kept the configuration in a band with an ICDP < 1.0E-06, with only one configuration with an ICDP > 1.0E-06. There have been no configurations with an ICDP > 5.0E-06. STP equipment reliability and availability will still meet licensing and design-basis requirements established by regulations such as 10CFR50.63, "Loss of all alternating current power" and 10CFR50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants."

The 30-day allowed outage time backstop limit established in Specification 3.13 provides further assurance that there is no significant challenge to the design and licensing basis from the longer allowed outage times.

Based on the assessment above, the extended allowed outage time will not affect design-basis assumptions for equipment availability and STPNOC concludes the proposed change does not change the design and licensing basis for STP.

Defense-in-Depth

Following the guidance provided in Regulatory Guide (RG) 1.77, the impact of the proposed Technical Specification change on the defense-in-depth is addressed below. Based on the following discussion, STPNOC has concluded that the proposed change meets the defense in depth principle.

- *A reasonable balance among prevention of core damage, prevention of containment failure, and consequence mitigation is preserved, i.e., the proposed change in a TS has not significantly changed the balance among these principles of prevention and mitigation, to the extent that such balance is needed to meet the acceptance criteria of the specific design-basis accidents and transients, consistent with 10 CFR 50.36. TS change requests should consider whether the anticipated operational changes associated with a TS change could introduce new accidents or transients or could increase the likelihood of an accident or transient (as is required by 10 CFR 50.92).*

  The proposed change represents a more robust technical approach that preserves a reasonable balance among prevention of core damage, prevention of containment failure, and consequence mitigation. STPNOC is proposing no changes to the design of the plant or any operating parameter. No new operating configurations are being proposed. The design-basis is not changed by the proposed changes to the Technical Specifications. The effect of the change when it is implemented will be that the CRMP will allow allowed outage times to vary based on the risk significance of the given plant configuration (i.e. the amount of equipment removed from service at any given time). In cases where there are multiple components inoperable in more than one train, the calculated risk-informed allowed outage time for the combination may be less than currently prescribed in the Technical Specifications. In many cases, the calculated allowed outage time for a single component will be greater than what the Technical Specifications currently allow.

  As discussed above, STPNOC's configuration risk management program has shown that STPNOC's risk monitoring practices are effective. As another compensatory measure, proposed Specification 3.13 establishes a 30-day limit on the allowed outage times for those components whose calculated allowed outage times are particularly long (the "backstop").

- *Over-reliance on programmatic activities to compensate for weaknesses in plant design is avoided, e.g., use of high reliability estimates that are primarily based on optimistic program assumptions*

  The proposed application of a plant-specific CRMP program to determine allowed outage times uses plant-specific operating experience for component reliability and availability

data. Thus, the allowances permitted by the CRMP are directly reflective of actual component performance in conjunction with component risk significance. In some cases the CRMP may use compensatory actions to reduce calculated risk in some configurations. These compensatory actions may be incorporated in procedures, work instructions, or other station media. The high degree of redundancy at STP reduces the reliance that might otherwise be placed on operator action or other programmatic activities.

STP's design includes three trains of Engineered Safety Feature (ESF) equipment, which is a robust design. Table 1 compares the defense-in-depth of STP's three-train design to the two-train design for a comparable Westinghouse PWR. Table 2, with the deterministic and risk bases, provides additional detail with respect to STP's accident mitigation capability with less than three trains available. The allowed outage times shown for STP with two of three trains out of service are roughly what would be expected to apply for a two-train plant with one of two trains out of service. The table clearly shows that significant margin is retained for either a three-train or a two-train design.

The Standard Technical Specifications for Westinghouse plants were written for standard plants with two trains of Engineered Safety Feature (ESF) equipment. For such standard plant designs, the safety functions are degraded (loss of single failure protection) when a single train of an ESF function is inoperable, and there is a loss of safety function when two trains of an ESF function are inoperable. At STP, however, when only one of the three ESF trains is inoperable, there is more margin than for a two-train plant during conditions where one of two ESF trains is inoperable. STP does not experience a complete loss of safety function when two of three trains of an ESF function are inoperable. Because of the third ESF train, it is reasonable for the probabilistic risk assessment calculations for STP to justify relatively long allowed outage times when one of three trains is inoperable, and a reasonable allowed outage time for conditions where two of three trains are inoperable.

STPNOC proposes to apply the CRMP to determine the appropriate allowed outage times based on quantifying the risk associated with the plant configuration. The advantage of the CRMP is that it quickly and accurately assesses the relative significance of a given configuration, including those that involve multiple components in a single train or more than one train of equipment. The use of the Configuration Risk Management Program proposed in this submittal is an effective method to determine the safety implications associated with multiple inoperable components. In addition, the combined CRMP enables the operator to identify the most effective actions (i.e., return to service priority) to take to restore the plant to a safer (i.e., less risk-significant) configuration and how prompt the corrective or compensatory action should be.

STP has structured its application for Risk-Informed Technical Specifications to incorporate the three train design concepts described above. The first entry in Table 2 below outlines a general philosophy of a typical two-train plant and a three-train plant with risk-informed Technical Specifications. The time allowed to be in a condition with

less than three trains operable is based on a reasonable time to restore operability and the capability of the remaining operable equipment. The STP Probabilistic Safety Assessment (PSA) shows that the risks incurred by the proposed allowed outage times are acceptable and consistent with guidance contained in the EPRI PSA Application Guide.

- *System redundancy, independence, and diversity are maintained commensurate with the expected frequency and consequences of challenges to the system, e.g., there are no risk outliers. The following items should be considered.*

    - *Whether there are appropriate restrictions in place to preclude simultaneous equipment outages that would erode the principles of redundancy and diversity,*

      Application of the CRMP determines the risk significance of plant configurations. It also permits the operator to identify the equipment that has the greatest effect on the existing configuration risk. With this information, the operator can control the out-of-service duration and determine the consequences of removing additional equipment from service. The application of the CRMP approach places high value on key safety functions and works to ensure they remain a top priority over all plant conditions.

    - *Whether compensatory actions to be taken when entering the modified AOT for pre-planned maintenance are identified,*

      Application of the CRMP provides a structure to assist the operator in identifying effective compensatory actions for various plant maintenance configurations to maintain and manage acceptable risk levels.

    - *Whether voluntary removal of equipment from service during plant operation should not be scheduled when adverse weather conditions are predicted or at times when the plant may be subjected to other abnormal conditions, and*

      The CRMP is based on STP's Level 1 and 2 PRA, including external events; thus, the calculated values for configuration risk include the effect of adverse weather conditions on average. Consideration of existing weather effects on specific plant configurations is accounted for in the risk-informed programmatic application of the CRMP and in the station's Severe Weather procedure. STPNOC typically considers the potential effect of weather on planned maintenance of components that could potentially be challenged during severe weather, such as Standby Diesel Generators, Turbine Driven Auxiliary Feedwater, and Switchyard. Compensatory measures are also taken at STP for adverse weather conditions in accordance with plant procedures (e.g., freeze protection, storm warnings and watches).

- *Whether the impact of the TS change on the safety function should be taken into consideration. For example, what is the impact of a change in the AOT for the low-pressure safety injection system on the overall availability and reliability of the low-pressure injection function?*

  Application of the CRMP incorporates the impact of the extended allowed outage time on the availability and reliability of the affected plant-level safety functions and associated equipment. The effects will be quantified and traceable on the key figures-of-merit such as core damage frequency and large early release frequency. Managing to the actions required in proposed TS 3.13 and the risk-informed configuration management program will assure that the effects are known, small, and manageable. Also, the balance of availability and reliability will also be monitored and corrected in accordance with the station's compliance with the Maintenance Rule.

  As discussed in the description in Section 1, STP's application includes changes in the Actions associated with the actuation relays to require the operator to enter the specification associated with the actuated equipment. The specific changes are listed in Table 2. In each case, STP has included in the specification for the actuated equipment a reference to TS 3.13. The proposed change in the actuation relay action is consistent with the definition of OPERABILITY in the Technical Specifications since the instruments are considered support equipment for the actuated components and functions. Referring to the action for the actuated component will eliminate inconsistencies in the TS where the instrumentation has different required action time than the actuated component when the plant functions and associated consequences are the same. The proposed actions for the actuated systems address actions for one or more inoperable trains. Application of TS 3.13 will address the overall plant configuration.

  In an extension of the CRMP beyond Initiative 4B, STP proposes to allow application of the CRMP to an emergent condition where more than one both channel of instrumentation actuation logic is inoperable, provided that at least one channel is functional. This would allow the CRMP to be applied in conditions that previously would have required entry into TS 3.0.3.

  STP would not purposely remove both actuation channels from service simultaneously, and the CRMP would not permit continued operation in that configuration for an extended time.

  When both channels are inoperable, STP proposes a condition that at least one channel still be functional. A channel would be considered to still be functional if it could reasonably be expected to perform its design function under the most likely accident-related service conditions. An example of a functional channel might be a channel found to have an unqualified seismic mounting but is otherwise operable. Application of a risk-informed allowed outage time would be appropriate in this situation.

The proposed action is a logical application of a configuration risk management program. TS 3.0.3 was created to address conditions where the other TS had no prescribed action; i.e., where the plant was in an undefined operating configuration. Application of the CRMP specifically addresses that situation by defining the risk associated with the configuration and facilitating the determination of the correct response. TS 3.0.3 prescribes only one action – shutdown. Shutdown might not be the most appropriate action and application of TS 3.13 and the CRMP provides the means for the operator to take a more effective and safer course of action.

Safety Margin

In accordance with RG 1.177, with sufficient safety margins:

- *Codes and standards or their alternatives approved for use by the NRC are met.*

- *Safety analysis acceptance criteria in the Licensing Basis (e.g., FSAR, supporting analyses) are met, or proposed revisions provide sufficient margin to account for analysis and data uncertainty.*

Use of the CRMP to determine allowed outage time will not affect STPNOC's commitment to the codes and standards used in the design of STP. STPNOC is not proposing in this application to change any quality standard, material, or operating specification. Acceptance criteria for operability of equipment are not changed.

The design-basis analyses for STP remain applicable. Although STPNOC will be able to have design-basis equipment out of service longer than the current Technical Specifications allow, the actual expected increase in unavailability will be insignificant with respect to design-basis assumptions regarding accident mitigation. In addition, it would be expected that there would be some increase in reliability to offset any increase in unavailability.

In support of its application for the license amendment extending the allowed outage time for the Standby Diesel Generators (approved in Amendments 85 and 72), STP evaluated the capabilities of a single train of ESF equipment to mitigate design-basis accidents. Because the governing event is a condition where only one train of ESF equipment is postulated to be available, the analyses and evaluations performed in support of Amendments 85 and 72 are relevant to the evaluations of the changes to the allowed outage times being proposed in the Risk-Informed Technical Specifications. The results of the deterministic evaluation done in support of those amendments show that with only one train of ESF equipment available, and allowing for some operator actions, STP can mitigate nearly all design-basis events. Those design-basis events that could not be mitigated are considered extremely rare (i.e., design-basis LOCA).

Table 3 depicts the capability described above for STP to mitigate design-basis accidents with only one of the three ESF trains available, such as might be postulated if a design-basis accident and worst single failure were to occur with one entire train unavailable.

This is a very conservative assumption because it imposes single failure while the plant is in an ACTION statement. Were the single failure not considered, there would be no reduction in mitigation capability. The table shows that there is a substantial margin of safety.

Proposed Specification 3.13 also helps protect the margin of safety by preventing operation for extended periods in a configuration where a single failure would cause the loss of function of a system required to mitigate a design-basis accident. Effective and timely maintenance practices will limit the time that any train of accident mitigation equipment is unavailable such that having even one train of ESF equipment out of service for 30 days (assuming a system or component where that duration is permitted by the CRMP) is expected to occur rarely, if ever. In addition, compliance with Maintenance Rule requirements and availability and reliability standards from the Revised Reactor Oversight Program will limit the time any required equipment is out of service.

5. Regulatory Safety Analysis

5.1. No Significant Hazards Determination

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The following changes to the Technical Specifications are included in the proposed license amendment:

- Proposed new Specification 3.13 for allowed outage times to be determined by a risk-informed configuration risk management program and associated changes to the specific specifications that will apply TS 3.13
- Proposed changes to certain ACTION statements in Instrumentation TS 3.3 to delete allowed outage times specific to the instrument and instead to apply the required ACTION for the actuated component or system
- Proposed changes to certain ACTION statements in individual specifications to allow the application of the CRMP in accordance with the new Specification 3.13.

In accordance with the criteria set forth in 10CFR50.92, the South Texas Project has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the proposed change to the Technical Specifications involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed changes to the Technical Specifications to add new a TS 3.13 and to change specific TS to apply the new TS 3.13 do not involve a significant increase in the probability of an accident previously evaluated because the changes involve no change to the plant or its modes of operation. In addition, the risk-informed configuration management program will be applied to effectively manage the availability of required systems, structures, and components to assure there is no

significant increase in the probability of an accident. These proposed changes do not increase the consequences of an accident because the design-basis mitigation function of the affected systems is not changed and the risk-informed configuration management program will be applied to effectively manage the availability of systems, structures and components required to mitigate the consequences of an accident. The application of the risk-informed configuration management program is considered a substantial technological improvement over current methods.

The proposed changes to the Instrumentation TS 3.3 do not involve a significant increase in the probability or consequences of an accident previously evaluated because they only make the required action for instrumentation that supports other TS equipment consistent with the action required for the supported equipment. There are no changes in the design requirements or function.

Therefore, none of the proposed changes involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the proposed change to the Technical Specifications create the possibility of a new or different kind of accident from any accident previously evaluated?**

   None of the proposed changes involve a new mode of operation or design configuration. There are no new or different systems, structures, or components proposed by these changes. Therefore, there is no possibility of a new or different kind of accident.

3. **Does the proposed change to the Technical Specifications involve a significant reduction to a margin of safety?**

   Proposed new TS 3.13 and the associated changes to the specifications that apply the new TS 3.13 implement a risk-informed configuration management program to assure that adequate margins of safety are maintained. Application of these new specifications and the configuration management program considers cumulative effects of multiple systems or components being out of service and does so more effectively than the current Technical Specifications. Therefore, application of these new specifications will not involve a significant reduction in a margin of safety.

   The proposed changes to TS 3.3 make the instrumentation required actions consistent with the supported equipment actions. This change maintains the current margin of safety for the functions supported by that equipment and instrumentation.

   Based on the evaluation above, none of the proposed changes involve a significant reduction in a margin of safety.

5.2. Applicable Regulatory Criteria

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The proposed changes will revise the allowed outage times associated with selected specifications so that they will be managed in accordance with a risk-informed configuration risk management program (CRMP) instead of having a prescriptive time in the specification. As discussed below, this change in format and allowed outage time management still incorporates the elements required by 10CFR50.36 for Technical Specifications.

10CFR50.36 requires that Technical Specifications contain limiting conditions for operation (LCOs). The changes proposed will retain the LCOs. The current LCOs associated with the specifications to be changed include ACTION statements that require shutdown if required conditions are not met in a specified time. 10CFR50.36 requires that: "When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met." STPNOC is proposing to change the specifications to allow for a risk-informed process for determining required remedial action. The mechanism for STPNOC's change is a new Specification 3.13 that establishes a risk-informed configuration management program for determining required actions and allowed outage times, up to a 30-day limit. Individual LCOs will indicate if Specification 3.13 is applicable. Consequently, the provisions of 10CFR50.36 are met with the proposed TS 3.13.

STPNOC is not proposing changes that remove existing LCOs or which affect the 10CFR50.36 requirements for Safety Limits, Surveillance Requirements, Design Requirements, or Administrative Controls.

The proposed change complements recent changes to 10CFR50.65 requiring licensees to assess and manage risk associated with removing equipment from service for maintenance. The risk-informed configuration management program used to determine the allowed outage time of the Technical Specifications also meets the requirement of 10CFR50.65(a)(4) for performing a risk assessment for equipment removed from service for maintenance.

As discussed in the section below, STPNOC is not proposing to change the design or licensing basis for STP. Compliance with other design-basis regulations (e.g., 10CFR50.49, 10CFR50.46) or the General Design Criteria is not changed.

Based on the discussion above, STPNOC concludes that the proposed changes to the LCOs to eliminate the specified required ACTION times and replace them with application of Specification 3.13 is in compliance with regulatory requirements.

6. Environmental Assessment
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This proposed Technical Specification Change has been evaluated against the criteria for and identification of licensing and regulatory actions requiring environmental assessment in accordance with 10CFR51.21. It has been determined that the proposed changes meet the criteria for categorical exclusion as provided for under 10CFR51.22 (c) (9). The following is a discussion of how the proposed Technical Specification Change meets the criteria for categorical exclusion.

10CFR51.22 (c) (9). Although the proposed change involves changes to requirements with respect to the use of a facility component,

(i) the proposed change involves no Significant Hazards Consideration (refer to the No Significant Hazards Consideration section of this Technical Specification Change Request),

(ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite since the proposed changes do not change the assumptions regarding generation of any radioactive effluents nor do they affect any of the permitted release paths, and

(iii) there is no significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10CFR51.22 (c)(9). Based on the aforementioned and pursuant to 10CFR51.22 (b), no environmental assessment or environmental impact statement need be prepared in connection with issuance of an amendment to the Technical Specifications incorporating the proposed changes of this request.

Table 1
General Case: Three Train Design TS Requirements

System/Condition	Standard Two Train Specification	Current STP Specification	Proposed STP Risk-Informed Specifications	Safety Evaluation	Comments
All Trains Operable	Unlimited	Unlimited	Unlimited	Two train and three train plants meet design-basis, including single failure criteria.	
1 Train Inoperable	72 hours (typ.)	7 days (typ.)	As determined by the CRMP	2-train plant: no loss of safety function, but does not meet single failure criteria. STP (3 trains): no loss of safety function; meets single failure criteria in most cases.	Application of the CRMP recognizes the defense-in-depth capabilities and limitations and provides reasonable time and technical basis to take corrective actions. CRMP also takes into account integrated plant impacts including unavailability of multiple systems, thereby performing the function of a Safety Function Determination Program.
2 Trains Inoperable	T.S 3.0.3 or equivalent	T.S. 3.0.3 or equivalent (typ.)	As determined by the CRMP	2-train plant: loss of safety function. Application of CRMP recognizes plant level functional redundancy in safety systems and the low probability of an initiating event requiring two trains for mitigation. Some time to restore the inoperable function is appropriate based on the very low probability of an initiating event while in this configuration. STP (3 trains): loss of safety function only for specific low probability events (see details below and Table 3). Retains safe shutdown capability for non-accident conditions. A risk-informed allowed outage time is appropriate.	Application of the CRMP recognizes the capabilities and limitations and provides reasonable time to take corrective actions. CRMP also takes into account unavailability of multiple systems, thereby performing the function of a Safety Function Determination Program. Because STP typically has no action for 2 inoperable trains, TS 3.0.3 applies and this extends Initiative 4B to cover Initiative 6 for these configurations.
3 Trains Inoperable	NA	T.S. 3.0.3 or equivalent	As determined by the CRMP	Loss of safety function	Some time to restore the inoperable function is appropriate based on the very low probability of an initiating event while in this configuration. (RITS Initiative 6)

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.3.1.1 Manual Reactor Trip Action 1	With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours.	With one less than the Minimum Channels OPERABLE, within 48 hours restore the inoperable channel or apply TS 3.13, OR be in HOT STANDBY within the next 6 hours. With the number of channels more than one less than the Minimum Channels OPERABLE, within 6 hours restore at least one channel or apply TS 3.13, OR be in HOT STANDBY within the next 6 hours	Automatic reactor trip functions are still available. The reactor trip breakers' motor control center can be de-energized from the control room to assure reactor trip. STP would not purposely enter a condition with both channels of manual reactor trip inoperable.	One channel: Backstop	4B, 6
3.3.1.20 RTBs Action 9	With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.	With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement and with at least one channel functional, within 6 hours be in at least HOT STANDBY or apply the requirements of specification 3.13; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE	The reactor trip breakers' motor control center can be de-energized from the control room to assure reactor trip. The requirement that at least one channel is functional provides assurance that the RTB will perform as expected. STP would not purposely enter a condition with both channels of reactor trip breakers inoperable.	LATER	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.3.1.18 SI input from ESFAS 3.3.1.21 Automatic Trip and Interlock Logic Action 9A	With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours, or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.	With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement and with at least one channel functional, within 24 hours restore the inoperable channel to OPERABLE status, or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.	There are two channels for these functions. With only one channel inoperable, the other channel will be available to perform the function. With both channels inoperable, at least one channel is required to be functional, providing a high level of confidence that the design function will be accomplished. STP would not purposely enter a condition with both channels of reactor trip breakers inoperable.	LATER	4B, 6
3.3.2.1.b SI Automatic Actuation Logic 3.3.2.2.b CS Automatic Actuation Logic 3.3.2.3.a.2 Containment Isolation Automatic Actuation Logic 3.3.2.3.c.1 Phase B Isolation Automatic Actuation Logic Action 14	With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.	With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement and with at least one channel functional, within 24 hours restore the inoperable channel to OPERABLE status, or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.	There are two channels for these functions. With only one channel inoperable, the other channel will be available to perform the function. With both channels inoperable, at least one channel is required to be functional, providing a high level of confidence that the design function will be accomplished. Manual action is also available to perform the function. Manual action is generally timely for most accidents that would require actuation of these functions. In both cases, 24 hours is an adequate frontstop to perform an assessment of the condition and determine the appropriate action and AOT. .	1 channel: 30 days (backstop)	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.3.2.2.d CS on Containment Pressure Hi-3 3.3.2.3.c.3 Phase B on Containment Pressure Hi-3 Action 17 b. (New Action)	Existing Action (to be Action a.): With the number of OPERABLE channels one less than the Total Number of Channels, place the inoperable channel in the bypassed condition within 72 hours, or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours. One additional channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.2.1.	b. With the number of OPERABLE channels more than one less than the Total Number of channels, within 12 hours apply the requirements of Specification 3.13 or be in at least HOT SHUTDOWN within the following 6 hours.	The current requirement would be retained as Action a. and a new Action b. that applies TS 3.13 added for conditions where more than one channels is inoperable. The actuation logic for the subject functions is 2/4, which allows a relatively high degree or redundancy. Application of TS 3.13 would permit the use of compensatory actions such as placing an inoperable channel in trip. The 12 hour frontstop time is commensurate with the safety significance of the functions.	1 channel: 30 days (backstop)	4B, 6
3.3.2.1.a SI Manual Initiation 3.3.2.2.a CS Manual Initiation 3.3.2.3.a.1 Containment Isolation Manual Initiation Action 19	With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement, within 48 hours restore the inoperable channel to OPERABLE status or apply the requirements of specification 3.13,OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours	Automatic initiation of these functions is the primary initiation process. STP would not purposely enter a condition that made both channels of a function inoperable. In addition, SI and CS can be manually aligned and started from the control room. The most critical systems for containment isolation are those that could be open to the atmosphere, which is generally limited to the normally closed RCB purge For most design-basis events, manual alignment is adequate for mitigation. A 48 hour frontstop time is commensurate with the risk-significance of the condition.	1 channel: 30 days (backstop) (A condition where neither channel is at least functional is expected to be rare.)	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.3.2.4.a.2 Manual Steam Line Isolation, System 3.3.2.9.c ESFAS Interlocks: Reactor Trip, P-4 Action 23	With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.	With the number of OPERABLE channels less than the Total Number of Channels and with at least one channel functional, within 48 hours restore the inoperable channels to OPERABLE status or apply the requirements of Specification 3.13,OR be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.	Steam line isolation is accomplished primarily by automatic initiation. The operator can also manually isolate the steam lines individually. For inoperable P-4: Immediate operator response to reactor trip is to confirm/trip the turbine. The requirement for at least one channel to be functional provides additional assurance that the design function will be accomplished. STP would not purposely enter a condition that made both channels of a function inoperable.	1 channel: 30 days (backstop)	4B, 6
Automatic Switchover to Containment Sump: 3.3.2.7.a Automatic Actuation Logic and Relays 3.3.2.7.b RWST low-low level Action 19 to new Action 26	With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With less than the minimum channels OPERABLE, declare the associated system/train/component inoperable and apply the requirements of the applicable Technical Specification Action.	In these conditions, the inoperability of the instrument makes the associated equipment inoperable and the appropriate action is to enter the TS for that equipment. This proposed change makes the TS more consistent.	1 channel: 30 days (backstop)	NA

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.3.2.1.c SI Actuation Relays 3.3.2.2.c CS Actuation Relays 3.3.2.3.a.3 Containment Isolation Actuation Relays 3.3.2.3.c.2 Phase B Isolation Actuation Relays Action 14 to new Action 26	With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.	With less than the minimum channels OPERABLE, declare the associated system/train/component inoperable and apply the requirements of the applicable Technical Specification Action.	In these conditions, the inoperability of the instrument makes the associated equipment inoperable and the appropriate action is to enter the TS for that equipment. This proposed change makes the TS more consistent.	1 channel: 30 days (backstop)	NA
3.3.2.6.c Auxiliary Feedwater Actuation Relays Action 22 to New Action 26	With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.	With less than the minimum channels OPERABLE, declare the associated system/train/component inoperable and apply the requirements of the applicable Technical Specification Action.	In these conditions, the inoperability of the instrument makes the associated equipment inoperable and the appropriate action is to enter the TS for that equipment. This proposed change makes the TS more consistent.	1 channel: 30 days (backstop)	NA

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.3.2.6.a Auxiliary Feedwater Manual Initiation Action 26	With the number of channels OPERABLE less than the Minimum Channels OPERABLE requirement, declare the affected Auxiliary Feed Water Pump inoperable and take ACTION required by Specification 3.7.1.2.	With less than the Minimum Channels OPERABLE requirement, declare the associated system/train/component inoperable and apply the requirements of the applicable Technical Specification Action	Administrative change to create a generally applicable ACTION.	NA	NA
3.3.2.10.a. Control Ventilation Manual Initiation 3.3.2.10.c. Control Room Ventilation Automatic Actuation Logic and Actuation Relays Old Action 27 to revised Action 26	For an inoperable channel, declare its associated ventilation train inoperable and apply the actions of Specification 3.7.7.	With less than the Minimum Channels OPERABLE requirement, declare the associated system/train/component inoperable and apply the requirements of the applicable Technical Specification Action. (Old Action 27 – NOT USED)	Administrative change to create a generally applicable ACTION.	NA	NA

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.3.2.4.b Steam Line Isolation Actuation Logic and Relays 3.3.2.6.b AFW Actuation Logic Action 22	With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours, or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.	With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement and with at least one channel functional, within 24 hours restore the inoperable channel to OPERABLE status or apply the requirements of specification 3.13, OR be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE..	There are two channels for these functions. With only one channel inoperable, the other channel will be available to perform the function. With both channels inoperable, at least one channel is required to be functional, providing a high level of confidence that the design function will be accomplished. STP would not purposely enter a condition with both channels of reactor trip breakers inoperable.	1 channel: 30 days (backstop)	4B, 6
3.3.2.5.a Turbine Trip and FW Isolation Actuation Logic and Relays Action 25	With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.	With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement and with at least one channel functional, within 24 hours restore the inoperable channel to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.	There are two channels for these functions. With only one channel inoperable, the other channel will be available to perform the function. With both channels inoperable, at least one channel is required to be functional, providing a high level of confidence that the design function will be accomplished. STP would not purposely enter a condition with both channels of reactor trip breakers inoperable.	1 channel: 30 days (backstop)	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.3.3.5 Remote Shutdown Action a.	With the number of OPERABLE remote shutdown monitoring channels, transfer switches, power or control circuits less than the Minimum Channels OPERABLE as required by Table 3.3-9, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.	With the number of OPERABLE remote shutdown monitoring channels, transfer switches, power or control circuits less than the Minimum Channels OPERABLE as required by Table 3.3-9, restore the inoperable channel(s) to OPERABLE status within 7 days. Otherwise, within the next 30 days submit a Special Report that defines the corrective action to be taken.	STP can achieve and maintain safe shutdown using any one of its three trains. The three trains are well separated. Effective compensatory actions are generally available in the event this Action must be entered. Because of the very low risk significance of these components, requiring a plant shutdown is not warranted if they are inoperable.	Not risk significant	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
Accident Monitoring 3.3.3.6	As specified in Table 3.3-10	a. With the number of OPERABLE accident monitoring channels less than the Minimum Channels OPERABLE as required by Table 3.3-10, restore the inoperable channel(s) to OPERABLE status within 7 days. Otherwise, within the next 30 days submit a Special Report that defines the corrective action to be taken. b. With the number of OPERABLE accident monitoring channels less than the Total Number of Channels as required by Table 3.3-10, within 60 days restore the inoperable channel(s) to OPERABLE status or submit a Special Report that defines the corrective action to be taken.	Accident monitoring instrumentation has very low risk significance and a high degree of redundancy. Its risk-significance does not warrant having a shutdown action. 7 days is sufficient time to perform an assessment to determine the required action and time limitations.	Not risk significant	NA

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.3.5.1 Atmospheric Steam Relief Valve Instrumentation delete Action 2 – apply Action 1 to all	ACTION 1 - With the number of OPERABLE channels less than the required number of channels, declare the affected valve(s) inoperable and apply Technical Specification 3.7.1.6. ACTION 2 - a. With one less than the required number of OPERABLE channels, restore the inoperable channel to OPERABLE status within 7 days; or be in at least HOT STANDBY within the next 6 hours. b. With two less than the required number of OPERABLE channels, restore at least three channels to OPERABLE status within 72 hours; or be in at least HOT STANDBY within the next 6 hours.	With the number of OPERABLE channels less than the required number of channels, declare the affected valve(s) inoperable and apply Technical Specification 3.7.1.6.	In these conditions, the inoperability of the instrument makes the associated equipment inoperable and the appropriate action is to enter the TS for that equipment. This proposed change makes the TS more consistent.	Approximately the same as AFW	NA

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.4.2.2 Pressurizer Code Safety Valves	With one pressurizer Code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 1 hour or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.	With one or more pressurizer Code safety valves inoperable, within 1 hour either restore the inoperable valves to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.	Pressurizer power-operated relief valves and pressurizer spray also provide overpressure protection. PORVs would normally provide relief such that Code safety valves would not be expected to lift.	LATER	4B, 6
3.4.4 Pressurizer PORVs and Block Valves Action a	With one or both PORV(s) inoperable, because of excessive seat leakage, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s) with power maintained to the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	With one or both PORV(s) inoperable, because of excessive seat leakage, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s)with power maintained to the block valve(s); otherwise apply the requirements of specification 3.13 OR be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours..	Current action prescribed by the TS would still be followed in most cases where this ACTION is applied. Ability to apply TS 3.13 gives the operator some additional leeway in the evaluation of current plant conditions with respect to the desirability of closing the PORV. The additional time could allow for an evaluation of the degree of seat leakage.	1 PORV: 372 days 2 PORVs: 345 days	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.4.4 Pressurizer PORVs and Block Valves Action b	With one PORV inoperable due to causes other than excessive seat leakage, within 1 hour either restore the PORV to OPERABLE status or close the associated block valve and remove power from the block valve; restore the PORV to OPERABLE status within the following 72 hours or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	With one PORV inoperable due to causes other than excessive seat leakage, within 1 hour either restore the PORV to OPERABLE status or close the associated block valve and remove power from the block valve; within the following 72 hours restore the PORV to OPERABLE status or apply the requirements of Specification 3.13, OR be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	Application of TS 3.13 will allow an assessment of the functionality of the PORV and an assignment of an AOT that reflects the actual plant condition. The redundant PORV is still operable to perform the required safety functions. The pressurizer safety valves are still available for design-basis overpressure relief.	LATER	4B
3.4.4 Pressurizer PORVs and Block Valves Action c	With both PORVs inoperable due to causes other than excessive seat leakage, within 1 hour either restore at least one of the PORVs to OPERABLE status or close their associated block valves and remove power from the block valves and be in HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours.	With both PORVs inoperable due to causes other than excessive seat leakage, within 1 hour either restore at least one of the PORVs to OPERABLE status or close their associated block valves and remove power from the block valves and apply the requirements of Specification 3.13, OR be in HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours.	Overpressure protection is still provided by the Code safety valves and pressurizer spray is still available for response to normal pressure fluctuations.	LATER	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.4.4 Pressurizer PORVs and Block Valves Action d	With one block valve inoperable, within 1 hour restore the block valve to OPERABLE status or place its associated PORV in closed position; restore the block valve to operable status within 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	With one block valve inoperable, within 1 hour restore the block valve to operable status or place its associated PORV in closed position; within 72 hours restore the block valve to operable status or apply the requirements of Specification 3.13; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	The existing required action makes no distinction regarding the degree of functionality of the block valve. A degraded block valve may be able to perform its expected function.	LATER	4B
3.4.4 Pressurizer PORVs and Block Valves Action e	With both block valves inoperable, within 1 hour restore the block valves to operable status or place the associated PORVs in the closed position; restore at least one block valve to OPERABLE status within the next hour; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	With both block valves inoperable, within 1 hour restore the block valves to operable status or place the associated PORVs in the closed position; restore at least one block valve to OPERABLE status within the next hour or apply the requirements of Specification 3.13; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	The existing requirement for restoration of operability within one hour is inadequate time to take reasonable action.	LATER	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.5.1 Accumulators Action a	With one accumulator inoperable, except as a result of a closed isolation valve or the boron concentration outside the required limits, restore the inoperable accumulator to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.	With one or more accumulators inoperable, except as a result of boron concentration outside the required limits, within 24 hours restore the inoperable accumulator(s) to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.	The accumulators would only be expected to be used for the most unlikely accidents and are not credited in the PRA. Within 24 hours of determining one or more accumulators are inoperable, an assessment can be performed to determine the significance of the condition and if compensatory actions are necessary. This is a conservative time considering the low risk significance of these components.	LATER	4B, 6
3.5.1 Accumulators Action b	With the boron concentration of one accumulator outside the required limit, restore the boron concentration to within the required limits within 72 hours or be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.	With the boron concentration of one or more accumulators outside the required limit, within 72 hours restore the boron concentration to within the required limits or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.	Accumulator boron concentration deviations are not likely to be significantly outside required limits. Conservatism in the accident analysis provides reasonable assurance that the accumulators would still provide their required function even with concentration outside the limits.	LATER	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.5.2 ECCS in MODES 1,2, & 3 Action a	With less than the above subsystems OPERABLE, but with at least two High Head Safety Injection pumps in an OPERABLE status, two Low Head Safety Injection pumps and associated RHR heat exchangers in an OPERABLE status, and sufficient flow paths to accommodate these OPERABLE Safety Injection pumps and RHR heat exchangers,** restore the inoperable subsystem(s) to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	With less than the above subsystems OPERABLE, but with at least two High Head Safety Injection pumps in an OPERABLE status, two Low Head Safety Injection pumps and associated RHR heat exchangers in an OPERABLE status, and sufficient flow paths to accommodate these OPERABLE Safety Injection pumps and RHR heat exchangers,** within 7 days restore the inoperable subsystem(s) to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	With 1 inoperable train of SI, there is no loss of safety function, and STP meets single failure except for specific low probability events.	1 inoperable train: • HHSI: 193 days • LHSI: > plant life	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.5.2 ECCS in MODES 1,2, & 3 Action b	Existing ACTION b. moved to ACTION c.	New ACTION b. With less than two of the required subsystems OPERABLE, within 6 hours restore at least one subsystem to OPERABLE status AND apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	With 2 inoperable trains of SI there is generally not a loss of safety function, although STP cannot mitigate LBLOCA if the SI train is injecting into the broken RCS loop. Mitigation of SBLOCA with SI in the broken loop requires operator action. Steam line break mitigation impaired, but DNB is not expected to occur. With no operable trains, STP loses the SI safety function; however, a risk-informed AOT is appropriate to accommodate specific situations where the SI trains are degraded but still functional and to allow for timely actions commensurate with the actual significance of the condition.	2 inoperable trains: • HHSI: 38 days • LHSI: 664 days 3 inoperable trains: • HHSI: 9 hours • LHSI: 9 days The functional redundancy of RHR and LHSI to maintain long-term cooling makes the risk-significance of LHSI relatively low. With more than one inoperable train, the application of TS 3.13 is proposed as a requirement rather than an option. This accounts for the potential risk-significance of a configuration where the HHSI function could be affected.	4B, 6
3.5.2 ECCS in MODES 1,2, & 3 Action c	No ACTION c.	Old ACTION b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected Safety Injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.	Administrative change to accommodate new ACTION b. No change to the TS requirement.	NA	Admin.

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.5.3.1 ECCS MODE 4 Action a	With less than the above-required ECCS components OPERABLE because of the inoperability of either the High Head Safety Injection pumps or the flow paths from the refueling water storage tank, restore at least the required ECCS components to OPERABLE status within 1 hour or be in COLD SHUTDOWN within the next 20 hours.	With less than the above-required ECCS components OPERABLE because of the inoperability of either the High Head Safety Injection pumps or the flow paths from the refueling water storage tank, within 24 hours restore at least the required ECCS components to OPERABLE status or apply the requirements of Specification 3.13, OR be in COLD SHUTDOWN within the next 20 hours.	See the discussion above for MODEs 1, 2, & 3. In addition, the likelihood and potential consequences of a LOCA in MODE 4 are substantially reduced.	LATER	4B
3.5.5 RWST MODE 1,2, 3, 4	With the RWST inoperable, restore the tank to OPERABLE status within 1 hour or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.	With the RWST inoperable, within 1 hour restore the tank to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.	The proposed action allows the operator to make a determination based on the specific situation and the degree of degradation of the RWST. A number of situations may make the RWST inoperable, but still functional (e.g., boron concentration slightly low or an ASME Code question).	5 hours (based on RWST not being available)	4B
3.5.6 RHR MODE 1, 2, 3 Action a	With one RHR loop inoperable, restore the required loop to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	With one RHR loop inoperable, within 7 days restore the required loop to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	The proposed action is justified by the plant-specific function of RHR and the degree of redundancy at STP. STP's RHR does not perform a SI function. It is required only for long-term cooling after shutdown or post-accident. In post-LOCA conditions, LHSI is functionally redundant.	1 inoperable RHR train: • 39 years	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.5.6 RHR MODE 1, 2, 3 Action b	With two RHR loops inoperable, restore at least two RHR loops to OPERABLE status within 24 hours or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.	With two RHR loops inoperable, within 24 hours restore at least two RHR loops to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours	The proposed action is justified by the plant-specific function of RHR and the degree of redundancy at STP. STP's RHR does not perform a SI function. It is required only for long-term cooling after shutdown or post-accident. In post-LOCA conditions, LHSI is functionally redundant.	2 inoperableRHR trains: • 504 days	4B
3.6.1.7 Containment Ventilation Action a	With a 48-inch containment purge supply and/or exhaust isolation valve open or not sealed closed, close and/or seal close that valve or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With a 48-inch containment purge supply and/or exhaust isolation valve open or not sealed closed, within 4 hours close and/or seal close that valve or isolate the penetration(s) or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	The proposed allowance for this specification would seldom be applied since these valves are normally closed during operation and there is no reason to open them during power operation. Surveillance testing, will be performed during shutdown since the test interval has been extended to 18 months. The proposed change will provide a process to account for some degradation of the sealing capability.	No impact on CDF	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.6.1.7 Containment Ventilation Action b	With the 18-inch supplementary containment purge supply and/or exhaust isolation valve(s) open for reasons other than given in Specification 3.6.1.7.b. above, close the open 18-inch valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.	With the 18-inch supplementary containment purge supply and/or exhaust isolation valve(s) open for reasons other than given in Specification 3.6.1.7.b. above, within 4 hours close the open 18-inch valve(s) or isolate the penetration(s), or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.	Pre-planned operator action can reasonably be credited to close these valves for most accident conditions.	No impact on CDF	4B
3.6.1.7 Containment Ventilation Action c	With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate in excess of the limits of Specifications 4.6.1.7.2 and/or 4.61.7.3, restore the inoperable valve(s) to OPERABLE status or isolate the penetrations so that the measured leakage rate does not exceed the limits of Specifications 4.6.1.7.2 and/or 4.6.1.7.3 within 24 hours, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.	With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate in excess of the limits of Specifications 4.6.1.7.2 and/or 4.61.7.3, within 24 hours restore the inoperable valve(s) to OPERABLE status or isolate the penetrations so that the measured leakage rate does not exceed the limits of Specifications 4.6.1.7.2 and/or 4.6.1.7.3 or apply the requirements of Specification 3.13; otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.	24 hours provides adequate time to perform an assessment to determine acceptable alternative action and time needed to address an inoperable containment purge isolation valve.	No impact on CDF	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.6.2.1 Containment Spray (Note 2)	With one Containment Spray System inoperable, restore the inoperable Spray System to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.	With one Containment Spray System inoperable, within 7 days restore the inoperable Spray System to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hour and in COLD SHUTDOWN within the following 36 hours.	The Containment Spray System is comprised of 3 trains. 2 operable trains meet the design-basis and 1 train is adequate to perform the system function at a degraded level. Reactor Containment Fan Coolers provide functionally redundant containment heat removal capability. Compensatory actions can be taken to reduce Iodine contribution to operator dose.	30-day backstop The Containment Spray System is not risk-significant.	4B
3.6.2.1 Containment Spray New Action b.	The current TS have no action for more than one train of CS inoperable and TS 3.0.3 would apply.	With more than one Containment Spray System inoperable, within 72 hours restore the inoperable Spray System to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 36 hours.	Reactor Containment Fan Coolers provide functionally redundant containment heat removal capability. Evaluations performed for STP TS Amendments 85/72 determined that a single train of RCFCs and Containment Spray is adequate for containment heat removal and RCB pressure control in accident conditions. Compensatory actions can be taken to reduce Iodine contribution to operator dose.	30-day backstop The Containment Spray System is not risk-significant	4B, 6
3.6.2.3 Reactor Containment Fan Coolers (Note 2)	With one group of the above required Reactor Containment Fan Coolers inoperable, restore the inoperable group of RCFC to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With one group of the above required Reactor Containment Fan Coolers inoperable, within 7 days restore the inoperable group of RCFC to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	Three trains of RCFCs provides a high degree of redundancy and Containment Spray is functionally redundant for heat removal.	30-day backstop The RCFCs are not risk-significant at STP.	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.6.2.3 Reactor Containment Fan Coolers New Action b.	The current TS have no action for more than one group of RCFCs inoperable and TS 3.0.3 would apply	With more than one group of the above required Reactor Containment Fan Coolers inoperable, within 72 hours restore at least two groups of RCFC to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	Three trains of RCFCs provides a high degree of redundancy and Containment Spray is functionally redundant for heat removal. The 72 hours for a "frontstop" time is appropriate considering the low risk-significance of the system an degree of redundancy. Evaluations performed for STP TS Amendments 85/72 determined that a single train of RCFCs and Containment Spray is adequate for containment heat removal and RCB pressure control in accident conditions.	30-day backstop RCFCs are not risk-significant	4B, 6
3.7.1.2 Auxiliary Feedwater Actions a & b	a. With one motor-driven auxiliary feedwater pump inoperable, restore the pump to OPERABLE status within **28** days. b. With the turbine-driven auxiliary feedwater pump inoperable, or with any two auxiliary feedwater pumps inoperable, restore the affected auxiliary feedwater pump(s) to OPERABLE status within 72 hours. The provisions of Specification 3.0.4 are not applicable for entry into Mode 3 for the turbine-driven pump.	a. With one motor-driven auxiliary feedwater pump inoperable, restore the pump to OPERABLE status within **30** days. b. With the turbine-driven auxiliary feedwater pump inoperable, or with any two auxiliary feedwater pumps inoperable, within 72 hours restore the affected auxiliary feedwater pump(s) to OPERABLE status or apply the requirements of Specification 3.13. The provisions of Specification 3.0.4 are not applicable for entry into Mode 3 for the turbine-driven pump.	STP's design is highly redundant with 3 motor-driven AFW pumps and 1 turbine-driven AFW pump. Action a is simply extended to the backstop time and Action b. permits the application of TS 3.13	TDAFW: 275 days 2 MD AFW: 172 hours	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.7.1.3 Auxiliary Feedwater Storage Tank	With the AFST inoperable, within 4 hours restore the AFST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	With the AFST inoperable, within 4 hours restore the AFST to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	Application of TS 3.13 is appropriate. The cause for the inoperability of the AFWST might be such that it would be unsafe to shutdown to a condition where the tank was required. More likely, the tank would be degraded but functional such that an extended AOT would be justified.	1 1/2 hours (assumes the AFST is unavailable; however shutdown is not appropriate nor required by the TS with no AFW available to remove decay heat. (See TS 3.7.1.2.d) 8 hours for tank level	4B
3.7.1.5 Main Steam Isolation Valves Mode 1 (Note 3)	With one MSIV inoperable but open, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 8 hours; otherwise be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	With one or more MSIV(s) inoperable but open, POWER OPERATION may continue provided the inoperable valve(s) is restored to OPERABLE status or the requirements of Specification 3.13 are applied within 8 hours; otherwise be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. * *Separate Limiting Condition for Operation entry is allowed for each MSIV	8 hours is an adequate time to determine the risk significance of the condition. The assessment may determine that although a MSIV is not operable under all aspects of the TS definition, it is still functional and additional time can be taken to restore it to operability.	Backstop – 30 days	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.7.1.6 Atmospheric Steam Relief Valves Action a	With one less than the required atmospheric steam relief valves OPERABLE, restore the required atmospheric steam relief valves to OPERABLE status within 7 days; or be in at least HOT STANDBY with the next 6 hours and in HOT SHUTDOWN within the following 6 hours and place the required RCS/RHR loops in operation for decay heat removal.	With one less than the required atmospheric steam relief valves OPERABLE, within 7 days restore the required atmospheric steam relief valves to OPERABLE status or apply the requirements of Specification 3.13 OR be in at least HOT STANDBY with the next 6 hours and in HOT SHUTDOWN within the following 6 hours and place the required RCS/RHR loops in operation for decay heat removal.	7 days is adequate time to determine alternative action and allowed outage time. Additional allowed outage time will probably be justifiable based on the expected availability of the condenser and associated steam dumps.	LATER	4B
3.7.1.6 Atmospheric Steam Relief Valves Action b	With two less than the required atmospheric relief valves OPERABLE, restore at least three atmospheric relief valves to OPERABLE status within 72 hours or be in at least HOT STANDBY with the next 6 hours and in HOT SHUTDOWN within the following 6 hours and place the required RCS/RHR loops in operation for decay heat removal.	With two or more less than the required atmospheric relief valves OPERABLE, within 72 hours restore at least three atmospheric relief valves to OPERABLE status or apply the requirements of Specification 3.13 OR be in at least HOT STANDBY with the next 6 hours and in HOT SHUTDOWN within the following 6 hours and place the required RCS/RHR loops in operation for decay heat removal.	72 hours is adequate time to determine alternative action and allowed outage time. Additional allowed outage time will probably be justifiable based on the expected availability of the condenser and associated steam dumps.	LATER	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.7.1.7 Main Feedwater Isolation Valves (Note 3)	With one or more MFIV(s) inoperable, close or isolate the inoperable valve(s) within 4 hours, or verify within 4 hours that the Main Feed Regulating Valve(s) (MFRV) in the same flow path(s) is/are available to perform feedwater isolation, and close or isolate the MFIV(s) within 72 hours and verify the valve(s) closed every 7 days. Otherwise, be in MODE 3 within the next 6 hours and be in MODE 4 within the following 6 hours. *	With one or more MFIV(s) inoperable, within 4 hours close or isolate the inoperable valve(s), OR verify within 4 hours that the Main Feed Regulating Valve(s) (MFRV) in the same flow path(s) is/are available to perform feedwater isolation AND within 72 hours apply the requirements of Specification 3.13, OR close or isolate the MFIV(s) and verify the valve(s) closed every 7 days. Otherwise, be in MODE 3 within the next 6 hours and be in MODE 4 within the following 6 hours. *	MFRVs are available for isolation function. Proposed revision to the action provides operational flexibility and potential alternatives to closing or isolating the MFIV. Formatting changes for readability and clarity.	12 hours	4B
3.7.3 Component Cooling Water	With only two component cooling water loops OPERABLE, restore at least three loops to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	a. With only two component cooling water loops OPERABLE, within 7 days restore at least three loops to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	CCW has a high degree of redundancy. With one inoperable train, the system generally still meets the single failure criteria with only modest degradation. The 7 day frontstop time is not representative of the safety significance of one train of CCW being inoperable. Proposed as Action a. because of proposed new Action b. below.	1 inoperable train of CCW: • 29 years	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.7.3 Component Cooling Water Proposed new Action b.	The current TS do not have an action for more than one inoperable train of CCW. TS 3.0.3 would apply	With two or more component cooling water loops inoperable, within 72 hours restore at least two loops to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	Evaluations performed for STP Amendments 85/72 showed that a single train of CCW is adequate for safe shutdown and accident mitigation with only modest degradation in capability.	2 inoperable trains of CCW: • 248 days All 3 trains of CCW inoperable: • 122 hours	4B, 6
3.7.4 Essential Cooling Water	With only two essential cooling water loops OPERABLE, restore at least three loops to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	a. With only two essential cooling water loops OPERABLE, within 7 days restore at least three loops to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours	With a single train of ECW inoperable there is no loss of safety function, and the plant generally meets single failure for most probable design-basis events. Proposed as Action a. because of proposed new Action b. below.	1 inoperable train of ECW • 78 - 93 days	4B
3.7.4 Essential Cooling Water Proposed new Action b.	The current TS do not have an action for more than one inoperable train of ECW. TS 3.0.3 would apply	With two or more essential cooling water loops inoperable, within12 hours restore at least two loops to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With two inoperable ECW trains, the plant retains its capability to mitigate a design-basis accident.	2 inoperable trains of ECW: • 68 hours All 3 trains of ECW inoperable: • 5 hours	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.7.7 Control Room Envelope HVAC Mode 1,2,3 & 4 Action a.	With one Control Room Makeup and Cleanup Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With one Control Room Makeup and Cleanup Filtration System inoperable, within 7 days restore the inoperable system to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	The Control Room Makeup and Cleanup Filtration System is comprised of three trains. With two operable trains, the system is fully capable and will still be functional with a single failure. With only a single operable train, the system can still perform its function, although it will be degraded.	295 days (based on cooling supplied to protection equipment)	4B
3.7.7 Control Room Envelope HVAC Mode 1,2,3 & 4 Action b.	With two Control Room Makeup and Cleanup Filtration Systems inoperable, restore at least two systems to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With two Control Room Makeup and Cleanup Filtration Systems inoperable, within 72 hours restore at least two systems to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	The Control Room Makeup and Cleanup Filtration System is comprised of three trains. With two operable trains, the system is fully capable and will still be functional with a single failure. With only a single operable train, the system can still perform its function, although it will be degraded.	[To be determined] (based on cooling supplied to protection equipment	4B
3.7.7 Control Room Envelope HVAC Mode 1,2,3 & 4 Action c.	With three Control Room Makeup and Cleanup Filtration Systems inoperable, suspend all operations involving movement of spent fuel, and crane operation with loads over the spent fuel pool, and restore at least one system to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With three Control Room Makeup and Cleanup Filtration Systems inoperable, suspend all operations involving movement of spent fuel, and crane operation with loads over the spent fuel pool, and within 12 hours restore at least one system to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	12 hours is adequate time to perform an assessment to determine if there are acceptable compensatory actions for extending the allowed outage time. A likely outcome is a determination that the system is degraded but still functional.	[To be determined] (based on cooling supplied to protection equipment)	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.7.8 Fuel Handling Building HVAC Action a.	With one FHB exhaust air filter train inoperable, restore the inoperable filter train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.	With one FHB exhaust air filter train inoperable, within 7 days restore the inoperable filter train to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.	The second operable exhaust air filter train provides sufficient redundancy to assure system function.	30-day backstop	4B
3.7.8 Fuel Handling Building HVAC Action b.	With two FHB exhaust air filter trains inoperable, restore at least one inoperable filter train to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.	With two FHB exhaust air filter trains inoperable, within 12 hours restore at least one inoperable filter train to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.	12 hours is adequate time to perform an assessment to determine if there are acceptable compensatory actions for extending the allowed outage time. A likely outcome is a determination that the system is degraded but still functional.	30-day backstop	4B
3.7.8 Fuel Handling Building HVAC Action c.	With one FHB exhaust ventilation train inoperable, restore the inoperable exhaust ventilation train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.	With one FHB exhaust ventilation train inoperable, within 7 days restore the inoperable exhaust ventilation train to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.	7days is adequate time to perform an assessment to determine if there are acceptable compensatory actions for extending the allowed outage time. A likely outcome is a determination that the system is degraded but still functional.	30-day backstop	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.7.8 Fuel Handling Building HVAC Action d.	With more than one FHB exhaust ventilation train inoperable, restore at least two exhaust ventilation trains to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours	With more than one FHB exhaust ventilation train inoperable, within 12 hours restore at least two exhaust ventilation trains to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.	12 hours is adequate time to perform an assessment to determine if there are acceptable compensatory actions for extending the allowed outage time. A likely outcome is a determination that the system is degraded but still functional.	30-day backstop	4B
3.7.14 Essential Chilled Water	With only two Essential Chilled Water System loops OPERABLE, restore three loops to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With only two Essential Chilled Water System loops OPERABLE, within 7 days restore at least three loops to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With a single train of EChW inoperable there is no loss of safety function, and the plant generally meets single failure for most probable design-basis events. Proposed as Action a. because of proposed new Action b. below.	1 inoperable train of EChW: • 290 days	4B
3.7.14 Essential Chilled Water New Action b.	The current TS do not have an action for more than one inoperable train of EChW. TS 3.0.3 would apply.	With two or more Essential Chilled Water System loops inoperable, within 12 hours restore at least two loops to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With two inoperable EChW trains, the plant retains its capability to mitigate a design-basis accident.	2 inoperable trains of EChW: • 145 hours All three trains of EChW inoperable: • 15 hours	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.8.1.1 AC Sources Operating Action a	With one offsite circuit of the above-required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.	With one offsite circuit of the above-required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Within 72 hours restore the offsite circuit to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.	STP's switchyard is served by 8 incoming lines. There are 3 transformers that are available to each unit to power the 13.8 KV buses that supply the 4.16 KV emergency buses. There are 3 trains of ESF power, only one of which is required to achieve and maintain safe shutdown. This is a very reliable and redundant power supply system. 72 hours is adequate to determine an alternate action or justify addition time to restore the condition.	584 days	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.8.1.1 Action b	With a standby diesel generator inoperable, demonstrate the OPERABILITY of the above-required A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If the standby diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE standby diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2) for each such standby diesel generator separately within 8 hours, unless it can be demonstrated there is no common mode failure for the remaining diesel generator(s). Restore the inoperable standby diesel generator to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.	With a standby diesel generator inoperable, demonstrate the OPERABILITY of the above-required A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If the standby diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE standby diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2) for each such standby diesel generator separately within 8 hours, unless it can be demonstrated there is no common mode failure for the remaining diesel generator(s). Within 14 days restore the inoperable standby diesel generator to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.	With one inoperable SDG, STP has no loss of safety function and generally meets the single failure criteria.	1 SDG inoperable: • 226 days	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.8.1.1 Action c	With one offsite circuit of the above-required A.C. electrical power sources and one standby diesel generator inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; and if the standby diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE standby diesel generator(s) by performing Surveillance Requirement 4.8.1.1.2a.2) within 8 hours, unless it can be demonstrated there is no common mode failure for the remaining diesel generators; restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least two offsite circuits to OPERABLE status within 72 hours and three standby diesel generators to OPERABLE status within 14 days from the time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With one offsite circuit of the above-required A.C. electrical power sources and one standby diesel generator inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; and if the standby diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE standby diesel generator(s) by performing Surveillance Requirement 4.8.1.1.2a.2) within 8 hours, unless it can be demonstrated there is no common mode failure for the remaining diesel generators; within 12 hours restore at least one of the inoperable sources to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	Deletion of the requirement to restore at least two offsite circuits to OPERABLE status within 72 hours and three standby diesel generators to OPERABLE status within 14 days from the time of initial loss is not a change because proper application of the TS would require this.	LATER	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.8.1.1 Action d	With one standby diesel generator inoperable in addition to ACTION b. or c. above, verify that: 1. All required systems, subsystems, trains, components, and devices that depend on the remaining OPERABLE diesel generator as a source of emergency power are also OPERABLE, and 2. When in MODE 1, 2, or 3, the steam-driven auxiliary feedwater pump is OPERABLE. If these conditions are not satisfied within 24 hours be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With one standby diesel generator inoperable in addition to ACTION b. or c. above, within 24 hours apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	24 hours is adequate time to determine the risk significance of the configuration. If there are inoperable cross-train components, the allowed outage time should depend on the risk significance of the specific configuration. For instance, an inoperable cross-train accumulator or reactor containment fan cooler would be of low significance and additional time can be justified if necessary.	LATER	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.8.1.1 Action e	With two of the above required offsite A.C. circuits inoperable, restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. With only one offsite source restored, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With two of the above required offsite A.C. circuits inoperable, within 24 hours restore at least one of the inoperable offsite sources to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours.	In this configuration, STP still has at least one ESF bus powered from off-site power. 24 hours is adequate time to determine the appropriate action and allowable time to restore the inoperable off-site power. This is not an expected configuration. Were it to occur, grid stability might be a factor and a plant shutdown could exacerbate the degraded condition. TS 3.13 provides an appropriate mechanism to respond to the condition.	LATER	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.8.1.1 Action f	With two or three of the above required standby diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing the requirements of Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; restore at least one standby diesel generator to OPERABLE status within 2 hours and at least two standby diesel generators to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least three standby diesel generators to OPERABLE status within 14 days from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With two or three of the above required standby diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing the requirements of Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; within 12 hours restore at least one standby diesel generator to OPERABLE status AND apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With 2 inoperable SDGs, STP does not lose the safety function and can meet almost all its design bases. Deleting the requirement to restore at least three standby diesel generators to OPERABLE status within 14 days from time of initial loss is not a change since proper application of the TS requires this interpretation without it being stated.	2 SDGs inoperable: • 238 hours All three SDGs inoperable: • 40 hours	4B
3.8.1.1 Action g. (Note 3)	With one required load sequencer inoperable, restore the inoperable load sequencer to operable status within 7 days or be in HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.	With one required load sequencer inoperable, within 7 days restore the inoperable load sequencer to operable status or apply the requirements of Specification 3.13, OR be in HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.	3.8.1.1.d will require an assessment of the condition within 24 hours to determine if required cross-train components are inoperable. 7 days is sufficient time to assess less restrictive conditions. There may be justification for additional time based on configurations with no additional inoperable components or inoperable components with low risk-significance.	272 days	4B

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.8.1.1 Action h. (Note 3)	With one required load sequencer inoperable and one required standby diesel generator not associated with the inoperable sequencer also inoperable restore the inoperable load sequencer and/or the inoperable standby diesel generator not associated with the inoperable load sequencer to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With one required load sequencer inoperable and one required standby diesel generator not associated with the inoperable sequencer also inoperable or with more than one required load sequencer inoperable, within 24 hours restore the inoperable load sequencer(s) and/or the inoperable standby diesel generator not associated with the inoperable load sequencer to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	This is bounded by the case for proposed TS 3.8.1.1.f. For this case (TS 3.8.1.1.h), the SDG associated with the inoperable sequencer can still be manually started and loaded. In addition, the third sequencer-SDG train is still available and is adequate to achieve and maintain safe shutdown and is able to mitigate nearly all design-basis events.	514 hours	4B, 6
3.8.2.1 D.C. Sources	a. With one of the required battery banks inoperable, restore the inoperable battery bank to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. b. With no battery chargers for a channel OPERABLE, restore at least one battery charger to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With less than the required battery banks or battery chargers OPERABLE, within 2 hours restore the inoperable battery bank or battery charger or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	STP has 4 battery banks, each with two full capacity chargers. The chargers are even less risk-significant due to their redundancy.	196 days	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.8.3.1 Onsite Power Distribution Operating Action a	With one of the required trains of A.C. ESF busses not fully energized, reenergize the train within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With the required trains of A.C. ESF busses not fully energized, within 8 hours reenergize the train or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	8 hours is sufficient time to assess the configuration and determine the appropriate action and allowed outage time. Extending the time beyond 8 hours can be justified due to the redundancy of the ESF power. STP does not lose the safety function unless all three trains of ESF power are lost.	253 days	4B, 6
3.8.3.1 Action b.	With one A.C. vital distribution panel either not energized from its associated inverter, or with the inverter not connected to its associated D.C. bus: (1) reenergize the A.C. distribution panel within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; and (2) reenergize the A.C. vital distribution panel from its associated inverter connected to its associated D.C. bus within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With one or more A.C. vital distribution panel(s) either not energized from its associated inverter, or with the inverter not connected to its associated D.C. bus: (1) within 2 hours reenergize the A.C. distribution panel(s) or apply the requirements of Specification 3.13 , OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; AND (2) within 24 hours reenergize the A.C. vital distribution panel(s) from its associated inverter connected to its associated D.C. bus or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	2 hours provides time for an assessment to determine an appropriate allowed outage time for the configuration. The redundancy of the STP electrical power systems will provide adequate justification for extending the time beyond 2 hours. Additional assessments may be performed to determine the time needed to re-energize the panel(s) from the associated inverter. The panels can also be powered from an alternate 1E diesel backed bus.	24 hours	4B, 6

Table 2
Detailed Description of Changes and Basis

Specification Number	Old Action Requirement	New Action Requirement	Deterministic Basis	Risk Basis Calculated STP AOT Before Backstop (base case)1	RITS Initiative
3.8.3.1 Action c.	With one D.C. bus not energized from its associated battery bank, reenergize the D.C. bus from its associated battery bank within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	With one or more D.C. bus(es) not energized from its associated battery bank, within 2 hours reenergize the D.C. bus(es) from its associated battery bank or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	STP has 4 battery banks, each with two full capacity chargers. STP can lose up to two battery banks without jeopardizing a safety function.	LATER	4B
3.13	Did not exist	Defines the actions to take at changing risk levels of the plant configuration	As described for the individual applications	As described for the individual applications	4B
BASES 3.13		Section added to explain these new specifications			4B

1. Base case is number of hours to exceed the CRMP Potentially Risk Significant Threshold for core damage probability (1E-05) assuming no other systems are inoperable. The Base Case Action Level where compensatory action must be initiated is 1E-06, or 10% of the time allowed to the 1E-05 Base Case. Note that the proposed backstop time will establish the allowed outage time for conditions where the CRMP calculated time exceeds 30 days.
2. Containment Spray and Reactor Containment Fan Cooler action levels have no dependency on core damage frequency and are based on contributions to large early release frequency.
3. This table may include actions from proposed TS changes that are not yet approved. Differences will be reconciled when STPNOC submits the actual license amendment request. Information from proposed changes is included to provide a more accurate representation of what STPNOC expects the risk-informed application to include.

Table 3
STP Systems with Reduced Design-basis Capability in Single Train Operation

System	Function Affected	Alternative Action	Event Probability†	Comments
Safety Injection (LHSI and HHSI)	Cannot mitigate LBLOCA if the SI train is injecting into the broken RCS loop	None (minimal cooling from using hot leg recirculation)	1.91E-10 Note: Accounts for a 25% chance of injecting in broken loop Leak before break not credited	One train in maintenance outage One train fails One train injects into the broken loop
Safety Injection (HHSI)	Steam line break mitigation capability reduced	None required	2.25E-8 Note: Accounts for a rupture either inside or outside containment.	DNB not expected to occur
Safety Injection (LHSI and HHSI)	Cannot mitigate SBLOCA without operator action if the SI train is injecting into the broken RCS loop	Operator action per EOPs to depressurize	1.75E-9 Note: No credit taken for operator action to depressurize	One train in maintenance. One train fails. One train of HHSI not enough to match break flow Operator action is expected to be effective
Residual Heat Removal	Cannot provide long term cooling if only a single ESF bus is energized or if RHR is injecting into broken loop	Continue to inject using LHSI until RHR is restored.	See Comments	RHR is required approximately 14 hours after event. Recovery of power to ESF bus is expected within 8 hours
Containment Spray	Iodine removal during a LBLOCA or SBLOCA	Monitor TSC doses and relocate to lower dose area	1.97E-8 Note: Assuming most probable event of SBLOCA	

Table 3
STP Systems with Reduced Design-basis Capability in Single Train Operation

System	Function Affected	Alternative Action	Event Probability†	Comments
Control Room Envelope HVAC	Cannot maintain 1/8" positive pressure	Positive pressure is expected to be maintained, so system is expected to be functional	7.64E-10 Note: This is the probability of a LBLOCA, failure of DG and LOOP while in the AOT.	
Fuel Handling Building HVAC	Cannot provide filter path for recirculation phase leakage if C train is only operable train	Provide alternate power supply from operable diesel	6.37E-11 Note: Due to design dependencies probabilities are calculated based on trains A or B being operable	
Component Cooling Water	CCW flow to RCFC's and RHR Heat Exchanger less than design	Manually isolate non-safety header to restore design flow.	5.75E-5 Note: Accounts for the probability of train C isolating non-safety flows	If train C is the operable train, CCW flow approximates design flow. Effect of reduced CCW flow is slight even without manual action.
† The event probability is the likelihood of an initiating event (i.e., Large Break LOCA) with a loss of offsite power and failure of a standby diesel generator given a diesel generator is unavailable for 21 days while another train is out of service. It conservatively does not include recovery factors or support system failures.				

Tech Spec Mark Up Pages

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the Reactor Trip System instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE with RESPONSE TIMES as shown in Chapter 16 in the Updated Final Safety Analysis Report (UFSAR).

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each Reactor Trip System instrumentation channel and interlock and the automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements specified in Table 4.3-1.

4.3.1.2 The REACTOR TRIP SYSTEM RESPONSE TIME of each Reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one train such that both trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific Reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Manual Reactor Trip	2	1	2	1, 2	1
	2	1	2	3*, 4*, 5*	10
2. Power Range, Neutron Flux					
a. High Setpoint	4	2	3	1, 2	2
b. Low Setpoint	4	2	3	1###, 2	2
3. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2
4. Deleted					
5. Intermediate Range, Neutron Flux	2	1	2	1###, 2	3
6. Source Range, Neutron Flux	2	1	2	2##	4
a. Startup	2	1	2	3*, 4*, 5*	10
b. Shutdown	2	0	2	3, 4, 5	4
7. Extended Range, Neutron Flux	4	2	3	1, 2	6
8. Overtemperature ΔT	4	2	3	1, 2	6
9. Overpower ΔT	4	2	3	1	6
10. Pressurizer Pressure -- Low (Interlocked with P-7)	4	2	3	1, 2	6
11. Pressurizer Pressure-- High	4	2	3	1	6
12. Pressurizer Water Level--High (Interlocked with P-7)					

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
13. Reactor Coolant Flow -- Low					
a. Single Loop (Above P-8)	3/1oop	2/loop in any operating loop	2/loop in each operating loop	1	6
b. Two Loops (Above P-7 and below P-8)	3/loop	2/loop in two operating loops	2/loop in each operating loop	1	6
14. Steam Generator Water Level -- Low-Low	4/stm. gen	2/stm. gen. in any operating stm. gen.	3/stm. gen. each operating stm. gen.	1, 2	6(1)
15. Undervoltage--Reactor Coolant Pumps (Interlocked with P-7)	4-1/bus	2	3	1	6
16. Underfrequency -- Reactor Coolant Pumps (Interlocked with P-7)	4-1/bus	2	3	1	6
17. Turbine Trip (Interlocked with P-9)					
a. Low Emergency Trip Fluid Pressure	3	2	2	1	6
b. Turbine Stop Valve Closure	4	2	3	1	6

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
18. Safety Injection Input from ESFAS	2	1	2	1, 2	9A
19. Reactor Trip System Interlocks					
a. Intermediate Range Neutron Flux, P-6	2	1	2	2##	8
b. Low Power Reactor Trips Block, P-7					
P-10 Input	4	2	3	1	8
or					
P-13 Input	2	1	2	1	8
c. Power Range Neutron Flux, P-8	4	2	3	1	8
d. Power Range Neutron Flux, P-9	4	2	3	1	8
e. Power Range Neutron Flux, P-10	4	2	3	1, 2	8
f. Turbine Impulse Chamber Pressure P-13	2	1	2	1	8
20. Reactor Trip Breakers	2	1	2	1, 2	9, 12
	2	1	2	3*, 4*, 5*	10

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
21. Automatic Trip and Interlock Logic	2	1	2	1, 2	9A
	2	1	2	3*, 4*, 5*	10

TABLE 3.3-1 (Continued)

TABLE NOTATIONS

*When the Reactor Trip System breakers are in the closed position and the Control Rod Drive System is capable of rod withdrawal.

##Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint.

###Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) Setpoint.

(1)The applicable MODES and ACTION statement for these channels noted in Table 3.3-3 are more restrictive and, therefore, applicable.

ACTION STATEMENTS

ACTION 1 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, **within 48 hours** restore the inoperable channel to OPERABLE status ~~within 48 hours~~ or **apply the requirements of specification 3.13, OR** be in HOT STANDBY within the next 6 hours**.**

With the number of OPERABLE channels more than one less than the Minimum Channels OPERABLE requirement, within 6 hours restore at least one inoperable channel to OPERABLE status or apply the requirements of specification 3.13, OR be in HOT STANDBY within the next 6 hours.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. For Functional Units with installed bypass test capability,

Note: A channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.1.1, provided no more than one channel is in bypass at any time.

1. The inoperable channel may be placed in bypass, and must be placed in the tripped condition within 72 hours, and

2. Either, THERMAL POWER is restricted to less than or equal to 75% of RATED THERMAL POWER and the Power Range Neutron Flux Trip Setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.2.

b. For Functional Units with no installed bypass test capability,

1. The inoperable channel is placed in the tripped condition within 72 hours, and

2. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1, and

3. Either, THERMAL POWER is restricted to less than or equal to 75% of RATED THERMAL POWER and the Power Range Neutron Flux Trip Setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.2.

ACTION STATEMENTS (Continued)

ACTION 7 - (Not Used)

ACTION 8 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 9 - With the number of OPERABLE channels ~~one~~ less than the Minimum Channels OPERABLE requirement **and with at least one channel functional**, **within 6 hours apply the requirements of Specification 3.13 OR** be in at least HOT STANDBY ~~within 6 hours~~; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

ACTION 9A - With the number of OPERABLE channels ~~one~~ less than the Minimum Channels OPERABLE requirement **and with at least one channel functional**, **within 24 hours** restore the inoperable channel to OPERABLE status ~~within 24 hours~~, or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

ACTION 10 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the Reactor Trip System breakers within the next hour.

ACTION 11 - (Not Used)

ACTION 12 - With one of the diverse trip features (undervoltage or shunt trip attachment) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply ACTION 9. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The Engineered Safety Features Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their Trip Setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4 and with RESPONSE TIMES as shown in Chapter 16 in the UFSAR.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

a. With an ESFAS Instrumentation or Interlock Trip Setpoint trip less conservative than the value shown in the Trip Setpoint column but more conservative than the value shown in the Allowable Value column of Table 3.3-4, adjust the Setpoint consistent with the Trip Setpoint value.

b. With an ESFAS Instrumentation or Interlock Trip Setpoint less conservative than the value shown in the Allowable Value column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION statement requirements of Table 3.3-3 until the channel is restored to OPERABLE status with its Setpoint adjusted consistent with the Trip Setpoint value.

c. With an ESFAS instrumentation channel or interlock inoperable, take the ACTION shown in Table 3.3-3.

4.3.2.1 Each ESFAS instrumentation channel and interlock and the automatic acutation logic and relays shall be demonstrated OPERABLE by performance of the ESFAS Instrumentation Surveillance Requirements specified in Table 4.3.2.

4.3.2.2 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one train so that:

a. Each logic train is tested at least once per 36 months,

b. Each actuation train is tested at least once per 54 months*, and

c. One channel per function so that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" column of Table 3.3-3.

*If an ESFAS instrumentation channel is inoperable due to response times exceeding the required limits, perform an engineering evaluation to determine if the test failure is a result of degradation of the actuation relays. If degradation of the actuation relays is determined to be the cause, increase the ENGINEERED SAFETY FEATURES RESPONSE TIME surveillance frequency such that all trains are tested at least once per 36 months.

TABLE 3.3-3

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Safety Injection (Reactor Trip, Feedwater Isolation, Control Room Standby Diesel Generators, Reactor Containment Fan Coolers, and Essential Cooling Water).					
a. Manual Initiation	2	1	2	1, 2, 3, 4	19
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	14
c. Actuation Relays	3	2	3	1, 2, 3 ,4	26
d. Containment Pressure—High –1	3	2	2	1, 2, 3 4	20
e. Pressurizer Pressure –Low	4	2	3	1, 2, 3#	20
f. Compensated Steam Line Pressure –Low	3/steam line	2/steam line any steam line	2/steam line in each steam line	1, 2, 3#	20

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
2. Containment Spray					
a. Manual Initiation	2	1 with 2 coincident switches	2	1, 2, 3, 4	19
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	14
c. Actuation Relays	3	2	3	1, 2, 3 ,4	**26**
d. Containment Pressure—High -3	4	2	3	1, 2, 3	17
3. Containment Isolation					
a. Phase "A" Isolation					
1) Manual Initiation	2	1	2	1, 2, 3, 4	19
2) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	14
3) Actuation Relays	3	2	3	1, 2, 3, 4	~~14~~ **26**
4) Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. Containment Isolation (Continued)					
b. Containment Ventilation Isolation					
1) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	18
2) Actuation Relays***	3	2	3	1, 2, 3, 4	18
3) Safety Injection ***	See Item 1. above for all Safety Injection initiating functions and requirements.				
4) RCB Purge Radioactivity- High	2	1	2	1, 2, 3, 4, 5##, 6##	18
5) Containment Spray- Manual Initiation	See Item 2. above for Containment Spray manual initiating functions and requirements.				
6) Phase "A" Isolation- Manual Isolation	See Item 3.a. above for Phase "A" Isolation manual initiating functions and requirements.				
c. Phase "B" Isolation					
1) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	14
2) Actuation Relays	3	2	3	1, 2, 3, 4	~~14~~ **26**
3) Containment Pressure -- High-3	4	2	3	1, 2, 3	17
4) Containment Spray-- Manual Initiation	See Item 2. above for Containment Spray manual initiating functions and requirements.				
d. RCP Seal Injection Isolation					
1) Automatic Actuation Logic and Actuation Relays	1	1	1	1, 2, 3, 4	16

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. d. RCP Seal Injection Isolation (Continued)					
2) Charging Header Pressure - Low	1	1	1	1, 2, 3, 4	16
Coincident with Phase "A" Isolation	See Item 3.a. above for Phase "A" Isolation initiating functions and requirements.				
4. Steam Line Isolation					
a. Manual Initiation					
1) Individual	2/steam line	1/steam line	2/operating steam line	1, 2, 3	24
2) System	2	1	2	1, 2, 3	23
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3	22
c. Steam Line Pressure - Negative Rate -- High	3/steam line	2/steam line any steam line	2/ steam line in each steam line	3###	20
d. Containment Pressure - High - 2	3	2	2	1, 2, 3	20
e. Compensated Steam Line Pressure - Low	3/steam line	2/steam line any steam line	2/steam line in each steam line	1, 2, 3#	20

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. Turbine Trip and Feedwater Isolation					
a. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3	25
b. Steam Generator Water Level--High-High (P-14)	4 / stm. gen.	2/ stm. gen. in any operating stm. gen.	3/stm. gen. in each operating stm. gen.	1, 2, 3	20
c. Deleted					
d. Deleted					
e. Safety Injection	See Item 1. for all Safety Injection initiating functions and requirements.				
f. T_{avg} - Low coincident with Reactor Trip (P-4) (Feedwater Isolation Only)	4 (1/loop)	2	3	1, 2, 3	20

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
6. Auxiliary Feedwater					
a. Manual Initiation	1/pump	1/pump	1/pump	1, 2, 3	26
b. Automatic Actuation Logic	2	1	2	1, 2, 3	22
c. Actuation Relays	3	2	3	1, 2, 3	~~22~~ **26**
d. Stm. Gen. Water Level -- Low-Low Start Motor-Driven Pumps and Turbine-Driven Pump	4 stm. gen.	2 stm. gen. in any stm. gen.	3/stm. gen. in each stm. gen.	1, 2, 3	20
e. Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				
f. Loss of Power (Motor Driven Pumps Only)	See Item 8. below for all Loss of Power initiating functions and requirements.				
7. Automatic Switchover to Containment Sump****					
a. Automatic Actuation Logic and Actuation Relays	3-1/train	1/train	1/train	1, 2, 3, 4	26
b. RWST Level -- Low-Low	3-1/train	1/train	1/train	1, 2, 3, 4	26
Coincident With: Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
8. Loss of Power					
a. 4.16 kV ESF Bus Under-voltage-Loss of Voltage	4/bus	2/bus	3 /bus	1, 2, 3, 4	20A
b. 4.16 kV ESF Bus Under-voltage-Tolerable Degraded Voltage Coincident with SI	4/bus	2/bus	3/bus	1, 2, 3, 4	20A
c. 4. 16 kV ESF Bus Under-voltage - Sustained Degraded Voltage	4/bus	2/bus	3/bus	1, 2, 3, 4	20A
9. Engineered Safety Features Actuation System Interlocks					
a. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	21
b. Low-Low T_{avg} , P-12	4	2	3	1, 2, 3	21
c. Reactor Trip, P-4	2	1	2	1, 2, 3	23

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
10. Control Room Ventilation					
a. Manual Initiation	3 (1/train)	2 (1/train)	3 (1/train)	All	**26** ~~27~~
b. Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				
c. Automatic Actuation Logic and Actuation Relays	3	2	3	All	**26** ~~27~~
d. Control Room Intake Air Radioactivity - High	2	1	2	All	28
e. Loss of Power	See Item 8. above for all Loss of Power initiating functions and requirements.				
11. FHB HVAC					
a. Manual Initiation	3 (1/train)	2 (1/train)	3 (1/train)	1, 2, 3, 4 or with irradiated fuel in spent pool	29, 30
b. Automatic Actuation Logic and Actuation Relays	3	2	3	1, 2, 3, 4 or with irradiated fuel in spent pool	29, 30
c. Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				
d. Spent Fuel Pool Exhaust Radioactivity - High	2	1	2	With irradiated fuel in spent fuel pool	30

TABLE 3.3-3 (Continued)
TABLE NOTATIONS

***Function is actuated by either actuation train A or actuation train B. Actuation train C is not used for this function.

****Automatic switchover to containment sump is accomplished for each train using the corresponding RWST level transmitter.

Trip function may be blocked in this MODE below the P-11 (Pressurizer Pressure Interlock) Setpoint.

During CORE ALTERATIONS or movement of irradiated fuel within containment.

Trip function automatically blocked above P-11 and may be blocked below P-11 when Low Compensated Steamline Pressure Protection is not blocked.

ACTION STATEMENTS

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement **and with at least one channel functional**, **within 24 hours** restore the inoperable channel to OPERABLE status ~~within 24 hours~~, or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.

ACTION 15 - (Not Used)

ACTION 16 - With the Charging Header Pressure channel inoperable:

a) Place the Charging Header Pressure channel in the tripped condition within one hour and

b) Restore the Charging Header Pressure channel to operable status within 7 days or be in at least Hot Standby within the next 6 hours and in Cold Shutdown within the following 30 hours.

ACTION 17 - **a.** With the number of OPERABLE channels one less than the Total Number of Channels, place the inoperable channel in the bypassed condition within 72 hours, or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours. One additional channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.2.1.

b. With the number of OPERABLE channels more than one less than the Total Number of channels, within 12 hours apply the requirements of Specification 3.13 or be in at least HOT SHUTDOWN within the following 6 hours.

ACTION 18 - With less than the Minimum Channels OPERABLE requirement, operation may continue provided the containment purge supply and exhaust valves are maintained closed.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 19 - With the number of OPERABLE channels ~~one~~ less than the Minimum Channels OPERABLE requirement, **within 48 hours** restore the inoperable channel to OPERABLE status ~~within 48 hours~~ or **apply the requirements of specification 3.13**, **OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours

ACTION 20 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. For Functional Units with installed bypass test capability, the inoperable channel may be placed in bypass, and must be placed in the tripped condition within 72 hours.

Note: A channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.2.1, provided no more than one channel is in bypass at any time.

b. For Functional Units with no installed bypass test capability,

1. The inoperable channel is placed in the tripped condition within 72 hours, and

2. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 20A - a. With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

1. The inoperable channel is removed from service or placed in the tripped condition within 72 hours, and

2. The Minimum Channels OPERABLE requirement is met; however, an inoperable channel in the tripped condition may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.2.1.

b. With the number of OPERABLE channels two less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided:

1. One inoperable channel is placed in the tripped condition and one inoperable channel is removed from service within 72 hours, and

2. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.2.1.

c. With the number of OPERABLE channels less than the Minimum Number of Channels, declare the associated load sequencer inoperable and apply the ACTION required by Technical Specification 3.8.1.1.

ACTION 21 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 22 - With the number of OPERABLE channels ~~one~~ less than the Minimum Channels OPERABLE requirement, ~~restore the inoperable channel to OPERABLE status~~ **and with at least one channel functional**, **within 24 hours restore the inoperable channel to OPERABLE status or apply the requirements of specification 3.13, OR** be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION **23** - With the number of OPERABLE channels ~~one~~ less than the Total Number of Channels **and with at least one channel functional**, **within 48 hours** restore the inoperable channel**(s)** to OPERABLE status ~~within 48~~ hours or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 24 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the ACTION required by Specification 3.7.1.5.

ACTION 25 - With the number of OPERABLE channels ~~one~~ less than the Minimum Channels OPERABLE requirement, **within 24 hours** restore the inoperable channel to OPERABLE status ~~within 24 hours~~, or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACI'ION 26- **With less than the Minimum Channels OPERABLE requirement, declare the associated system/train/component inoperable and apply the requirements of the applicable Technical Specification Action.** ~~With the number of channels OPERABLE less than the Minimum Channels OPERABLE requirement, declare the affected Auxiliary Feed Water Pump inoperable and take ACTION required by Specification 3.7.1.2.~~

ACTION 27- **NOT USED** ~~For an inoperable channel, declare its associated ventilation train inoperable and apply the actions of Specification 3.7.7.~~

ACTION 28- MODES 1, 2, 3, 4: With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement, within 1 hour isolate the Control Room Envelope and maintain operation of the ventilation System in the filtered recirculation mode.

MODES 5 and 6: With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the Control Room Makeup and Cleanup Filtration System (at 100% capacity) in the recirculation and makeup filtration mode.

ACTION 29*- MODES 1, 2, 3, 4: With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or either initiate and maintain operation of the FHB exhaust air filtration system (at 100% capacity) or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 30- With irradiated fuel in the spent fuel pool: With the number of OPERABLE channels less than the minimum Channels OPERABLE requirement, fuel movement within the spent fuel pool or crane operation with loads over the spent fuel pool may proceed provided the FHB exhaust air filtration system is in operation and discharging through at least one train of HEPA filters and charcoal absorbers.

INSTRUMENTATION

REMOTE SHUTDOWN SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.3.5 The Remote Shutdown System transfer switches, power, controls and monitoring instrumentation channels shown in Table 3.3-9 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With the number of OPERABLE remote shutdown monitoring channels, transfer switches, power or control circuits less than the Minimum Channels OPERABLE as required by Table 3.3-9, restore the inoperable channel(s) to OPERABLE status within 7 days. **Otherwise, within the next 30 days submit a Special Report that defines the corrective action to be taken.**

b. With the number of OPERABLE remote shutdown monitoring channels, transfer switches, power or control circuits less than the Total Number of Channels as required by Table 3.3-9, within 60 days restore the inoperable channel(s) to OPERABLE status or, pursuant to Specification 6.9.2, submit a Special Report that defines the corrective action to be taken.

c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.5.1 Each remote shutdown monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-6.

4.3.3.5.2 Each Remote Shutdown System transfer switch, power and control circuit including the actuated components, shall be demonstrated OPERABLE at least once per 18 months.

TABLE 3.3-9

REMOTE SHUTDOWN SYSTEM

INSTRUMENT	READOUT LOCATION	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
1. Neutron Flux - Extended Range			
a. Startup Rate	ASP*-QDPS**	2	2
b. Flux Level	ASP-QDPS	2	2
2. Reactor Trip Breaker Indication	ASP-QDPS Reactor Trip Switchgear	1/trip breaker	1/trip breaker
3. Reactor Coolant Temperature-Wide Range			
a. Hot Leg	ASP-QDPS	4-1/loop	1/loop - 3 loops#
b. Cold Leg	ASP-QDPS	4-1/loop	1/loop - 3 loops#
4. Reactor Coolant Pressure-Wide Range/Extended Range	ASP-QDPS	3	2
5. Pressurizer Water Level	ASP-QDPS	4	2
6. Steam Line Pressure	ASP-QDPS	4-1/steam line	1/steam line 3 steam lines#
7. Steam Generator Water Level-Wide Range	ASP-QDPS	4-1/steam generator	1/steam generator 3 steam generators

TABLE 3.3-9
REMOTE SHUTDOWN SYSTEM

INSTRUMENT	READOUT LOCATION	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
8. Auxiliary Feedwater Flow Rate	ASP-QDPS	4-1/steam generator	1/steam generator- 3 steam generators
9. Auxiliary Feedwater Storage Tank Water Level	ASP-QDPS	3	2
10. (DELETED)			

TRANSFER SWITCHES AND ASSOCIATED CONTROLS	TRANSFER SWITCH LOCATIONS	CONTROLS LOCATIONS	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
1. Steam Generator PORVs	ZLP-653 (Train A) ZLP-654 (Train B) ZLP-655 (Train C) ASP (Train D)	ASP	4	2#
2. Reactor Head Vent Throttle Valves	ZLP-700 (Train A) ZLP-701 (Train B)	ASP	2	1
3. Reactor Head Vent Isolation Valves	ZLP-700 (Train A) ZLP-701 (Train B)	ASP	2 pair	1 pair
4. AFW Pumps and Valves	ZLP-653 (Train A- AFW Pump) ZLP-700 (Train A- AFW Valves) ZLP-654 (Train B - AFW Pump) ZLP-701 (Train B - AFW Valves) ZLP-655 (Train C - AFW Pump) ZLP-709 (Train C - AFW Valves) ASP (Train D)	ASP	4	2#

TABLE 3.3-9 (Continued)

REMOTE SHUTDOWN SYSTEM

TRANSFER SWITCHES AND ASSOCIATED CONTROLS	TRANSFER SWITCH LOCATIONS	CONTROLS LOCATIONS	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
5. Centrifugal Charging Pumps	ZLP-653 (Train A) ZLP-655 (Train C)	ASP	2	1
6. Boric Acid Transfer Pumps	ZLP-653 (Train A) ZLP-655 (Train C)	ASP	2	1
7. Pressurizer PORVs and Block Valves	ZLP-700 (Train A) ZLP-701 (Train B)	ASP	2	1
8. Accumulator Discharge Isolation Valves and Power Lockouts	ZLP-653 (Train A) ZLP-654 (Train B) ZLP-655 (Train C)	ASP	3	3
9. Letdown Stop Valves	ZLP-700 (Train A) ZLP-709 (Train B)	ASP	2	1
10. CCW Pumps and Heat Exchanger Outlet Valves	ZLP-653 (Train A) ZLP-654 (Train B) ZLP-655 (Train C)	ZLP-653 (Train A) ZLP-654 (Train B) ZLP-655 (Train C)	3	2
11. ECW Pumps	ZLP-653 (Train A) ZLP-654 (Train B) ZLP-655 (Train C)	ZLP-653 (Train A) ZLP-654 (Train B) ZLP-655 (Train C)	3	2
12. EAB HVAC Fans	ZLP-700 (Train A) ZLP-653 (Train A - Battery Room and Electrical Penetration Space Fans) ZLP-701 (Train B) ZLP-654 (Train B - Battery Room and Electrical Penetration Space Fans)	ZLP-700 (Train A) ZLP-653 (Train A - Battery and Electrical Penetration Space Fans) ZLP-701 (Train B) ZLP-654 (Train B - Battery and Electrical Penetration Space Fans)	3	2

TABLE 3.3-9 (Continued)

REMOTE SHUTDOWN SYSTEM

TRANSFER SWITCHES AND ASSOCIATED CONTROLS	TRANSFER SWITCH LOCATIONS	CONTROLS LOCATIONS	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
12. EAB HVAC Fans (Continued)	ZLP-709 (Train C) ZLP-655 (Train C- Battery Room and Electrical Penetration Space Fans)	ZLP-709 (Train C) ZLP-655 (Train C- Battery Room and Electrical Penetration Space Fans)		
13. Reactor Containment Fan Coolers	ZLP-700 (Train A) ZLP-701 (Train B) ZLP-709 (Train C)	ZLP-700 (Train A) ZLP-701 (Train B) ZLP-709 (Train C)	6	3

* ASP - Auxiliary Shutdown Panel
** QDPS - Qualified Display Processing System
# Must be in the same OPERABLE RCS loop/secondary loop.

INSTRUMENTATION

ACCIDENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.6 The accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With the number of OPERABLE accident monitoring channels less than the Minimum Channels OPERABLE as required by Table 3.3-10, restore the inoperable channel(s) to OPERABLE status within 7 days. **Otherwise, within the next 30 days submit a Special Report that defines the corrective action to be**

b. With the number of OPERABLE accident monitoring channels less than the Total Number of Channels as required by Table 3.3-10, within 60 days restore the inoperable channel(s) to OPERABLE status or submit a Special Report that defines the corrective action to be taken.

c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.6 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION at the frequencies shown in Table 4.3-7.

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE	~~ACTION~~
1. Containment Pressure	4	1	~~43~~
2. Reactor Coolant Outlet Temperature-T_{HOT} (Wide Range)	1/loop	1/loop	~~35~~
3. Reactor Coolant Outlet Temperature-T_{COLD} (Wide Range)	1/loop	1/loop	~~35~~
4. Reactor Coolant Pressure - Wide Range and Extended Range	3	1	~~37~~
5. Pressurizer Water Level	4	1	~~43~~
6. Steam Line Pressure	4/steam generator	1/steam generator	~~43~~
7. Steam Generator Water Level - Narrow Range	4/steam generator	1/steam generator	~~43~~
8. Steam Generator Water Level - Wide Range	1/steam generator	1/steam generator	~~35~~
9. Refueling Water Storage Tank Water Level	3	1	~~44~~
10. Auxiliary Feedwater Storage Tank Water Level	3	1	~~44~~
11. Auxiliary Feedwater Flow	1/steam generator	1/steam generator	~~44~~
12. Reactor Coolant System Subcooling Margin Monitoring	2	1	~~36~~

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE	~~ACTION~~
13. Containment Water Level (Narrow Range)	2	1	~~36~~
14. Containment Water Level (Wide Range)	3	1	~~37~~
15. Core Exit Thermocouples	**2	**1	~~42~~
16. Steam Line Radiation Monitor	1/steam line	1/steam line	~~40~~
17. Containment - High Range Radiation Monitor	2	1	~~39~~
18. Reactor Vessel Water Level (RVWL)	2*	1*	~~41~~
19. Neutron Flux (Extended Range)	2	1	~~36~~
20. Containment Hydrogen Concentration	2	1	~~36~~
21. Containment Pressure (Extended Range)	2	1	~~36~~
22. Steam Generator Blowdown Radiation Monitor	1/blowdown line	1/blowdown line	~~40~~
23. Neutron Flux - Startup Rate (Extended Range)	2	1/steam generator	~~36~~

*A channel is eight sensors in a probe. A channel is OPERABLE if four or more sensors, on e or more in the upper section section and three or more in the lower section, are OPERABLE.

** A channel is OPERABLE if at least two core exit thermocouples per core quadrant are OPERABLE, and at least one quadrant has at least four OPERABLE thermocouples

TABLE 3.3-10 (Continued)

ACTION STATEMENTS

ACTION 35 – With the number of OPERABLE channels less than the Minimum Channels Operable requirement, restore at least one inoperable channel to OPERABLE status within 48 hours, or be in at least HOT SHUTDOWN within the next 12 hours.

ACTION 36 – a. With the number of OPERABLE channels one less than the Total Number of Channels requirements, restore one inoperable channel to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.

b. With the number of OPERABLE channels less than the Minimum Channels Operable requirements, restore at least one inoperable channel to OPERABLE status within 48 hours, or be in at least HOT SHUTDOWN within the next 12 hours.

ACTION 37 – a. With the number of OPERABLE channels one less than the Total Number of Channels requirements, restore the inoperable channel to OPERABLE status within 31 days, or be in at least HOT SHUTDOWN within the next 12 hours.

b. With the number of OPERABLE channels two less than the Total Number of Channels requirement, restore at least one inoperable channel to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.

c. With the number of OPERABLE channels less than the Minimum Channels Operable requirement, restore at least one inoperable channel to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

ACTION 38 – a. With the number of OPERABLE channels one less than the Total Number of Channels requirements, restore the inoperable channel to OPERABLE status within 90 days, or be in at least HOT SHUTDOWN within the next 12 hours.

b. With the number of OPERABLE channels two less than the Total Number of Channels requirements, restore the inoperable channel to OPERABLE status within 31 days, or be in at least HOT SHUTDOWN within the next 12 hours.

c. With the number of OPERABLE channels three less than the Total Number of Channels requirement, restore at least one inoperable channel to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.

d. With the number of OPERABLE channels less than the Minimum Channels Operable requirement, restore at least one inoperable channel to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

TABLE 3.3-10 (Continued)
ACTION STATEMENTS (Continued)

ACTION 39 a. With the number of OPERABLE channels one less than the Total Number of Channels requirements, restore one inoperable channel to OPERABLE status within 30 days, or submit a report in accordance with Specification 6.9.2 within the next 14 days outlining the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the inoperable instrumentation channels to OPERABLE status.

b. With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirements, restore at least one inoperable channel to OPERABLE status within 7 days, or submit a report in accordance with Specification 6.9.2 within the next 14 days outlining the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the inoperable instrumentation channels to OPERABLE status.

ACTION 40 a. With the number of OPERABLE channels less than the Minimum Channels OPERABLE requirements and with a functional diverse Channel, restore at least one inoperable channel to OPERABLE status within 30 days, or submit a report in accordance with Specification 6.9.2 within the next 14 days outlining the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the inoperable instrumentation channels to OPERABLE status.

b. With the number of Channels less than the Minimum Channels OPERABLE requirement, and with the diverse channel not functional, restore at least one inoperable Channel to operable status within 7 days or submit a report in accordance with Specification 6.9.2 within the next 14 days outlining the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the inoperable instrumentation channels to OPERABLE status.

ACTION 41 a. With the number of OPERABLE channels one less than the Required Number of Channels, either restore the system to OPERABLE status within 7 days if repairs are feasible without shutting down or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

b. With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE in Table 3.3-10, either restore the inoperable channel(s) to OPERABLE status within 48 hours if repairs are feasible without shutting down or:

1. Initiate an alternate method of monitoring the reactor vessel inventory;

2. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status; and

3. Restore the system to OPERABLE status at the next scheduled refueling.

ACTION 42 a. With one required channel inoperable, restore the required channel to OPERABLE status within 30 days; otherwise, a report shall be prepared and submitted in accordance with Specification 6.9.2 within the next 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 to OPERABLE status.

b. With two required channels inoperable, restore one required channel to OPERABLE status within 7 days; otherwise, be in HOT STANDBY within 6 hours, and in HOT SHUTDOWN in the next 6 hours.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS (Continued)

ACTION 43 – a. With the number of OPERABLE channels two less than the Total Number of Channels requirements, restore the inoperable channel to OPERABLE status within 31 days, or be in at least HOT SHUTDOWN within the next 12 hours.

b. With the number of OPERABLE channels three less than the Total Number of Channels requirement, restore at least one inoperable channel to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.

c. With the number of OPERABLE channels less than the Minimum Channels Operable requirement, restore at least one inoperable channel to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

ACTION 44 – With the number of OPERABLE channels less than the Total Number of Channels requirements, declare the affeected mechanical train inoperable and apply the requirements of the appropriate specification.

3/4.3.5 ATMOSPHERIC STEAM RELIEF VALVE INSTRUMENTATION

LIMITING CONDITION FOR OPERATION:

3.3.5.1 The atmospheric steam relief valve instrumentation shown in Table 3.3-14 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-14

ACTION: As shown in Table 3.3-14

SURVEILLANCE REQUIREMENTS:

4.3.5.1 Perform a CHANNEL CHECK on each atmospheric steam relief valve automatic actuation channel at least once per 12 hours.

4.3.5.2 Perform a CHANNEL CALIBRATION on each atmospheric steam relief valve automatic actuation channel at a nominal setpoint of 1225 psig ± 7 psi at least once every 18 months.

4.3.5.3 Perform an ANALOG CHANNEL OPERATIONAL TEST on each atmospheric steam relief valve automatic actuation channel at a nominal setpoint of 1225 psig ± 7 psi at least once every 18 months.

TABLE 3.3-14

ATMOSPHERIC STEAM RELIEF VALVE INSTRUMENTATION

FUNCTIONAL UNIT	REQUIRED NO. OF CHANNELS	APPLICABLE MODES	ACTION
Manual actuation control channels	4 (1 / valve)	1, 2, 3, 4*	1
Automatic actuation control channels	4 (1 / valve)	1, 2#	1

TABLE 3.3-14 (Continued)

TABLE NOTATIONS

* When steam generators are being used for decay heat removal.

\# Atmospheric steam relief valve(s) may be in manual operation and open, or in automatic operation, to maintain secondary side pressure at or below an indicated steam generator pressure of 1225 psig.

ACTION STATEMENTS

ACTION 1 - With the number of OPERABLE channels less than the required number of channels, declare the affected valve(s) inoperable and apply Technical Specification 3.7.1.6.

~~ACTION 2 - a. With one less than the required number of OPERABLE channels, restore the inoperable channel to OPERABLE status within 7 days; or be in at least HOT STANDBY within the next 6 hours.~~

~~b. With two less than the required number of OPERABLE channels, restore at least three channels to OPERABLE status within 72 hours; or be in at least HOT STANDBY within the next 6 hours.~~

REACTOR COOLANT SYSTEM

OPERATING

LIMITING CONDITION FOR OPERATION

3.4.2.2 All pressurizer Code safety valves shall be OPERABLE with a lift setting[1] of 2485 psig ± 2%.[2]

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With one **or more** pressurizer Code safety valve**s** inoperable, **within 1 hour** either restore the inoperable valve**s** to OPERABLE status ~~within 1 hour~~ or apply the requirements of Specification 3.13, or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.4.2.2 No additional requirements other than those required by Specification 4.0.5.

[1]The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

[2]The as left lift setting shall be within ±1% following valve testing.

3/4.4.4 RELIEF VALVES

LIMITING CONDITION FOR OPERATION

3.4.3 Both power-operated relief valves (PORVs) and their associated block valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one or both PORV(s) inoperable, because of excessive seat leakage, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s) with power maintained to the block valve(s); **otherwise apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With one PORV inoperable due to causes other than excessive seat leakage, within 1 hour either restore the PORV to OPERABLE status or close the associated block valve and remove power from the block valve; **within the following 72 hours** restore the PORV to OPERABLE status ~~within the following 72 hours~~ **or apply the requirements of Specification 3.13, OR** be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With both PORVs inoperable due to causes other than excessive seat leakage, within 1 hour either restore at least one of the PORVs to OPERABLE status or close their associated block valves and remove power from the block valves and **apply the requirements of Specification 3.13, OR** be in HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours.

d. With one block valve inoperable, within 1 hour restore the block valve to operable status or place its associated PORV in closed position; **within 72 hours** restore the block valve to operable status ~~within 72 hours~~ **or apply the requirements of Specification 3.13**; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

e. With both block valves inoperable, within 1 hour restore the block valves to operable status or place the associated PORVs in the closed position; restore at least one block valve to OPERABLE status within the next hour **or apply the requirements of Specification 3.13**; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

f. The provisions of Specification 3.0.4 are not applicable

3/4.5 EMERGENCY CORE COOLING SYSTEMS

3/4.5.1 ACCUMULATORS

LIMITING CONDITION FOR OPERATION

3.5.1 Each Safety Injection System accumulator shall be OPERABLE

APPLICABILITY: MODES 1 and 2
MODE 3 with pressurizer pressure > 1000 psig

ACTION:

a. With one **or more** accumulator**s** inoperable, except as a result of boron concentration outside the required limits, **within 24 hours** restore the inoperable accumulator**(s)** to OPERABLE status ~~within 24 hours~~ **or apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.

b. With the boron concentration of one **or more** accumulator**s** outside the required limit, **within 72 hours** restore the boron concentration to within the required limits ~~within 72 hours~~ **or apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.5.1.1 Each accumulator shall be demonstrated OPERABLE:

a. At least once per 24 hours by:

1) Verifying the contained borated water volume is $\geq$ 8800 gallons and $\leq$ 9100 gallons and nitrogen cover-pressure is $\geq$ 590 psig and $\leq$ 670 psig, and

2) Verifying that each accumulator isolation valve is open.

b. At least once per 31 days and within 6 hours* after each solution volume increase of greater than or equal to 1% of tank volume that is not the result of addition from the RWST by verifying the boron concentration of the accumulator solution is $\geq$ 2700 ppm and $\leq$ 3000 ppm and

c. At least once per 31 days when the RCS pressure is above 1000 psig by verifying that power to the isolation valve operator is removed.

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* The 6 hr. SR is only required to be performed for affected accumulators

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS SUBSYSTEMS - T_{AVG} GREATER THAN OR EQUAL TO 350°F

LIMITING CONDITION FOR OPERATION

3.5.2 Three independent Emergency Core Cooling System (ECCS) subsystems shall be OPERABLE with each subsystem comprised of:

a. One OPERABLE High Head Safety Injection pump,

b. One OPERABLE Low Head Safety Injection pump,

c. One OPERABLE RHR heat exchanger, and

d. An OPERABLE flow path capable of taking suction from the refueling water storage tank on a Safety Injection signal and automatically transferring suction to the containment sump during the recirculation phase of operation through a High Head Safety Injection pump and into the Reactor Coolant System and through a Low Head Safety Injection pump and its respective RHR heat exchanger into the Reactor Coolant System.

APPLICABILITY: MODES 1, 2, and 3.*

ACTION:

a. With less than the above subsystems OPERABLE, but with at least two High Head Safety Injection pumps in an OPERABLE status, two Low Head Safety Injection pumps and associated RHR heat exchangers in an OPERABLE status, and sufficient flow paths to accommodate these OPERABLE Safety Injection pumps and RHR heat exchangers,** **within 7 days** restore the inoperable subsystem(s) to OPERABLE status ~~within 7 days~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. **With less than two of the required subsystems OPERABLE, within 6 hours restore at least one subsystem to OPERABLE status AND apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.**

c. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected Safety Injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

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* The provisions of Specifications 3.0.4 and 4.0.4 are not applicable for entry into MODE 3 for the Safety Injection pumps declared inoperable pursuant to Specification 4.5.3.1.2 provided that the Safety Injection pumps are restored to OPERABLE status within 4 hours or prior to the temperature of one or more of the RCS cold legs exceeding 375°F, whichever comes first.

** Verify required pumps, heat exchangers and flow paths OPERABLE every 48 hours.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.3 ECCS SUBSYSTEMS - T_{avg} LESS THAN 350°F

LIMITING CONDITION FOR OPERATION

3.5.3.1 As a minimum, the following ECCS components shall be OPERABLE:

a. Two OPERABLE High Head Safety Injection pumps,*

b. Two OPERABLE Low Head Safety Injection pumps and their associated RHR heat exchangers, and

c. Two OPERABLE flow paths capable of taking suction from the refueling water storage tank upon being manually realigned and transferring suction to the containment sump during the recirculation phase of operation through a High Head Safety Injection pump and into the Reactor Coolant System and through a Low Head Safety Injection pump and its respective RHR heat exchanger into the Reactor Coolant System.

APPLICABILITY: MODE 4.

ACTION:

a. With less than the above-required ECCS components OPERABLE because of the inoperability of either the High Head Safety Injection pumps or the flow paths from the refueling water storage tank, **within 24 hours** restore at least the required ECCS components to OPERABLE status ~~within 1 hour~~ or **apply the requirements of Specification 3.13, OR** be in COLD SHUTDOWN within the next 20 hours.

b. With less than the above-required ECCS components OPERABLE because of the inoperability of either the residual heat removal heat exchangers or the Low Head Safety Injection pumps, restore at least the required ECCS components to OPERABLE status or maintain the Reactor Coolant System T_{avg} less than 350°F by use of alternate heat removal methods.

c. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected Safety Injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

*A maximum of one High Head Safety Injection pump shall be OPERABLE and a second High Head Safety Injection pump shall be OPERABLE except that its breaker shall be racked out (the third HHSI pump shall have its breaker racked out) within: (1) 4 hours after entering MODE 4 from MODE 3 or prior to the temperature of one or more of the RCS cold legs decreasing below 325°F, whichever comes first; or (2) 4 hours after entering MODE 4 from MODE 5 or prior to the temperature of one or more of the RCS cold legs exceeding 225°F, whichever comes first.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.5 REFUELING WATER STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.5.5 The refueling water storage tank (RWST) shall be OPERABLE with:

a. A minimum contained borated water volume of 458,000 gallons, and

b. A boron concentration between 2800 ppm and 3000 ppm.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the RWST inoperable, **within 1 hour** restore the tank to OPERABLE status ~~within 1 hour~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.5.5 The RWST shall be demonstrated OPERABLE at least once per 7 days by:

a. Verifying the contained borated water volume in the tank, and

b. Verifying the boron concentration of the water.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.6 RESIDUAL HEAT REMOVAL (RHR) SYSTEM

LIMITING CONDITION FOR OPERATION

3.5.6 Three independent Residual Heat Removal (RHR) loops shall be OPERABLE with each loop comprised of:

a. One OPERABLE RHR pump,

b. One OPERABLE RHR heat exchanger, and

c. One OPERABLE flowpath capable of taking suction from its associated RCS hot leg and discharging to its associated RCS cold leg.*

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one RHR loop inoperable, **within 7 days** restore the required loop to OPERABLE status ~~within 7 days~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With two RHR loops inoperable, **within 24** restore at least two RHR loops to OPERABLE status ~~within 24 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With three RHR loops inoperable, immediately initiate corrective action to restore at least one RHR loop to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.5.6.1 Each RHR loop shall be demonstrated OPERABLE on a STAGGERED TEST BASIS pursuant to the requirements of Specification 4.0.5.

4.5.6.2 At least once per 18 months by verifying automatic interlock action of the RHR system from the Reactor Coolant System to ensure that:

a. With a simulated or actual Reactor Coolant System pressure signal greater than or equal to 350 psig, the interlocks prevent the valves from being opened.

*Valves MOV-0060 A, B, and C and MOV-0061 A, B, and C may have power removed to support the FHAR (Fire Hazard Analysis Report) assumptions.

CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.7 Each containment purge supply and exhaust isolation valve shall be OPERABLE and:

a. Each 48-inch containment shutdown purge supply and exhaust isolation valve shall be closed and sealed closed, and

b. The 18-inch supplementary containment purge supply and exhaust isolation valves shall be closed to the maximum extent practicable but may be open for supplementary purge system operation for pressure control, for ALARA and respirable air quality considerations for personnel entry and for surveillance tests that require the valves to be open.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With a 48-inch containment purge supply and/or exhaust isolation valve open or not sealed closed**, within 4 hours** close and/or seal close that valve or isolate the penetration(s) ~~within 4 hours,~~ ~~otherwise~~ **or apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With the 18-inch supplementary containment purge supply and/or exhaust isolation valve(s) open for reasons other than given in Specification 3.6.1.7.b. above, **within 4 hours** close the open 18-inch valve(s) or isolate the penetration(s) ~~within 4 hours~~, **or apply the requirements of Specification 3.13, OR** ~~otherwise~~ be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.

c. With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate in excess of the limits of Specifications 4.6.1.7.2 and/or 4.61.7.3, **within 24 hours** restore the inoperable valve(s) to OPERABLE status or isolate the penetrations so that the measured leakage rate does not exceed the limits of Specifications 4.6.1.7.2 and/or 4.6.1.7.3 ~~within 24 hours~~ **or apply the requirements of Specification 3.13;** otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Three independent Containment Spray Systems shall be OPERABLE with each Spray System capable of taking suction from the RWST and transferring suction to the containment sump.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With one Containment Spray System inoperable, **within 7 days** restore the inoperable Spray System to OPERABLE status ~~within 7 days~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours~~; restore the inoperable Spray System to OPERABLE status within the next 48 hours or be~~ **and** in COLD SHUTDOWN within the following ~~30~~ **36** hours.

b. **With more than one Containment Spray System inoperable, within 72 hours restore the inoperable Spray System to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 36 hours.**

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each Containment Spray System shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position;

b. By verifying on a STAGGERED TEST BASIS, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 283 psid when tested pursuant to Specification 4.0.5;

c. At least once per 18 months during shutdown, by:

1) Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure High 3 test signal, and

2) Verifying that each spray pump starts automatically on a Containment Pressure High 3 test signal coincident with a sequencer start signal.

d. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

CONTAINMENT SYSTEMS
CONTAINMENT COOLING SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.3 Three independent groups of Reactor Containment Fan Coolers (RCFC) shall be OPERABLE with a minimum of two units in two groups and one unit in the third group.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With one group of the above required Reactor Containment Fan Coolers inoperable, **within 7 days** restore the inoperable group of RCFC to OPERABLE status ~~within 7 days~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. **With more than one group of the above required Reactor Containment Fan Coolers inoperable, within 72 hours restore at least two groups of RCFC to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours**.

SURVEILLANCE REQUIREMENTS

4.6.2.3 Each group of Reactor Containment Fan Coolers shall be demonstrated OPERABLE:

a. At least once per 92 days by:

1) Starting each non-operating fan group from the control room, and verifying that each fan group operates for at least 15 minutes, and

2) Verifying a component cooling water flow rate of greater than or equal to 1800 gpm to each cooler.

a. At least once per 18 months by verifying that each fan group starts automatically on a Safety Injection test signal.

AUXILIARY FEEDWATER SYSTEM
LIMITING CONDITION FOR OPERATION

3.7.1.2 Four independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

a. Three motor-driven auxiliary feedwater pumps, each capable of being powered from separate emergency busses, and

b. One steam turbine-driven auxiliary feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

Simple extension to backstop time

a. With one motor-driven auxiliary feedwater pump inoperable, restore the pump to OPERABLE status within **30**~~28~~ days.

b. With the turbine-driven auxiliary feedwater pump inoperable, or with any two auxiliary feedwater pumps inoperable, **within 72 hours** restore the affected auxiliary feedwater pump(s) to OPERABLE status ~~within 72 hours~~ **or apply the requirements of Specification 3.13**. The provisions of Specification 3.0.4 are not applicable for entry into Mode 3 for the turbine-driven pump.

c. With three auxiliary feedwater pumps inoperable, or if the required action and associated allowed outage time for a) or b) is not met, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

d. With four auxiliary feedwater pumps inoperable, immediately initiate action to restore at least one auxiliary feedwater pump to OPERABLE status as soon as possible. LCO 3.0.3 and all other LCO actions requiring Mode changes are suspended until one of the four inoperable auxiliary feedwater pumps is restored to OPERABLE status.

AUXILIARY FEEDWATER STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The auxiliary feedwater storage tank (AFST) shall be OPERABLE with a contained water volume of at least 485,000 gallons of water.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With the AFST inoperable, within 4 hours restore the AFST to OPERABLE status **or apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3 The AFST shall be demonstrated OPERABLE at least once per 12 hours by verifying the contained water volume is within its limits.

This specification is marked up assuming NRC approval of STP application of 5/2002.

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve (MSIV) shall be OPERABLE.

APPLICABILITY: MODE 1
MODES 2 and 3 except when all MSIVs are closed and deactivated

ACTION:

MODE 1:

With one **or more** MSIV**(s)** inoperable but open, POWER OPERATION may continue provided the inoperable valve**(s)** is restored to OPERABLE status **or the requirements of Specification 3.13 are applied** within 8 hours; otherwise be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. *****

MODES 2 and 3:

With one or more MSIV(s) inoperable, subsequent operation in MODE 2 or 3 may proceed provided the isolation valve(s) is/are closed within 8 hours and verified closed every 7 days. Otherwise, be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. *

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each MSIV shall be demonstrated OPERABLE by verifying full closure within 5 seconds when tested pursuant to Specification 4.0.5. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.

*Separate Limiting Condition for Operation entry is allowed for each MSIV.

PLANT SYSTEMS

ATMOSPHERIC STEAM RELIEF VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.6 At least four atmospheric steam relief valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.*

ACTION:

a. With one less than the required atmospheric steam relief valves OPERABLE, **within 7 days** restore the required atmospheric steam relief valves to OPERABLE status ~~within 7 days;~~ **or apply the requirements of Specification 3.13 OR** be in at least HOT STANDBY with the next 6 hours and in HOT SHUTDOWN within the following 6 hours and place the required RCS/RHR loops in operation for decay heat removal.

b. With two **or more** less than the required atmospheric relief valves OPERABLE, **within 72 hours** restore at least three atmospheric relief valves to OPERABLE status within ~~72 hours~~ **or apply the requirements of Specification 3.13 OR** be in at least HOT STANDBY with the next 6 hours and in HOT SHUTDOWN within the following 6 hours and place the required RCS/RHR loops in operation for decay heat removal.

~~SURVEILLANCE REQUIREMENTS~~

4.7.1.6 Each atmospheric relief valve shall be demonstrated OPERABLE prior to startup following any COLD SHUTDOWN of 30 days or longer or following any refueling shutdown, by verifying that all valves will open and close fully by operation of automatic and manual controls.

*When steam generators are being used for decay heat removal.

Mark-up is based on NRC approval of STP application of 5/2002.

PLANT SYSTEMS

MAIN FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.7 Each main feedwater isolation valve (MFIV) shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3 except when MFIV is closed and deactivated.

ACTION:

With one or more MFIV(s) inoperable, **within 4 hours** close or isolate the inoperable valve(s) ~~within 4 hours~~,

OR

verify within 4 hours that the Main Feed Regulating Valve(s) (MFRV) in the same flow path(s) is/are available to perform feedwater isolation

AND

within 72 hours apply the requirements of Specification 3.13, OR close or isolate the MFIV(s) ~~within 72 hours~~ and verify the valve(s) closed every 7 days.

Otherwise, be in MODE 3 within the next 6 hours and be in MODE 4 within the following 6 hours. *

SURVEILLANCE REQUIREMENTS

4.7.1.7 Each MFIV shall be demonstrated OPERABLE by verifying full closure within 10 seconds when tested pursuant to Specification 4.0.5. The provisions of specification 4.0.4 are not applicable for entry into MODE 3.

* Separate Limiting Condition for Operation entry is allowed for each MFIV.

PLANT SYSTEMS

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3 At least three independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With only two component cooling water loops OPERABLE, **within 7 days** restore at least three loops to OPERABLE status ~~within 7 days~~ **or apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. **With two or more component cooling water loops inoperable, within 72 hours restore at least two loops to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours**.

SURVEILLANCE REQUIREMENTS

4.7.3 At least three component cooling water loops shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve outside containment (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position; and

b. At least once per 18 months by verifying that:

1) Each automatic valve servicing safety-related equipment or isolating the non-nuclear safety portion of the system actuates to its correct position on a Safety Injection, Loss of Offsite Power, Containment Phase "B" Isolation, or Low Surge Tank test signal, as applicable (performed during shutdown);

2) Each Component Cooling Water System pump starts automatically on a Safety Injection or Loss of Offsite Power test signal (performed during shutdown); and

3) The surge tank level instrumentation which provides automatic isolation of portions of the system is demonstrated OPERABLE by performance of a CHANNEL CALIBRATION test.

c. By verifying that each valve inside containment (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position prior to entering MODE 4 following each COLD SHUTDOWN of greater than 72 hours if not performed within the previous 31 days.

3/4.7.4 ESSENTIAL COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.4 At least three independent essential cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With only two essential cooling water loops OPERABLE, **within 7 days** restore at least three loops to OPERABLE status ~~within 7 days~~ **or apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. **With two or more essential cooling water loops inoperable, within 12 hours restore at least two loops to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours**.

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SURVEILLANCE REQUIREMENTS

4.7.4 At least three essential cooling water loops shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position;

b. At least once per 18 months during shutdown, by verifying that:

1) Each Essential Cooling Water automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal, and

2) Each Essential Cooling Water pump starts automatically on an actual or simulated signal.

3/4.7.7 CONTROL ROOM MAKEUP AND CLEANUP FILTRATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Three independent Control Room Makeup and Cleanup Filtration Systems shall be OPERABLE.

APPLICABILITY: All MODES.

ACTION:

MODES 1, 2, 3, and 4:

a. With one Control Room Makeup and Cleanup Filtration System inoperable, **within 7 days** restore the inoperable system to OPERABLE status ~~within 7 days~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With two Control Room Makeup and Cleanup Filtration Systems inoperable, **within 72 hours** restore at least two systems to OPERABLE status ~~within 72 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With three Control Room Makeup and Cleanup Filtration Systems inoperable, suspend all operations involving movement of spent fuel, and crane operation with loads over the spent fuel pool, and **within 12 hours** restore at least one system to OPERABLE status ~~within 12 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6:

a. With one Control Room Makeup and Cleanup Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Makeup and Cleanup Filtration Systems in the recirculation and makeup air filtration mode, or suspend all operations involving CORE ALTERATIONS, operations involving positive reactivity additions that could result in loss of required SHUTDOWN MARGIN or required boron concentration, movement of spent fuel, and crane operation with loads over the spent fuel pool.

b. With more than one Control Room Makeup and Cleanup Filtration System inoperable, or with the OPERABLE Control Room Makeup and Cleanup Filtration Systems required to be in the recirculation and makeup air filtration mode by ACTION a. not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS, operations involving positive reactivity additions that could result in loss of required SHUTDOWN MARGIN or required boron concentration, movement of spent fuel, and crane operations with loads over the spent fuel pool.

SURVEILLANCE REQUIREMENTS

4.7.7 Each Control Room Makeup and Cleanup Filtration System shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 78°F;

b. At least once per 92 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers of the makeup and cleanup air filter units and verifying that the system operates for at least 10 continuous hours with the makeup filter unit heaters operating;

3/4.7.8 FUEL HANDLING BUILDING (FHB) EXHAUST AIR SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.8 The FHB Exhaust Air System comprised of the following components shall be OPERABLE.

a. Two independent exhaust air filter trains,

b. Three exhaust ventilation trains.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:*

a. With one FHB exhaust air filter train inoperable, **within 7 days** restore the inoperable filter train to OPERABLE status ~~within 7 days~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

b. With two FHB exhaust air filter trains inoperable, **within 12 hours** restore at least one inoperable filter train to OPERABLE status ~~within 12 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

c. With one FHB exhaust ventilation train inoperable, **within 7 days** restore the inoperable exhaust ventilation train to OPERABLE status ~~within 7 days~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

d. With more than one FHB exhaust ventilation train inoperable, **within 12 hours** restore at least two exhaust ventilation trains to OPERABLE status ~~within 12 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN in the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.8 The Fuel Handling Building Exhaust Air System shall be demonstrated OPERABLE:

a. At least per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal absorbers and verifying that the system operates for at least 10 continuous hours with the heaters operating with two of the three exhaust booster fans and two of the three main exhaust fans operating to maintain adequate air flow rate;

b. At least once per 18 months and (1) after any structural maintenance on the HEPA filter or charcoal absorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:

1) Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% for HEPA filter banks and 0.10% for charcoal absorber banks and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 29,000 cfm ± 10%.

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52,

PLANT SYSTEMS

3/4.7.14 ESSENTIAL CHILLED WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.14 At least three independent Essential Chilled Water System loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With only two Essential Chilled Water System loops OPERABLE, **within 7 days** restore at least three loops to OPERABLE status ~~within 7 days~~ **or apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. **With two or more Essential Chilled Water System loops inoperable, within 12 hours restore at least two loops to OPERABLE status or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours**

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SURVEILLANCE REQUIREMENTS

4.7.14 The Essential Chilled Water System shall be demonstrated OPERABLE by:

a. Performance of surveillances as required by Specification 4.0.5, and

b. At least once per 18 months by demonstrating that the system starts automatically on a Safety Injection test signal.

Includes proposed requirements for an automatic load sequencer,

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE.

a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E Distribution System(l), and

b. Three separate and independent standby diesel generators, each with a separate fuel tank containing a minimum volume of 60,500 gallons of fuel, and an automatic load sequencer.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With one offsite circuit of the above-required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. **Within 72 hours r**estore the offsite circuit to OPERABLE status ~~within 72 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. With a standby diesel generator inoperable, demonstrate the OPERABILITY of the above-required A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If the standby diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE standby diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.2) for each such standby diesel generator separately within 8 hours, unless it can be demonstrated there is no common mode failure for the remaining diesel generator(s). **Within 14 days r**estore the inoperable standby diesel generator to OPERABLE status ~~within 14 days~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

c. With one offsite circuit of the above-required A.C. electrical power sources and one standby diesel generator inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; and if the standby diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive

ACTION (Continued)

maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE standby diesel generator(s) by performing Surveillance Requirement 4.8.1.1.2a.2) within 8 hours, unless it can be demonstrated there is no common mode failure for the remaining diesel generators; **within 12 hours** restore at least one of the inoperable sources to OPERABLE status ~~within 12 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. ~~Restore at least two offsite circuits to OPERABLE status within 72 hours and three standby diesel generators to OPERABLE status within 14 days from the time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours~~.

d. With one standby diesel generator inoperable in addition to ACTION b. or c. above, ~~verify that~~ **within 24 hours apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

~~1. All required systems, subsystems, trains, components, and devices that depend on the remaining OPERABLE diesel generators as a source of emergency power are also OPERABLE, and~~

~~2. When in MODE 1, 2, or 3, the steam-driven auxiliary feedwater pump is OPERABLE~~.

~~If these conditions are not satisfied within 24 hours be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.~~

e. With two of the above required offsite A.C. circuits inoperable, **within 24 hours** restore at least one of the inoperable offsite sources to OPERABLE status ~~within 24 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours. ~~With only one offsite source restored, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.~~

f. With two or three of the above required standby diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing the requirements of Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; **within 12 hours** restore at least one standby diesel generator to OPERABLE status ~~within 2 hours~~ **AND apply the requirements of Specification 3.13, OR** ~~at least two standby diesel generators to OPERABLE status within 24 hours or~~ be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. ~~Restore at least three standby diesel generators to OPERABLE status within 14 days from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.~~

g. With one required load sequencer inoperable**, within 7 days** restore the inoperable load sequencer to operable status ~~within 7 days~~ or **apply the requirements of Specification 3.13, OR** be in HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

h. With one required load sequencer inoperable and one required standby diesel generator not associated with the inoperable sequencer also inoperable **or with more than one required load sequencer inoperable**, **within 24 hours** restore the inoperable load sequencer**(s)** and/or the inoperable standby diesel generator not associated with the inoperable load sequencer to OPERABLE status ~~within 24 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ELECTRICAL POWER SYSTEMS

3/4.8.2 D.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 As a minimum, the following D.C. electrical sources shall be OPERABLE:

a. Channel I 125-volt Battery Bank E1A11(Unit 1), E2A11 (Unit 2) and one of its two associated chargers,

b. Channel II 125-volt Battery Bank E1D11 (Unit 1), E2D11 (Unit 2) and one of its two associated full capacity chargers,

c. Channel III 125-volt Battery Bank E1B11 (Unit 1), E2B11 (Unit 2) and one of its two associated full capacity chargers, and

d. Channel IV 125-volt Battery Bank E1C11 (Unit 1), E2C11 (Unit 2) and one of its two associated chargers.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With less than the required battery banks or battery chargers OPERABLE, within 2 hours restore the inoperable battery bank or battery charger or apply the requirements of Specification 3.13, OR be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

~~a. With one of the required battery banks inoperable, restore the inoperable battery bank to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.~~

~~b. With no battery chargers for a channel OPERABLE, restore at least one battery charger to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.~~

SURVEILLANCE REQUIREMENTS

4.8.2.1 Each 125-volt battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1) The parameters in Table 4.8-2 meet the Category A limits, and

2) The total battery terminal voltage is greater than or equal to 129 volts on float charge.

ELECTRICAL POWER SYSTEMS

3/4.8.3 ONSITE POWER DISTRIBUTION

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.3.1 The following electrical busses shall be energized in the specified manner:

a. Train A A.C. ESF Busses consisting of:
   1) 4160-Volt ESF Bus # ElA (Unit 1), E2A (Unit 2), and
   2) 480-Volt ESF Busses # ElAl and EIA2 (Unit 1), E2Al and E2A2 (Unit 2) from respective load center transformers.

b. Train B A.C. ESF Busses consisting of:
   1) 4160-Volt ESF Bus # ElB (Unit 1), E2B (Unit 2), and
   2) 480-Volt ESF Busses # E1B1 and ElB2 (Unit 1), E2Bl and E2B2 (Unit 2) from respective load center transformers.

c. Train C A.C. ESF Busses consisting of:
   1) 4160-Volt ESF Bus # ElC (Unit 1), E2C (Unit 2), and
   2) 480-Volt ESF Busses # ElCl and ElC2 (Unit 1), E2Cl and E2C2 (Unit 2) from respective load center transformers.

d. 120-Volt A.C. Vital Distribution Panels DP1201 and DP001 energized from their associated inverters connected to D.C. Bus # ElAll* (Unit 1), E2All* (Unit 2), .

e. 120-Volt A.C. Vital Distribution Panel DP1202 energized from its associated inverter connected to D.C. Bus # ElDll* (Unit 1), E2Dll* (Unit 2),

f. 120-Volt A.C. Vital Distribution Panel DP1203 energized from its associated inverter connected to D.C. Bus # ElBll* (Unit 1), E2Bll* (Unit 2),

g. 120-Volt A. C. Vital Distribution Panels DP1204 and DP002 energized from their associated inverters connected to D. C. Bus #E1C11* (Unit 1), E2C11* (Unit 2),

h. 125-Volt D. C. Bus E1A11 (Unit 1) E2A11 (Unit 2) energized from Battery Bank E1A11 (Unit 1), E2A11 (Unit 2),

i. 125-Volt D. C. Bus E1D11 (Unit 1) E20D11 (Unit 2) energized from Battery Bank E1D11 (Unit 1), E2D11 (Unit 2),

j. 125-Volt D. C. Bus E1B11 (Unit 1) E2B11 (Unit 2) energized from Battery Bank E1B11 (Unit 1), E2B11 (Unit 2), and

k. 125-Volt D. C. Bus E1C11 (Unit 1) E2C11 (Unit 2) energized from Battery Bank E1C11 (Unit 1), E2C11 (Unit 2).

*The inverter(s) associated with one channel may be disconnected from its D.C. bus for up to 24 hours as necessary, for the purpose of performing an equalizing charge on its associated battery bank provided: (1) its vital distribution panels are energized, and (2) the vital distribution panels associated with the other battery banks are energized from their associated inverters and connected to their associated D.C. busses.

LIMITING CONDITION FOR OPERATION (Continued)

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With ~~one of~~ the required trains of A.C. ESF busses not fully energized, **within 8 hours** reenergize the train ~~within 8 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one **or more** A.C. vital distribution panel**(s)** either not energized from its associated inverter, or with the inverter not connected to its associated D.C. bus**: (1)** within 2 hours reenergize the A.C. distribution panel(s) **or apply the requirements of Specification 3.13 , OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; **AND** (2) **within 24 hours** reenergize the A.C. vital distribution panel**(s)** from its associated inverter connected to its associated D.C. bus ~~within 24 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With one **or more** D.C. bus(**es)** not energized from its associated battery bank, **within 2 hours** reenergize the D.C. bus**(es)** from its associated battery bank ~~within 2 hours~~ or **apply the requirements of Specification 3.13, OR** be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.3.1 The specified busses shall be determined energized in the required manner at least once per 7 days by verifying correct breaker alignment and indicated voltage on the busses.

RISK MANAGEMENT

ALLOWED OUTAGE TIME DETERMINATIONS

LIMITING CONDITION FOR OPERATION

3.13.1 When referred to this specification, equipment that has been removed from service or declared inoperable shall be evaluated for its impact on plant risk and allowed outage times determined accordingly.

APPLICABILITY: As required by the referencing specification(s)

ACTION:

Determine that the configuration is acceptable for Completion Time extension beyond the [Front Stop AOT],

AND

Determine that the configuration is acceptable for continued operation beyond the [Front Stop AOT] whenever configuration changes occur that may affect plant risk,

AND

Restore required inoperable [subsystem, component] to OPERABLE status within the Acceptable Allowed Outage Time Extension or 30 days, whichever is shorter.

Note: The 30-day limitation may be applied individually to each specification for which Specification 3.13.1 has been entered.

OR

Take the ACTION(s) required in the referencing specification(s) for required action or completion time not met

SURVEILLANCE REQUIREMENTS

4.13.1: As required by the referencing specification(s)

Bases for Specification 3.13.1

Specification 3.13.1 establishes provisions for performing a risk assessment to determine required actions and allowed outage times for specifically identified specifications for structures, systems, and components. Application of the risk assessment is consistent with the requirements of the Maintenance Rule, 10CFR50.65(a)(4), to assess and manage the increase in risk that may result from maintenance activities. The process to manage the risk assesses the rate of accumulation of risk in plant configurations and determines the allowed outage time by calculating the time required to cross a Potentially Risk Significant Threshold (1.0E-05).

Application of the risk assessment to manage allowed time in different plant configurations is complemented by the station's programs to monitor performance indicators for long-term availability of risk-significant components. The requirement to achieve acceptable long-term performance indicators provides a significant disincentive to the potential to regularly extend baseline allowed outage times to the detriment of availability.

TS 3.13.1.a establishes the conditions for performance of the risk assessment. The LCOs subject to the configuration risk management program specifically reference TS 3.13.1. The baseline allowed outage time or required completion time specified in the LCO may be used to apply the TS 3.13.1 to determine an alternate allowed outage time and compensatory actions. The requirement to continuously determine the acceptability of the plant means that once the subject LCO has exceeded the baseline allowed outage time, the risk assessment must be reperformed as needed to determine the required action and time limits for any LCO that subsequently becomes inoperable. This requirement provides assurance that the configuration risk is adequately assessed. In a configuration with multiple LCOs inoperable, the risk assessment may determine that the allowed outage time is shorter than what would be allowed by the baseline time in the affected LCOs. With more than one LCO inoperable, the baseline time for a subsequent inoperable LCO might also be a non-conservative time to perform a risk assessment to determine the appropriate required action and time. Consequently, the risk assessment process may also be applied to determine how much time is available to perform a risk assessment for subsequent inoperable LCOs.

TS 3.13.1 is applied with the referencing specification and the ACTION required by the referencing specification must be taken if the configuration risk exceeds the Potentially Risk Significant Threshold. It recognizes that the plant is in an extended allowed outage time that has a specified required action if the required action time is exceeded. In a configuration where the risk exceeds the Potentially Risk Significant Threshold, the calculated allowed outage time has been exceeded and the action required at the expiration of LCO allowed outage time must be taken. If more than one LCO is beyond its frontstop time, the LCO with the most limiting required action must be followed.

TS 3.13.1 establishes a backstop allowed outage time of 30 days. This backstop allowed outage time prevents allowing a component with little or no risk significance from being inoperable indefinitely and resulting in a defacto change to the design or licensing basis of the plant. The note allows the 30-day backstop to be applied individually to specifications for which TS 3.13.1 is being used.

Implementation Examples

The examples in this attachment depict how the risk-informed Technical Specifications and the Configuration Risk Management Program would be applied. As discussed earlier, STPNOC's implementation of the risk-informed Technical Specifications will be generally consistent with the NEI Risk-informed Technical Specifications Risk Management Guide.

Example 1: Routine Train A work week with emergent Train B condition

This example illustrates how the Technical Specifications would be applied for situation where there is a train of equipment out of service for planned maintenance and a risk-significant component on a different train is found to be inoperable. Current TS for the condition below would require entry into TS 3.0.3 for the second inoperable HHSI train. This would subsequently require the plant to be shutdown within a few hours unless STNOC was granted enforcement discretion by the NRC.

Application of the proposed risk-informed TS would allow STP to determine the appropriate allowed outage time for the condition where the second HHSI train was inoperable. The example demonstrates that there is adequate time for the plant to address the emergent condition without shutting down or requesting enforcement discretion.

Time (hh:mm)	**Event**	**Frontstop**	**Calculated AOT (time to reach 1E-05)**	**Risk (/hr)**	**Comment**
00:00	Begin Train A work week (SDG, ECW, CCW, HHSI)	HHSI (3.5.2.a): 7 days CCW (3.7..3.a): 7 days ECW (3.7.4.a): 7 days SDG (3.8.1.1.b): 14 days	NA, planned to remain within frontstop allowed outage time.	5.9E-09	Routine planned maintenance
24:00	Train B HHSI found to be inoperable	3.5.2.b: 6 hours to apply TS 3.13	24 days	1.7E-08	Emergent condition where CTS would require TS 3.0.3 entry. RITS permits the station to address the condition with normal work controls.
36:00	Train B HHSI restored	Exit TS 3.5.2.b and TS 3.13 applicability. Back on the work week clock with 36 hours elapsed.	NA	5.9E-09	

Example 2: Emergent condition while in configuration where TS 3.13 is in use

This example illustrates how the TS would be applied in a situation where a frontstop AOT has been extended by use of TS 3.13 and there is a subsequent emergent condition involving an inoperable risk-significant component. The recalculated AOT of 27 days when the TDAFW pump is found to be inoperable also accounts for the days that the ECW pump has been out of service.

Time (hh:mm)	**Event**	**Frontstop**	**Calculated AOT (time to reach 1E-05**	**Risk (/hr)**	**Comment**
00:00	ECW pump replacement expected to last 10 days.	TS 3.7.4.a: 7 days (Also makes associated SDG inoperable)	1 train of ECW could be allowed OOS up to the 30-day backstop	4.5E-09	TS 3.13 requirements apply after 7 days. The risk is calculated from the time the ECW is taken out of service.
8 days	Turbine-driven AFW found to be inoperable	TS 3.7.1.2.b: 72 hours TS 3.8.1.1.d: 24 hours	27 days	1.5E-08	Regardless of the frontstop time for the TDAFW pump, TS 3.13 applies because the ECW has gone beyond its frontstop. TS 3.13 requires a determination of the acceptability of the configuration with the additional inoperable TDAFW. Application of the CRMP would determine the configuration is acceptable.
9 days	ECW pump is restored	TS 3.7.1.2.b: 72 hours less the 24 hours that have transpired.	> 30 days (backstop would apply)	1.5E-09	The condition that caused TS 3.13 to apply has been exited and there are no TS beyond their frontstop time. The frontstop AOT may be applied to the TDAFW.

Example 3: Same as Example 2, except that the emergent condition is restored first

Time (hh:mm)	**Event**	**Frontstop**	**Calculated AOT (time to reach 1E-05)**	**Risk (/hr)**	**Comment**
00:00	ECW pump replacement expected to last 10 days.	TS 3.7.4.a: 7 days	1 train of ECW could be allowed OOS up to the 30-day backstop	4.5E-09	TS 3.13 requirements apply after 7 days. The risk is calculated from the time the ECW is taken out of service
8 days	Turbine-driven AFW found to be inoperable	TS 3.7.1.2.b: 72 hours TS 3.8.1.1.d: 24 hours	27 days	1.5E-08	Regardless of the frontstop time for the TDAFW pump, TS 3.13 applies because the ECW has gone beyond its frontstop. TS 3.13 requires a determination of the acceptability of the configuration with the additional inoperable TDAFW. Application of the CRMP would determine the configuration is acceptable.
9 days	TD AFW restored	NA	> 30 days	4.5E-09	TS 3.13 still applies. TDAFW no longer contributes to risk calculation. A new completion time may be calculated.

PRA Quality

As stated in the cover letter, STPNOC proposes that this application be used as a pilot for draft Regulatory Guide (DG) 1122, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities".

STPNOC has determined that the preparing and submitting the information required by DG-1122 will require a substantial effort. This submittal contains an outline with some preliminary information. The remainder of the information will be included in future submittals.

Description of the STP PRA

The STP PRA is a full-scope Level 1 / 2 PRA that incorporates internal events, inclusive of fires/floods, and external events (seismic, fire, flood). STP's PRA features a seismic PRA, flood PRA (including spatial interactions analysis), human reliability analysis, and detailed common cause modeling. The model is quantified using the RISKMAN® software code that has met station and industry software quality assurance requirements. The PRA is maintained and updated under a PRA configuration control program in accordance with station procedures. This program is governed by procedure. Periodic reviews and updates, if necessary, for plant changes (includes as a minimum performance data, procedures, and modifications) by qualified personnel with independent reviews and approvals.

STPNOC has used the PRA for risk-informed insights and applications since the mid-1980s. The NRC has previously reviewed the STP PRA in support of approving the following risk-informed licensing applications:

1. Amendment Nos. 59 & 47, dated February 17, 1994 (initial application made in 1990). The application extended the allowed outage times for 10 LCOs and the intervals for 3 surveillance tests.
2. Amendment Nos. 85 & 72, dated October 31, 1996. The application extended the allowed outage time for the standby diesel generators and their associated support systems.
3. Amendment Nos. 125 & 113, dated September 26, 2000. The application relaxed LCO requirements for control room and fuel handling building HVAC.
4. Approval of Exemption to Special Treatment Requirements, dated August 3, 2001. The application relaxed regulatory requirements for various degrees of special treatment provisions for safety related components (Option 2 Pilot).
5. Amendment Nos. 135 & 124, dated January 10, 2002. The application extended the allowed outage time for ECCS Accumulators consistent with WCAP-15049-A and relaxed accumulator surveillance requirements consistent with Westinghouse Improved Technical Specifications.
6. Amendment Nos. 143 & 131, dated September 17, 2002. The application allowed a one extension of integrated leak rate test to 15 years.
7. Amendment Nos. 146 & 134, dated December 31, 2002. The application extended the allowed outage time for auxiliary feedwater.

In addition to the risk-informed licensing applications above, STPNOC has used the STP PRA to provide additional insight to other licenses amendments and to respond to NRC questions.

The following references are evaluations of the STP PRA that have been performed by the NRC and others:

1. NRC SER related to the STP Probabilistic Safety Assessment, dated January 21, 1992, documented favorable conclusions with regard to the STP PRA, including its treatment of fire (done to support the review for Amendment Nos. 59 & 47, above).

2. 2002 Peer Review

   In April 2002, STP's PRA underwent an industry peer review performed in accordance with NEI-00-02, "Industry PRA Peer Review Process." All technical elements within the scope of the peer review were graded as sufficient to support application requiring the capabilities of a grade 2 (e.g., risk ranking applications). Most of the elements were further graded as sufficient to support application requiring the capabilities defined for grade 3 (e.g., risk-informed applications supported by deterministic insights). The general assessment of the peer reviewers was that STP's PRA could effectively be used to support applications involving risk significance determinations supported by deterministic analyses once the items noted in the element summaries and Fact & Observations (F&O) sheets were addressed. Using STP's Corrective Action program as a tracking mechanism, all F&O items identified by the peer team have been completed and are incorporated into the latest revision of the STP PRA (Revision 4). The STP PRA Revision 4 model is the basis for this application of Risk-Informed Technical Specifications.

DG-1122 Required Information

The information described below will be provided to demonstrate that the parts of the STP PRA are of sufficient quality to support the analyses used in this application

- A description of the process for maintenance, update, and control of the PRA.

- Identification of changes to design or operational practices whose impacts have not been incorporated in the PRA model used to support the application, and either a justification of why this does not impact the results used or the results of a sensitivity study to demonstrate that the impact is not significant.

- Documentation that the parts of the PRA required to produce the results used in the decision are performed consistently with the standard or peer review process as endorsed in the appendices to this regulatory guide, or a discussion of the impact of not meeting the standard or the criteria of the peer review process on the results and either a justification of why this does not impact the results used or the results of a sensitivity study that demonstrate that the impact is not significant.

- A characterization of the assumptions and approximations that have a significant impact on the results used in the decision-making process. This characterization also includes the peer reviewers' assessment of those assumptions. These characterizations provide information that the NRC staff may find useful to support the assessment of whether the use of these assumptions and approximations is either appropriate for the application, or whether sensitivity studies performed to support the decision are appropriate.

- A discussion of the resolution of the peer review comments that are applicable to the parts of the PRA required for the application. This may take the form of: (1) a discussion of how the PRA model has been changed, (2) a justification of why the particular issue raised does not impact the results used, or (3) the results of a sensitivity study that demonstrate that the impact is not significant.