



July 22, 2016

L-2016-135
10 CFR 50.90

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

St. Lucie Nuclear Plant, Units 1 and 2
Docket Nos. 50-335 and 50-389

Re: Second Response to Request for Additional Information Regarding License Amendment Request to Adopt TSTF-505, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4B"

References:

1. Florida Power & Light Company letter L-2014-242 "Application to Adopt TSTF-505, Revision 1, Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4B," December 5, 2014 (ML14353A016)
2. NRC E-mail "Request for Additional Information - St. Lucie TSTF-505 EICB - MF5372 & MF 5373," March 28, 2016 (ML16089A006)
3. NRC E-mail "Request for Additional Information - St. Lucie TSTF-505 APLA - MF5372 & MF5373," April 13, 2016 (ML16105A456)
4. NRC E-mail "Request for Additional Information - St. Lucie TSTF 505 APLA - MF5372 & MF5373," May 27, 2016 (ML16152A187)
5. Florida Power & Light letter L-2016-114 "Response to Request for Additional Information Regarding License Amendment Request to Adopt TSTF-505, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4B," July 8, 2016

In Reference 1, Florida Power & Light Company (FPL) submitted a license amendment request (LAR) for St. Lucie Units 1 & 2. The proposed amendment would revise the technical specifications (TS) to implement TSTF-505, Revision 1, "Provide Risk-Informed Extended Completion Times RITSTF [Risk Informed TSTF] Initiative 4b."

In References 2, 3, and 4, the NRC staff requested additional information to complete its review of the LAR. Reference 5 responded to all but four questions in the requests for additional information. The Enclosure to this letter provides FPL's response to the four remaining questions (RAI-MF5372/73-EICB-01, RAI-MF5372/73-APLA-08 R1, RAI-MF5372/73-SBPB-01, and RAI-MF5372/73-SBPB-02).

FPL has included in this response a 24-hour limit on the risk informed completion time used for emergent conditions involving a loss of specified safety function or inoperability of all trains when one or more trains are PRA functional. While this response does not propose a backstop longer than 24 hours for a loss of function condition, FPL will continue to participate in the industry effort and may request a longer backstop in the future.

ADD
NRR

Attachments 1 and 2 to the Enclosure provide markups of the TS for Unit 1 and Unit 2, respectively, showing revisions to the proposed changes. These markups supersede the corresponding markups provided in Reference 1. Revised TS pages for Unit 1 and Unit 2 are provided in Attachments 3 and 4, respectively. The revised TS pages supersede the corresponding pages provided in Reference 1.

The revisions to the proposed changes included in this response do not alter the conclusion in Reference 1 that the changes do not involve a significant hazards consideration pursuant to 10 CFR 50.92, and there are no significant environmental impacts associated with the changes.

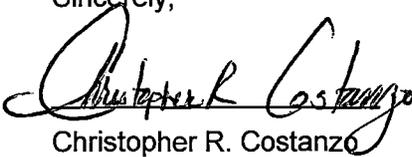
No new or revised commitments are included in this letter.

Should you have any questions regarding this submittal, please contact Mr. Mike Snyder, Licensing Manager, at (772) 467-7036

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 22nd, 2016

Sincerely,



Christopher R. Costanzo

Site Vice President
St. Lucie Nuclear Plant

Enclosure

cc: NRC Regional Administrator, Region II
NRC Senior Resident Inspector, St. Lucie Units 1 and 2
NRC Project Manager
Ms. Cindy Becker, Florida Department of Health

ENCLOSURE

Second Response to Request for Additional Information Regarding License Amendment
Request to Adopt TSTF-505, "Provide Risk-Informed Extended Completion Times - RITSTF
Initiative 4B"

RAI-MF5372/73-EICB-01

The LAR does not describe conditions where instrumentation and control (I&C) functions are INOPERABLE but are probabilistic risk assessment (PRA) Functional.

- a) For each I&C function where there is a proposed ACTION for the condition where two or more less than the minimum number of operable channels are OPERABLE, please provide some example conditions that would be considered PRA Functional.
- b) For each example condition provided in (a), please include an evaluation against the criteria in NEI 06-09 Section 2.3.1, Item No. 10 (i.e., Item No. 11 as augmented and supplemented by Section 3.2.3).
- c) Title 10 of the Code of Federal Regulations (10 CFR), part 50.55a, "Codes and Standards," requires (see 10 CFR50.55a(h)(2)):

"Protection systems. For nuclear power plants with construction permits issued after January 1, 1971, but before May 13, 1999, protection systems must meet the requirements in IEEE Std 279-1968, "Proposed IEEE Criteria for Nuclear Power Plant Protection Systems," or the requirements in IEEE Std 279-1971, "Criteria for Protection Systems for Nuclear Power Generating Stations," or the requirements in IEEE Std 603-1991, "Criteria for Safety Systems for Nuclear Power Generating Stations["]], and the correction sheet dated January 30, 1995. For nuclear power plants with construction permits issued before January 1, 1971, protection systems must be consistent with their licensing basis or may meet the requirements of IEEE Std. 603-1991 and the correction sheet dated January 30, 1995."

Furthermore, both IEEE 279-1968 and IEEE 279-1971 require (see Clause 4.1, General Functional Requirement"):

"The nuclear power generating station protection system shall, with precision and reliability, automatically initiate appropriate protective action whenever a condition monitored by the system reaches a preset level. This requirement applies for the full range of conditions and performance enumerated in Sections 3(7), 3(8), and 3(9)."

For each example condition provided in (a), please describe if, in any way, this regulatory requirement is NOT met.

FPL Response

- a) Functions that are INOPERABLE will be considered PRA functional only when the cause of the inoperability is solely due to an administrative consideration. An example of an administrative consideration causing inoperability that will be considered to not impact PRA functionality is corrective maintenance and associated post-maintenance testing that have been successfully completed on a channel, indicating a reasonable expectation that the channel can perform the specified functions in the CLB, but the Technical Specification Surveillance Requirement has not yet been satisfied to declare the channel OPERABLE.

This practice is consistent with the current Configuration Risk Management Program (CRMP) in use for assessing and managing configuration risk per 10 CFR 50.65(a)(4) (Maintenance Rule). Note that performance of a surveillance test that results in failure to meet its Surveillance Requirements would result in the affected Actuation Logic channel being considered inoperable and not PRA functional and, therefore, the channel could not be credited in a RICT calculation.

- b) Item number 11.1 does not apply (no degraded parameters). Degraded performance parameters will not be considered PRA functional when they are inoperable, as discussed in response to (a).

Item number 11.2 is applicable. This criterion permits consideration of the unaffected functions of the component to be PRA functional when the condition causing the inoperability is capable of being assessed by the PRA model. The corrective maintenance has restored the channel to its design configuration and associated post-maintenance testing has been completed on the channel which indicates a reasonable expectation that the channel can perform the specified functions in the CLB and, therefore, the functions modeled in the PRA are no longer affected.

Item number 11.3 is not applicable because the affected functions for inoperable ESFAS components are modeled either explicitly or by bounding inputs in the PRA, for those with specific components not modeled. The surrogates will not be considered PRA functional when the associated components are inoperable, as discussed in response to (a).

- c) Requirements in IEEE Std 279-1971, "Criteria for Protection Systems for Nuclear Power Generating Stations," are met with the exception of the single failure criterion. (Note that it is the TS Conditions, Required Actions, and their associated Completion Times which specify the limited period of operation where the single failure criterion is not met; the LCO specifies the minimum equipment requirements for unlimited continued operation. NEI 06-09 Revision 0-A implemented by TSTF-505 provides a method acceptable to the NRC for determination of this limited time, as an alternative to the fixed times in the Standard TS.). Both IEEE 279-1968 and IEEE 279-1971 (Clause 4.1, General Functional Requirement) are in regard to automatic functions. Failure of the Manual push buttons has NO impact on automatic functions. The RICT requires one Automatic Actuation Logic to be PRA Functional. As discussed in response 1a, these will only be considered PRA function due to an administrative concern. The actuation logic will function as per design requirements required in Clause 4.1.

RAI-MF5372/73-APLA-08 R1 (PRA Functionality)

Model Application to TSTF-505, Revision 1, "Proposed Revision to the Model Application for TSTF-505, Revision 1, 'Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b'," Enclosure 1 (ADAMS ML12032A065) states:

This enclosure should provide a description of PRA functionality for each associated specified safety function that corresponds to each proposed Required Action that is applicable when all trains of equipment are inoperable as discussed in Section 2.3.1.10 of NEI 06-09.

The TSTF-505 enclosure guidance is included as part of the model application because the NRC staff seeks clarity in how PRA Functionality will be used during full power operation following, "loss of a specified safety function or inoperability of all required trains or divisions of a system." Provide justification for PRA functionality for each associated specified safety function consistent with TSTF-505 as requested below:

1. To provide confidence that the defense-in-depth philosophy is maintained as the completion times (CTs) are extended, the NRC staff requests the following information for three of the defense-in-depth "circumstances" described in RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decision-making: Technical Specifications," Revision 1, May 2011.
 - a. *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 licensee should consider...whether there are appropriate restrictions in place to preclude simultaneous equipment outages that would erode the principles of redundancy and diversity.*

Beyond prohibiting voluntary entry, the guidance on PRA Functionality in NEI 06-09 does not address how PRA Functionality should be defined when the systems, structures, and components (SSCs) normally relied on to perform a specified safety function are unavailable. Specifically, the PRA often includes alternative SSCs that could be used to fulfill a specified safety function when the SSCs referenced in the TSs are unavailable. Crediting alternative SSCs when the SSCs normally relied on are unavailable would represent a reduction in redundancy or diversity.

- i. Please confirm that SSCs credited in a PRA Functionality determination are the same SSCs relied upon to perform the specified safety function.
 - ii. If a PRA Functionality determination for a loss of a specified safety function or inoperability of all required trains or divisions of a system credits alternative SSCs to replace the SSCs covered by the TS (e.g., crediting the Fire Protection system as an alternative water source), please summarize each such TS and justify how appropriate redundancy and diversity is maintained.
 - iii. If a PRA Functionality determination for a loss of a specified safety function or inoperability of all required trains or divisions of a system will not credit alternative SSCs to replace the SSCs covered by the TSs, then please add that constraint in TS 6.8.4 or propose an alternative location where changes would require prior NRC staff review and approval.
 - b. *Over-reliance on programmatic activities as compensatory measures associated with the change in the licensing basis is avoided (e.g., the change does not use high reliability estimates that are primarily based on optimistic program assumptions).*
 - i. Please confirm that all human actions required to achieve PRA functionality upon loss of specified safety function are modeled in the PRA (i.e., they are all explicitly proceduralized; and that they all are (1) trained on or (2) not trained on because they are so simple as to be skill of the craft).

- ii. If any human actions were evaluated and credited in the PRA scenarios, but not modeled in the PRA, then:
 - A. Summarize the action and the evaluation.
 - B. Clarify why not modelling each action will have a negligible impact on core damage frequency and large early release frequency and the associated CT that will be used when the corresponding PRA Function to TS LCO/Conditions is unavailable.
 - C. If any other human actions are directly or indirectly credited in the CT length calculations, please provide the same information as in parts A and part B.

c. *The intent of the plant's design criteria is maintained.*

The intent of the design basis design criteria is that all design basis accident scenarios could be mitigated, i.e., the minimum specified safety function capability is available. To maintain this intent, PRA Functionality should not include any scenarios that allow any design basis accident initiator to proceed directly to core damage (e.g., Loss of Offsite Power/Loss of Coolant Accident). Please confirm that PRA Functionality does not include any scenarios that allow any design basis accident to proceed directly to core damage or containment failure, or identify the scenarios and justify that the intent of the design criteria is maintained and describe how the PRA functionality determination will verify these requirements are met.

2. To provide confidence that sufficient safety margins are maintained, NRC Staff requests the following information for the detailed "circumstance" described in RG 1.177.

Safety analysis acceptance criteria in the final safety analysis report (FSAR) are met or proposed revisions provide sufficient margin to account for analysis and data uncertainties (e.g., the proposed TS CT or SF change does not adversely affect any assumptions or inputs to the safety analysis, or, if such inputs are affected, justification is provided to ensure sufficient safety margin will continue to exist). For TS CT changes, an assessment should be made of the effect on the FSAR acceptance criteria assuming the plant is in the condition addressed by the proposed CT (i.e., the subject equipment is inoperable) and there are no additional failures. Such an assessment should result in the identification of all situations in which entry into the condition addressed by the proposed CT could result in failure to meet an intended safety function.

Some TS safety functions are credited in design basis accident scenarios modeled in the PRA but are also required in other design basis accident scenarios not modeled in the internal events PRA because the other scenarios do not contribute to Core Damage Frequency (CDF) and Large Early Release Frequency (LERF) or are not needed within the PRA mission time.

- a) Please confirm that in order to enter a RICT on TS Loss of Function (LOF), design basis success parameters that are not modeled in the design basis accident

scenarios in the internal events PRA shall be met (e.g., containment spray may be credited as decay heat removal in some plants which is modeled in the PRA. It may also provide an iodine removal function for the same plants, which is not modeled in the PRA). Please add that constraint in TS 6.8.4, or propose an alternative location where changes would require prior NRC staff review and approval. If the design basis success criteria parameters may not be met, then justify how adequate safety margins are ensured, and provide some clarifying examples of the difference between design basis success parameters and the parameters allowed by the proposed TS LOF with the RICT.

- b) Please confirm there are no safety functions required to reach a safe and stable state but are not included in the PRA because they are only required after the 24 hour mission time generally used in the PRA (e.g., some alternative primary water sources may lead to excessive boron dilution after some loss-of-coolant accidents but only after at least 24 hours, so boron is not modeled in the PRA) or describe how the PRA functionality determination will provide confidence the requirements credited in design basis accident scenarios are met.
 - c) In Table E1-1 of its December 5, 2014, LAR, the licensee noted differences between the design basis success criteria and the PRA success criteria for certain specified safety functions. However, the response did not address how safety margin was maintained for the case of a PRA functionality determination for a loss of a specified safety function or inoperability of all required trains or divisions of a system. Please confirm that, in order to enter a RICT on TS LOF, design basis success criteria parameters shall be met for design basis accident scenarios modelled in the internal events PRA. Please add that constraint in TS 6.8.4, or propose an alternative location where changes would require prior NRC staff review and approval. If the design basis success criteria parameters may not be met, then please elaborate on how adequate safety margins are maintained, and provide some clarifying examples of adequate safety margins for where the PRA success criteria parameters (e.g., flow rates, temperature limits) differ from the design criteria.
3. Extended completion times are limited to no more than 30 days, i.e., a 30 day "backstop." During the Audit, FPL mentioned the possibility of administratively limiting the time in total loss of function LCOs (i.e., both/all trains inoperable) to 24 hours when using a PRA functional argument. Explain how FPL will incorporate this 24 hour limit into the technical specifications.

4. Please identify any proposed TSs where a RICT is allowed upon loss of a specified safety function or inoperability of all required trains or divisions TSs condition that do not meet the following constraints:
- Alternative SSCs cannot replace the SSCs covered by the TSs.
 - Design basis success criteria parameters shall be met for design basis accident scenarios that are not modelled in the internal event PRA.
 - Design basis success criteria parameters shall be met for design basis accident scenarios modelled in the internal events PRA.

For every identified proposed TS that cannot meet the above constraints (for example, the TSTF-505 proposal to allow entering a RICT with less than 100% ECCS), justify how safety margins and defense-in-depth are maintained, or eliminate the proposed TS RICT entry.

FPL Response

- 1.a.i. SSCs which would be credited in a PRA Functionality determination must be the same SSCs relied upon to perform the specified safety function to meet the associated TS LCO. No credit is taken for any SSCs other than those SSCs covered by the TS LCO when establishing PRA Functionality for a loss of a specified safety function or inoperability of all required trains or divisions of a system.
- 1.a.ii. As per response to 1.a.i., no alternative SSCs are used.
- 1.a.iii. This is unnecessary. NEI 06-09 Section 2.3.1.10 already requires one or more of the trains to be PRA Functional; in this context, "trains" refers to the "trains of equipment required by the TS LCO."
- 1.b.i) Only human actions which are modeled in the PRA are credited when establishing a RICT for loss of a specified safety function for a PRA Functional train. All such actions in the PRA model are credited consistent with the associated PRA standard as endorsed by the NRC in Regulatory Guide 1.200.
- 1.b.ii) There are no human actions evaluated and credited in PRA scenarios not modeled in the PRA.
- 1.c. The requirement that one train of equipment be PRA Functional ensures its availability to mitigate accident scenarios in order to prevent core damage, such that no event would proceed directly to core damage or containment failure.
- 2.a) For safety functions which are not in the scope of the PRA, the RICT Program would not be applicable, and if the inoperability also affected these functions, the associated TS action requirements other than use of the RICT Program would apply.
- 2.b) There are no safety functions not included in the PRA due to their applicability after the 24-hour mission time of the PRA.

- 2.c) Consistent with NEI 06-09 and the NRC safety evaluation, when no safety train is operable but one train is PRA Functional, adequate safety margin is maintained by the PRA Functional train. If the train is considered inoperable but PRA Functional based on less restrictive success criteria associated with the PRA still being met by an inoperable train, then this PRA Functional train has adequate capability to prevent core damage or a large early release, but may not meet other safety analysis assumptions. This is consistent with RG 1.177 regulatory position 2.2, which states that if the proposed TS change adversely affects any assumptions or inputs to the safety analysis, justification is provided to ensure sufficient safety margin will continue to exist. By maintaining a PRA Functional train, no core damage or large early release will occur, and this represents a justifiably sufficient safety margin for the limited period of time the RICT will be in effect, consistent with NRC-approved NEI 06-09 and TSTF-505.

The changes to TS proposed by FPL are consistent with the NRC-approved changes to standard TS in TSTF-505; therefore, there is no unique safety margin impact resulting from the proposed plant-specific TS changes.

The use of PRA Functionality as a basis for maintaining adequate plant safety while a time-limited Technical Specification action is applicable is unique to TSTF-505 as a risk-informed application. However, similar safety arguments are made and found acceptable to the NRC staff when addressing inoperable equipment for NOEDs, where the licensee evaluates the specific reason for component inoperability and justifies continued operation for a limited time period to permit restoration of the components to operable status. NEI 06-09 provides a NRC-approved method for a licensee to evaluate the cause of inoperability and to continue to operate under the provisions of the RICT Program when at least one train satisfies the PRA success criteria. This approved method complies with 10 CFR 50.36 as an alternative to a plant shutdown when the LCO is not met. The basis for decisions on PRA Functionality is required to be documented and available for NRC review.

The capability to prevent core damage and large early releases ensures that any offsite consequences (i.e., radiological releases) would be small and consistent with the principles of risk-informed regulation per RG 1.174 and RG 1.177, and provides adequate safety margin during the time-limited TS action which applies while the TS LCO is not met. Ensuring prevention of core damage and large early releases consistent with the process of NEI 06-09 is an acceptable staff-approved action when the TS LCO is not met consistent with 10CFR50.36.

3. FPL proposes to incorporate a 24-hour limit on the risk informed completion time used for emergent conditions involving a loss of specified safety function or inoperability of all trains if one or more trains are PRA functional. This limit will be included in the Risk Informed Completion Time Program that will be added to the TS in Section 6.0, Administrative Controls. Item (v) in the proposed program will be revised to state:

- (v) Use of a RICT, *not to exceed 24 hours*, is permitted for emergent conditions which represent a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE if one or more of the trains are considered "PRA functional" as defined in Section 2.3.1 of NEI 06-09

Attachments 1 and 2 contain markups of the TS showing the revised proposed changes, and clean pages are provided in Attachments 3 and 4.

4. See responses in 1.a.i., 2.a), 1.c.

RAI-MF5372/73-SBPB-01

In the event of one inoperable main steam isolation valve (MSIV) in MODE 1, the current TS 3.7.1.5 requires entry into "Hot Standby" within 10 hours. The TSTF-505 LAR proposed to revise the TS to require entry into MODE 2, within 10 hours (or in accordance with RICT). As a basis for this change, the LAR indicates TSTF-505 contains incorrect structure, and in order to establish the correct structure for the St. Lucie TS, FPL offers that the proposed new action addressing two inoperable MSIVs would include a MODE 2 shutdown requirement (rather than MODE 4), and to revise the existing action for one inoperable MSIV accordingly. While these changes are consistent with the STSs, this is a deviation from the current TS and the staff is unable to locate a clear justification for this mode change. Please provide a technical justification for the proposed change from Hot Standby to MODE 2.

FPL Response

St. Lucie TS 3.7.1.5 for Units 1 & 2, MSIVs, contains two Actions, one that applies in Mode 1 and a second that applies in Modes 2 and 3 (for Unit 1) and Modes 2, 3, and 4 (for Unit 2). With one MSIV inoperable for 4 hours in Mode 1, current TS 3.7.1.5 requires the plant to be in Mode 3 within six hours. However, the Action that is applicable during operation in Modes 2 and 3 (and Mode 4 for Unit 2) permits unlimited operation in these Modes provided the inoperable MSIV is maintained closed. As a result, a conflict exists between the two Actions. While the Mode 1 Action directs a shutdown to Mode 3, once the plant exits Mode 1, the Mode 1 Action is no longer applicable, and the Action that applies in Modes 2 and 3 (and Mode 4 for Unit 2) establishes the remedial measures. If the inoperable MSIV is maintained closed, this Action would permit unlimited operation in Mode 2 because the valve is performing its specified function of isolating the steam generator.

FPL proposes to revise the Action for an inoperable MSIV in Mode 1 to require the plant to enter Mode 2 if the MSIV is not restored to operable status within the completion time. Once the plant exits Mode 1, the Mode 1 Action, which directs a shutdown to Mode 3, no longer applies. Therefore, it is appropriate for the Mode 1 Action to direct remedial measures for Mode 1 operation, and if the inoperable MSIV is not restored to operable status within the completion time, to direct exiting Mode 1. Once the plant enters Mode 2, the Action that applies in Modes 2 and below becomes effective and the Mode 1 Action is no longer applicable. Therefore, the Action that becomes applicable in Mode 2, rather than the Mode 1 Action, is appropriate for directing mode changes after exiting Mode 1.

RAI-MF5372/73-SBPB-02

The TSTF-505 LAR is to align the St Lucie TSs with TSTF-505. For complete alignment with TSTF-505, the staff finds the following actions missing from proposed TS change:

- 1) TSTF-505 includes a [8] hours completion time for closing MSIV(s) for one or more MSIV inoperable in MODE 2 or 3, but the proposed change to TS 3.7.1.5 does not specify a time limit for closing an inoperable MSIV in Modes 2 or 3.

- 2) TSTF-505 includes a condition to verify the MSIV is closed once per 7 days, but the proposed TS is missing any action for MSIV closure verification.

Please provide an explanation why the LAR did not request adoption of the completion time and periodic MSIV closure verification.

FPL Response

TSTF-505 modified standard TS 3.7.2, MSIVs, to (1) add a risk informed completion time to required action A.1 for an inoperable MSIV, and (2) add new condition C for two or more MSIVs inoperable in Mode 1. The required actions to close the MSIVs within eight hours and to verify the MSIVs are closed once per seven days when MSIVs are inoperable in Modes 2 and 3 existed previously and were not added by TSTF-505. Therefore, FPL did not include these required actions in the LAR. For the condition of an inoperable MSIV in Modes 2 and 3, the St. Lucie TS only require that the valve is maintained closed.

As part of adopting the MSIV related TS changes in TSTF-505, FPL proposes to incorporate additional required actions to (1) close the inoperable MSIVs within eight hours, and (2) verify the inoperable MSIVs are closed once per seven days. These changes will align St. Lucie Units 1 & 2 TS 3.7.1.5 more closely with standard TS 3.7.2 in TSTF-505.

The Action in TS 3.7.1.5 is revised as shown below:

TS 3.7.1.5 (Unit 1)

MODES 2 and
3

With one or both main steam isolation valve(s) inoperable, subsequent operation in MODES 2 or 3 may proceed provided: ~~the isolation valve(s) is (are) maintained closed.~~

1. *The inoperable main steam isolation valves are closed within 8 hours, and*
2. *The inoperable main steam isolation valves are verified closed once per 7 days.*

Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 24 hours.

TS 3.7.1.5 (Unit 2)

MODES 2, 3
and 4

With one or both main steam isolation valve(s) inoperable, subsequent operation in MODES 2 or 3 may proceed provided: ~~the isolation valve(s) is (are) maintained closed.~~

1. *The inoperable main steam isolation valves are closed within 8 hours, and*
2. *The inoperable main steam isolation valves are verified closed once per 7 days.*

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 24 hours.

ATTACHMENTS

1. Markups of the Technical Specifications - Unit 1
2. Markups of the Technical Specifications - Unit 2
3. Revised Technical Specifications Pages - Unit 1
4. Revised Technical Specifications Pages - Unit 2

ATTACHMENT 1

Markups of the Technical Specifications - Unit 1

INSERT 2

or in accordance with the Risk Informed Completion Time Program

INSERT 10 - LCO 3.7.1.5, Main Steam Isolation Valves

NOTE

Action not applicable when both main steam isolation valves intentionally made inoperable.

- b. With both main steam line isolation valves inoperable in MODE 1, restore main steam isolation valves to OPERABLE status within 1 hour or in accordance with the Risk Informed Completion Time Program; otherwise, be in MODE 2 within the next 6 hours.

INSERT 15-A (Replaces Insert 15 in Attachment 2)

p. **Risk Informed Completion Time Program**

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

- (i) The RICT may not exceed 30 days;
- (ii) A RICT may only be utilized in MODES 1 and 2;
- (iii) When a RICT is being used, any plant configuration change within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT.
 - 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
 - 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
 - 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- (iv) Use of a RICT is not permitted for voluntary entry into a configuration which represents a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE.
- (v) Use of a RICT, not to exceed 24 hours, is permitted for emergent conditions which represent a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE if one or more of the trains are considered "PRA functional" as defined in Section 2.3.1 of NEI 06-09.

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a.

INSERT 2

MODE 1

With one main steam line isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is either restored to OPERABLE status or closed within 4 hours; otherwise, be in HOT STANDBY within the next 6 hours.

INSERT 10

MODES 2 and 3

With one or both main steam isolation valve(s) inoperable, subsequent operation in ~~MODES 2 or 3 may proceed provided the isolation valve(s) is (are) maintained closed. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 24 hours.~~

MODE 2

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam line isolation valve that is open shall be demonstrated OPERABLE by verifying full closure within 6.0 seconds when tested pursuant to the Inservice Testing Program.

With one or both main steam isolation valve(s) inoperable, subsequent operation in MODES 2 or 3 may proceed provided:

1. The inoperable main steam isolation valves are closed within 8 hours, and
2. The inoperable main steam isolation valves are verified closed once per 7 days.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 24 hours.

ADMINISTRATIVE CONTROLS (continued)

o. Surveillance Frequency Control Program

This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

- a. The Surveillance Frequency Control Program shall contain a list of frequencies of those Surveillance Requirements for which the frequency is controlled by the program.
- b. Changes to the frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1.
- c. The provisions of Surveillance Requirements 4.0.2 and 4.0.3 are applicable to the frequencies established in the Surveillance Frequency Control Program.

INSERT 15-A



6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the NRC.

STARTUP REPORT

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following:

- (1) receipt of an operating license,
- (2) amendment of the license involving a planned increase in power level,
- (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and
- (4) modifications that may have significantly altered the nuclear, thermal or hydraulic performance of the plant.

ATTACHMENT 2

Markups of the Technical Specifications - Unit 2

INSERT 2

or in accordance with the Risk Informed Completion Time Program

INSERT 10 - LCO 3.7.1.5, Main Steam Isolation Valves

NOTE

Action not applicable when both main steam isolation valves intentionally made inoperable.

- c. With both main steam line isolation valves inoperable in MODE 1, restore main steam isolation valves to OPERABLE status within 1 hour or in accordance with the Risk Informed Completion Time Program; otherwise, be in MODE 2 within the next 6 hours.

INSERT 16-A (Replaces Insert 16 in Attachment 3)

r. Risk Informed Completion Time Program

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

- (i) The RICT may not exceed 30 days;
- (ii) A RICT may only be utilized in MODES 1 and 2;
- (iii) When a RICT is being used, any plant configuration change within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT.
 - 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
 - 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
 - 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- (iv) Use of a RICT is not permitted for voluntary entry into a configuration which represents a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE.
- (v) Use of a RICT, not to exceed 24 hours, is permitted for emergent conditions which represent a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE if one or more of the trains are considered "PRA functional" as defined in Section 2.3.1 of NEI 06-09.

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a.

MODE 1

With one main steam line isolation valve inoperable but open, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 4 hours; otherwise, be in at least HOT STANDBY within the next 6 hours.

MODE 2

INSERT 10

MODES 2, 3 and 4

~~With one or both main steam isolation valve(s) inoperable, subsequent operation in MODES 2, 3 or 4 may proceed provided the isolation valve(s) is (are) maintained closed. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 24 hours.~~

INSERT 2

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam line isolation valve shall be demonstrated OPERABLE by verifying full closure within 6.75 seconds when tested pursuant to the Inservice Testing Program.

With one or both main steam isolation valve(s) inoperable, subsequent operation in MODES 2, 3, or 4 may proceed provided:

1. The inoperable main steam isolation valves are closed within 8 hours, and
2. The inoperable main steam isolation valves are verified closed once per 7 days.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 24 hours.

ADMINISTRATIVE CONTROLS

q. Surveillance Frequency Control Program

This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

- a. The Surveillance Frequency Control Program shall contain a list of frequencies of those Surveillance Requirements for which the frequency is controlled by the program.
- b. Changes to the frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1.
- c. The provisions of Surveillance Requirements 4.0.2 and 4.0.3 are applicable to the frequencies established in the Surveillance Frequency Control Program.

INSERT 16-A



6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the NRC.

STARTUP REPORT

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier; and (4) modifications that may have significantly altered the nuclear, thermal or hydraulic performance of the plant.

6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

ATTACHMENT 3

Revised Technical Specifications Pages - Unit 1

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

MODE 1 - a. With one main steam line isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is either restored to OPERABLE status or closed within 4 hours or in accordance with the Risk Informed Completion Time Program; otherwise, be in MODE 2 within the next 6 hours.

<p><u>NOTE</u> Action not applicable when both main steam isolation valves intentionally made inoperable.</p>
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b. With both main steam isolation valves inoperable in MODE 1, restore main steam isolation valves to OPERABLE status within 1 hour or in accordance with the Risk Informed Completion Time Program; otherwise, be in MODE 2 within the next 6 hours.

MODES 2 and 3 - With one or both main steam isolation valve(s) inoperable, subsequent operation in MODES 2 or 3 may proceed provided:

1. The inoperable main steam isolation valves are closed within 8 hours, and
2. The inoperable main steam isolation valves are verified closed once per 7 days.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam line isolation valve that is open shall be demonstrated OPERABLE by verifying full closure within 6.0 seconds when tested pursuant to the Inservice Testing Program.

ADMINISTRATIVE CONTROLS (continued)

o. Surveillance Frequency Control Program

This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

- a. The Surveillance Frequency Control Program shall contain a list of frequencies of those Surveillance Requirements for which the frequency is controlled by the program.
- b. Changes to the frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1.
- c. The provisions of Surveillance Requirements 4.0.2 and 4.0.3 are applicable to the frequencies established in the Surveillance Frequency Control Program.

p. Risk Informed Completion Time Program

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

- (i) The RICT may not exceed 30 days;
- (ii) A RICT may only be utilized in MODES 1 and 2;
- (iii) When a RICT is being used, any plant configuration change within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT.
 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- (iv) Use of a RICT is not permitted for voluntary entry into a configuration which represents a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE.
- (v) Use of a RICT, not to exceed 24 hours, is permitted for emergent conditions which represent a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE if one or more of the trains are considered "PRA functional" as defined in Section 2.3.1 of NEI 06-09.

ATTACHMENT 4

Revised Technical Specifications Pages - Unit 2

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- MODE 1** - a. With one main steam line isolation valve inoperable but open, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 4 hours or in accordance with the Risk Informed Completion Time Program; otherwise, be in at least MODE 2 within the next 6 hours.

NOTE

Action not applicable when both main steam isolation valves intentionally made inoperable.

- b. With both main steam line isolation valves inoperable in MODE 1, restore main steam isolation valves to OPERABLE status within 1 hour or in accordance with the Risk Informed Completion Time Program; otherwise, be in MODE 2 within the next 6 hours.

MODES 2, 3 and 4 - With one or both main steam isolation valve(s) inoperable, subsequent operation in MODES 2, 3 or 4 may proceed provided:

1. The inoperable main steam isolation valves are closed within 8 hours, and
2. The inoperable main steam isolation valves are verified closed once per 7 days.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam line isolation valve shall be demonstrated OPERABLE by verifying full closure within 6.75 seconds when tested pursuant to the Inservice Testing Program.

ADMINISTRATIVE CONTROLS

q. Surveillance Frequency Control Program

This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

- a. The Surveillance Frequency Control Program shall contain a list of frequencies of those Surveillance Requirements for which the frequency is controlled by the program.
- b. Changes to the frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1.
- c. The provisions of Surveillance Requirements 4.0.2 and 4.0.3 are applicable to the frequencies established in the Surveillance Frequency Control Program.

r. Risk Informed Completion Time Program

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

- (i) The RICT may not exceed 30 days;
- (ii) A RICT may only be utilized in MODES 1 and 2;
- (iii) When a RICT is being used, any plant configuration change within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT.
 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- (iv) Use of a RICT is not permitted for voluntary entry into a configuration which represents a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE.
- (v) Use of a RICT, not to exceed 24 hours, is permitted for emergent conditions which represent a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE if one or more of the trains are considered "PRA functional" as defined in Section 2.3.1 of NEI 06-09.