DATE

DRAFT TSTF-17-01 REVISION ~~1~~*3*
PROJ0753

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

SUBJECT: Response to NRC Questions on TSTF-505-*A*, "Provide Risk-Informed Extended Completion Times"

Reference: Letter from T. McGinty and A. Boland (NRC) to Technical Specifications Task Force (TSTF), "Issues with Technical Specifications Task Force Traveler TSTF-505, Revision 1, 'Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b'," dated November 15, 2016

In the referenced letter, the NRC raised concerns with approved TSTF traveler, TSTF-505-A, Revision 1, "Provide Risk-Informed Extended Completion Times." The NRC published in the Federal Register a notice of availability for the Model Safety Evaluation (SE) for plant-specific adoption of TSTF traveler TSTF-505, Revision 1, on March 15, 2012. Currently, ~~six~~ *several* licensees have License Amendment Requests (LARs) under NRC review to adopt risk-informed Completion Times.

On December 13, 2016, the TSTF and the Nuclear Energy Institute (NEI) met with the NRC to discuss the NRC's concerns. Most of the NRC concerns were related to proposed Technical Specifications (TS) Actions related to all trains of a TS required system being inoperable ~~(i.e., loss of function)~~. The industry proposed the following short-term and long-term actions to resolve the NRC concerns:

1. The industry will pursue development of a companion traveler for TSTF-505-*A* that addresses the NRC issues with Actions related to *inoperability of all trains of a TS required system*~~a loss of function~~. Following approval, plants that have adopted TSTF-505-*A* without *these* Actions ~~related to a loss of function~~ could submit a LAR to adopt the companion traveler. Following NRC approval of the companion traveler, plants that have not adopted TSTF-505-*A* can adopt TSTF-505-*A* and the companion traveler in a single LAR.

2. TSTF-505-*A* allows licensees to choose which Action changes are included in their LAR. The TSTF will recommend to the industry that until the companion traveler is approved by the NRC, licensees submitting LARs to adopt TSTF-505 *follow the guidance in the attachments to this letter. Actions related to the inoperability of all trains of a TS required system should not be included in LARs submitted prior to approval of the companion*

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traveler. ~~not include Action changes related to a loss of function.~~ Omitting these Actions *and incorporating the other changes recommended in the attachments to this letter* should allow timely approval of LARs ~~and provide the majority of the benefit of TSTF-505~~. Attachment 1 contains a list of the Actions revised by TSTF-505-*A* that should be omitted *in LARs submitted prior to approval of the companion traveler. Attachment 1 also includes* ~~, as well as~~ conforming changes to the TSTF-505-*A* Section 1.3 TS example and the TS Section 5.5 Administrative Controls program. *Attachment 2 contains a list of Actions revised by TSTF-505-A that have conditions on their inclusion in a plant-specific LAR. Attachment 3 contains a revised Mode Application for requesting adoption of TSTF-505-A.*

3. The proposed actions only apply to future submittals. The licensees with LARs currently under NRC review will decide how to proceed.

~~The TSTF has been informed by Southern Nuclear Operating Company that the Vogtle LAR will proceed with limited Risk Informed Completion Times for loss-of-function conditions. The TSTF encourages the NRC to expeditiously complete the Vogtle LAR review, as it will provide valuable insight regarding loss-of-function Actions.~~

~~The NRC had questions on other aspects of TSTF-505 not related to loss of function. Those questions are addressed in Attachment 2.~~

The TSTF requests that the NRC rescind the suspension of the approval of TSTF-505-*A*, Revision 1, and accept LARs to adopt TSTF-505-*A* that *follow the recommendations in the attachments to this letter.* ~~do not include proposed Actions with risk-informed Completion Times related to loss of function, as described in Attachment 1. Following NRC approval of a TSTF traveler that addresses Actions with a risk-informed Completion Time related to loss of function, LARs should be accepted for review that propose to adopt TSTF-505 and the companion traveler.~~

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

James R. Morris (PWROG/W)

Lisa L. Williams (BWROG)

Otto W. Gustafson (PWROG/CE)

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Enclosure

cc: *Mirella Gavrilas*, Director of the Division of Safety Systems
Anne T. Boland, Director of the Division of Operating Reactor Licensing
Jennifer Whitman, *Acting Chief of the* Technical Specifications Branch
Michelle Honcharik, Technical Specifications Branch

Attachment 1

Recommended Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

~~**TSTF-505 Recommended Changes to Exclude Provisions Related to Loss of Function**~~

TSTF-505 Markup to ~~**TSTF-505 Markup to**~~ **NUREG-1430, Babcock and Wilcox STS**

Specification	Specification Title	Notes
1.3	Completion Times	See attached recommended changes
Action 3.3.1.C	RPS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.A	*Reactor Protection System (RPS) Manual Reactor Trip*	*Do not include.*
Action 3.3.5.B	ESFAS Instrumentation	~~LOF.~~ Do not include
Action 3.3.6.B	ESFAS Manual Initiation	~~LOF.~~ Do not include
Action 3.3.11.D	EFIC System Instrumentation	~~LOF.~~ Do not include
Action 3.3.13.B	EFIC Logic	~~LOF.~~ Do not include
Action 3.3.14.B	EFIC-EFW- Vector Valve Logic	~~LOF.~~ Do not include
Action 3.4.10.A	*Pressurizer Safety Valves*	*Do not include.*
Action 3.4.14.C	*RCS Pressure Isolation Valve (PIV) Leakage*	*Do not include.*
Action 3.5.1.A	CFTs	Do not include
Action 3.5.1.B	*CFTs*	*Do not include*
Action 3.5.1.C	CFTs	~~LOF.~~ Do not include
Action 3.5.2.C	ECCS - Operating	~~LOF.~~ Do not include
Action 3.5.3.B	*ECCS - Shutdown*	*Do not include.*
Action 3.5.4.A	BWST	Do not include
Action 3.5.4.B	*BWST*	*Do not include*
Action 3.6.3.B	*Containment Isolation Valves*	*Do not include*
Action 3.6.3.D	*Containment Isolation Valves*	*Do not include*
Action 3.6.6.F	Containment Spray and Cooling Systems	~~LOF.~~ Do not include
Action 3.7.2.C	MSIVs	~~LOF.~~ Do not include
Action 3.7.4.B	*AVVs*	*Do not include.*
Action 3.7.5.C	EFW System	~~LOF.~~ Do not include
Action 3.7.6.A	*CST*	*Do not include.*

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TSTF-505 Markup to ~~**TSTF-505 Markup to**~~ **NUREG-1430, Babcock and Wilcox STS**

Specification	Specification Title	Notes
Action 3.7.8.B	SWS	~~LOF.~~ Do not include
Action 3.7.9.C	UHS	~~LOF.~~ Do not include
Action 3.7.11.B	CREVS	~~LOF.~~ Do not include
Action 3.8.1.E	*AC Sources - Operating*	*Do not include*
Action 3.8.1.G	AC Sources - Operating	~~LOF.~~ Do not include
Action 3.8.4.A.1	*DC Sources - Operating*	*Do not include. Required Action outside the scope of TSTF-505.*
Action 3.8.4.D	DC Sources - Operating	~~LOF.~~ Do not include
Action 3.8.7.B	Inverters - Operating	~~LOF.~~ Do not include
Action 3.8.9.D	Distribution Systems - Operating	~~LOF.~~ Do not include
5.5.18	Risk Informed Completion Time Program	See attached recommended changes

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Recommended Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

~~**TSTF-505 Recommended Changes to Exclude Provisions Related to Loss of Function**~~

TSTF-505 Markup to NUREG-1431, Westinghouse STS

Specification	Specification Title	Notes
1.3	Completion Times	See attached recommended changes
Action 3.3.1.C	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.1.E	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.1.G	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.1.I	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.1.Q	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.1.S	*RTS Instrumentation*	*Do not include*
Action 3.3.1.T	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.1.V	*RTS Instrumentation*	*Do not include*
Action 3.3.1.W	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.1.Z	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.1.CC	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.1.EE	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.1.JJ	RTS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.C	ESFAS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.E	ESFAS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.G	ESFAS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.I	ESFAS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.K	ESFAS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.M	ESFAS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.O	ESFAS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.Q	ESFAS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.S	ESFAS Instrumentation	~~LOF.~~ Do not include
Action 3.3.2.U	ESFAS Instrumentation	~~LOF.~~ Do not include

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TSTF-505 Markup to NUREG-1431, Westinghouse STS

Specification	Specification Title	Notes
Action 3.3.2.V	*ESFAS Instrumentation*	*Do not include. Required Action outside the scope of TSTF-505.*
Action 3.3.9.B	BDPS	~~LOF.~~ Do not include
Action 3.4.9.C	Pressurizer	~~LOF.~~ Do not include.
Action 3.4.10.A	*Pressurizer Safety Valves*	*Do not include.*
Action 3.4.11.E	*Pressurizer Power Operated Relief Valves (PORVs)*	*Do not include.*
Action 3.4.11.F	*Pressurizer Power Operated Relief Valves (PORVs)*	*Do not include.*
Action 3.4.14.C	*RCS Pressure Isolation Valve (PIV) Leakage*	*Do not include.*
Action 3.5.1.A	Accumulators	Do not include.
Action 3.5.1.B	*Accumulators*	*Do not include.*
Action 3.5.1.C	Accumulators	~~LOF.~~ Do not include.
Action 3.5.2.B	ECCS - Operating	~~LOF.~~ Do not include.
Action 3.5.3.B	*ECCS - Shutdown*	*Do not include.*
Action 3.5.4.A	RWST	Do not include.
Action 3.5.4.B	*RWST*	*Do not include.*
Action 3.5.6.A	*Boron Injection Tank*	*Do not include.*
Action 3.6.3.B	*Containment Isolation Valves*	*Do not include.*
Action 3.6.3.C	*Containment Isolation Valves*	*Do not include.*
Action 3.6.3.D	*Containment Isolation Valves*	*Do not include.*
Action 3.6.3.E	*Containment Isolation Valves*	*Do not include.*
Action 3.6.6A.E	Containment Spray and Cooling Systems (Atmospheric and Dual)	~~LOF.~~ Do not include.
Action 3.6.6B.G	Containment Spray and Cooling Systems (Atmospheric and Dual)	~~LOF.~~ Do not include.
Action 3.6.6C.B	Containment Spray System (Ice Condenser)	~~LOF.~~ Do not include.
Action 3.6.6D.B	QS System (Subatmospheric)	~~LOF.~~ Do not include.
Action 3.6.6E.F	RS System (Subatmospheric)	~~LOF.~~ Do not include.

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TSTF-505 Markup to NUREG-1431, Westinghouse STS

Specification	Specification Title	Notes
Action 3.6.9.B	*Hydrogen Mixing System*	*Do not include.*
Action 3.6.10.C	HIS (Ice Condenser)	~~LOF.~~ Do not include.
Action 3.6.14.B	ARS (Ice Condenser)	~~LOF.~~ Do not include.
Action 3.6.15.A	*Ice Bed*	*Do not include.*
Action 3.6.17.A	*Divider Barrier Integrity (Ice Condenser)*	*Do not include.*
Action 3.6.17.B	*Divider Barrier Integrity (Ice Condenser)*	*Do not include.*
Action 3.6.18.A	Containment Recirculation Drains (Ice Condenser)	~~LOF.~~ Do not include.
Action 3.6.18.B	Containment Recirculation Drains (Ice Condenser)	~~LOF.~~ Do not include.
Action 3.7.2.C	MSIVs	~~LOF.~~ Do not include.
Action 3.7.5.C	AFW System	~~LOF.~~ Do not include.
Action 3.7.6.A	*Condensate Storage Tank*	*Do not include.*
Action 3.7.7.B	CCW System	~~LOF.~~ Do not include.
Action 3.7.8.B	SWS	~~LOF.~~ Do not include.
Action 3.7.9.C	UHS	~~LOF.~~ Do not include.
Action 3.7.11.B	CREATCS	~~LOF.~~ Do not include.
Action 3.8.1.E	*AC Sources - Operating*	*Do not include*
Action 3.8.1.G	AC Sources - Operating	~~LOF.~~ Do not include
Action 3.8.4.A.1	*DC Sources - Operating*	*Do not include. Required Action outside the scope of TSTF-505.*
Action 3.8.4.D	DC Sources - Operating	~~LOF.~~ Do not include
Action 3.8.7.B	Inverters - Operating	~~LOF.~~ Do not include
Action 3.8.9.D	Distribution Systems - Operating	~~LOF.~~ Do not include
5.5.18	Risk Informed Completion Time Program	See attached Recommended Changes

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Recommended Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests
~~TSTF-505 Recommended Changes to Exclude Provisions Related to Loss of Function~~

TSTF-505 Markup to NUREG-1432, Combustion Engineering STS

Specification	Specification Title	Notes
1.3	Completion Times	See attached recommended changes
Action 3.3.4.B	ESFAS Instrumentation (Analog)	~~LOF.~~ Do not include.
Action 3.3.5.B	ESFAS Logic and Manual Trip (Analog)	~~LOF.~~ Do not include.
Action 3.3.5.E	ESFAS Logic and Manual Trip (Analog)	~~LOF.~~ Do not include.
Action 3.3.6.A	*ESFAS Logic and Manual Trip (Digital)*	*Do not include.*
Action 3.3.6.E	ESFAS Logic and Manual Trip (Digital)	~~LOF.~~ Do not include.
Action 3.4.9.C	Pressurizer	~~LOF.~~ Do not include.
Action 3.4.10.A	*Pressurizer Safety Valves*	*Do not include.*
Action 3.4.11.E	*Pressurizer Power Operated Relief Valves (PORVs)*	*Do not include.*
Action 3.4.11.F	*Pressurizer Power Operated Relief Valves (PORVs)*	*Do not include.*
Action 3.4.14.C	*RCS Pressure Isolation Valve (PIV) Leakage*	*Do not include.*
Action 3.5.1.A	SITs	Do not include.
Action 3.5.1.B	*SITs*	*Do not include.*
Action 3.5.1.C	SITs	~~LOF.~~ Do not include.
Action 3.5.2.C	ECCS - Operating	~~LOF.~~ Do not include.
Action 3.5.3.A	*ECCS - Shutdown*	*Do not include.*
Action 3.5.4.A	RWT	Do not include.
Action 3.5.4.B	*RWT*	*Do not include.*
Action 3.6.3.C	*Containment Isolation Valves*	*Do not include.*
Action 3.6.3.E	*Containment Isolation Valves*	*Do not include.*
Action 3.6.3.F	*Containment Isolation Valves*	*Do not include.*
Action 3.6.6A.F	Containment Spray and Cooling Systems (Atmospheric and Dual)	~~LOF.~~ Do not include.
Action 3.6.6B.F	Containment Spray and Cooling Systems (Atmospheric and Dual)	~~LOF.~~ Do not include.
Action 3.6.9.B	*Hydrogen Mixing System*	*Do not include.*

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Recommended Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

~~**TSTF-505 Recommended Changes to Exclude Provisions Related to Loss of Function**~~

TSTF-505 Markup to NUREG-1432, Combustion Engineering STS

Specification	Specification Title	Notes
Action 3.7.2.C	MSIVs	~~LOF.~~ Do not include.
Action 3.7.4.B	*Atmospheric Dump Valves*	*Do not include.*
Action 3.7.5.C	AFW System	~~LOF.~~ Do not include.
Action 3.7.6.A	*Condensate Storage Tank*	*Do not include.*
Action 3.7.7.B	CCW System	~~LOF.~~ Do not include.
Action 3.7.8.B	SWS	~~LOF.~~ Do not include.
Action 3.7.9.C	UHS	~~LOF.~~ Do not include.
Action 3.7.10.B	ECW	~~LOF.~~ Do not include.
Action 3.7.12.B	CREATCS	~~LOF.~~ Do not include.
Action 3.8.1.E	*AC Sources - Operating*	*Do not include.*
Action 3.8.1.G	AC Sources - Operating	~~LOF.~~ Do not include
Action 3.8.4.A.1	*DC Sources - Operating*	*Do not include. Required Action outside the scope of TSTF-505.*
Action 3.8.4.D	DC Sources - Operating	~~LOF.~~ Do not include
Action 3.8.7.B	Inverters - Operating	~~LOF.~~ Do not include
Action 3.8.9.D	Distribution Systems - Operating	~~LOF.~~ Do not include
5.5.18	Risk Informed Completion Time Program	See attached recommended changes

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Recommended Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests
~~TSTF-505 Recommended Changes to Exclude Provisions Related to Loss of Function~~

TSTF-505 Markup to NUREG-1433, BWR/4 STS

Specification	Specification Title	Notes
1.3	Completion Times	See attached recommended changes
Action 3.1.7.A	SLC System	Do not include.
Action 3.1.7.C	*SLC System*	*Do not include.*
Action 3.3.1.1.C	*Reactor Protection System (RPS) Instrumentation*	*Do not include.*
Action 3.3.4.1.B	*End of Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation*	*Do not include.*
Action 3.3.4.2.B	*Anticipated Transient Without Scram Recirculation Pump Trip (ATWS-RPT) Instrumentation*	*Do not include.*
Action 3.3.4.2.C	*Anticipated Transient Without Scram Recirculation Pump Trip (ATWS-RPT)*	*Do not include.*
Action 3.3.5.2.C	*Reactor Core Isolation Cooling (RCIC) System Instrumentation*	*Do not include.*
Action 3.3.6.1.B	*Primary Containment Isolation Instrumentation*	*Do not include.*
Action 3.3.6.3.C	*LLS Instrumentation*	*Do not include.*
Action 3.3.6.3.D	LLS Instrumentation	~~LOF.~~ Do not include.
Action 3.4.3.B	S/RVs	~~LOF.~~ Do not include.
Action 3.5.1.G	ECCS - Operating	~~LOF.~~ Do not include.
Action 3.5.1.I	ECCS - Operating	~~LOF.~~ Do not include.
Action 3.6.1.3.B	*PCIVs*	*Do not include. Required Action outside the scope of TSTF-505.*
Action 3.6.1.3.C	*PCIVs*	*Do not include. Required Action outside the scope of TSTF-505.*
Action 3.6.2.3.B	*Residual Heat Removal (RHR) Suppression Pool Cooling*	*Do not include.*
Action 3.6.2.4.B	*Residual Heat Removal (RHR) Suppression Pool Spray*	*Do not include.*
Action 3.6.3.3.B	*Containment Atmosphere Dilution (CAD) System*	*Do not include.*
Action 3.7.1.D	*Residual Heat Removal Service Water (RHRSW) System*	*Do not include.*
Action 3.7.2.F	[PSW] System and [UHS]	~~LOF.~~ Do not include.
Action 3.7.5.B	[Control Room AC] System	~~LOF.~~ Do not include.
Action 3.8.1.E	*AC Sources - Operating*	*Do not include*

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TSTF-505 Markup to NUREG-1433, BWR/4 STS

Specification	Specification Title	Notes
Action 3.8.1.G	AC Sources - Operating	~~LOF.~~ Do not include
Action 3.8.4.A.1	*DC Sources - Operating*	*Do not include. Required Action outside the scope of TSTF-505.*
Action 3.8.4.D	DC Sources - Operating	~~LOF.~~ Do not include
Action 3.8.7.B	Inverters - Operating	~~LOF.~~ Do not include
Action 3.8.9.D	Distribution Systems - Operating	~~LOF.~~ Do not include
5.5.15	Risk Informed Completion Time Program	See attached recommended changes

Attachment 1
Recommended Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests
~~**TSTF-505 Recommended Changes to Exclude Provisions Related to Loss of Function**~~

TSTF-505 Markup to NUREG-1434, BWR/6 STS

Specification	Specification Title	Notes
1.3	Completion Times	See attached recommended changes
Action 3.1.7.A	SLC System	Do not include.
Action 3.1.7.C	*SLC System*	*Do not include.*
Action 3.3.1.1.C	*Reactor Protection System (RPS) Instrumentation*	*Do not include.*
Action 3.3.4.1.B	*End of Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation*	*Do not include.*
Action 3.3.4.2.B	*Anticipated Transient Without Scram Recirculation Pump Trip (ATWS-RPT) Instrumentation*	*Do not include.*
Action 3.3.4.2.C	*Anticipated Transient Without Scram Recirculation Pump Trip (ATWS-RPT) Instrumentation*	*Do not include.*
Action 3.3.5.2.C	*Reactor Core Isolation Cooling (RCIC) System Instrumentation*	*Do not include.*
Action 3.3.6.1.B	*Primary Containment Isolation Instrumentation*	*Do not include.*
Action 3.3.6.4.B	*Suppression Pool Makeup (SPMU) System Instrumentation*	*Do not include.*
Action 3.3.6.4.C	*Suppression Pool Makeup (SPMU) System Instrumentation*	*Do not include.*
Action 3.3.6.5.B	Relief and LLS Instrumentation	~~LOF.~~ Do not include.
Action 3.4.4.B	S/RVs	~~LOF.~~ Do not include.
Action 3.5.1.G	ECCS - Operating	~~LOF.~~ Do not include.
Action 3.5.1.I	ECCS - Operating	~~LOF.~~ Do not include.
Action 3.5.1.J	ECCS - Operating	~~LOF.~~ Do not include.
Action 3.5.1.K	ECCS - Operating	~~LOF.~~ Do not include.
Action 3.5.1.L	ECCS - Operating	~~LOF.~~ Do not include.
Action 3.6.1.3.B	*Primary Containment Isolation Valves (PCIVs)*	*Do not include.*
Action 3.6.1.3.C	*Primary Containment Isolation Valves (PCIVs)*	*Do not include.*
Action 3.6.1.3.D	*Primary Containment Isolation Valves (PCIVs)*	*Do not include.*
Action 3.6.1.7.B	*Residual Heat Removal (RHR) Containment Spray System*	*Do not include.*
Action 3.6.2.3.B	*Residual Heat Removal (RHR) Suppression Pool Cooling*	*Do not include.*

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Recommended Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests
~~**TSTF-505 Recommended Changes to Exclude Provisions Related to Loss of Function**~~

TSTF-505 Markup to NUREG-1434, BWR/6 STS

Specification	Specification Title	Notes
Action 3.6.2.4.A	*SPMU System*	*Do not include.*
Action 3.6.2.4.B	*SPMU System*	*Do not include.*
Action 3.6.2.4.D	SPMU System	~~LOF.~~ Do not include.
Action 3.6.3.1.B	*Drywell Cooling System Fans*	*Do not include.*
Action 3.6.3.2.B	*Drywell Purge System*	*Do not include.*
Action 3.6.5.1.A	*Drywell*	*Do not include.*
Action 3.6.5.3.B	*Drywell Isolation Valve[s]*	*Do not include.*
Action 3.6.5.6.D	*Drywell Vacuum Relief System*	*Do not include.*
Action 3.6.5.6.E	*Drywell Vacuum Relief System*	*Do not include.*
Action 3.6.5.6.F	Drywell Vacuum Relief System	~~LOF.~~ Do not include.
Action 3.7.1.D	[SSW] System and [UHS]	~~LOF.~~ Do not include.
Action 3.7.4.B	[Control Room AC] System	~~LOF.~~ Do not include.
Action 3.8.1.E	*AC Sources - Operating*	*Do not include*
Action 3.8.1.G	AC Sources - Operating	~~LOF.~~ Do not include
Action 3.8.4.A.1	*DC Sources - Operating*	*Do not include. Required Action outside the scope of TSTF-505.*
Action 3.8.4.D	DC Sources - Operating	~~LOF.~~ Do not include
Action 3.8.7.B	Inverters - Operating	~~LOF.~~ Do not include
Action 3.8.9.D	Distribution Systems - Operating	~~LOF.~~ Do not include
5.5.15	Risk Informed Completion Time Program	See attached recommended changes

Recommended Changes to the Section 1.3 Example ~~in TSTF-505~~

---------- Reviewer's Note ----------
Example 1.3-8 is only applicable to plants that have adopted the Risk Informed Completion Time Program.

[EXAMPLE 1.3-8

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One subsystem inoperable.	A.1 Restore subsystem to OPERABLE status.	7 days OR In accordance with the Risk Informed Completion Time Program
~~B. --- NOTE ----- Not applicable when second subsystem intentionally made inoperable. ---------- Two subsystems inoperable.~~	~~B.1 Restore subsystems to OPERABLE status.~~	~~1 hour OR In accordance with the Risk Informed Completion Time Program~~
B~~C~~.Required Action and associated Completion Time not met.	B~~C~~.1 Be in MODE 3. AND B~~C~~.2 Be in MODE 5.	6 hours 36 hours

Recommended Changes to the Section 1.3 Example
~~in TSTF-505~~

When a subsystem is declared inoperable, Condition A is entered. The 7 day Completion Time may be applied as discussed in Example 1.3-2. However, the licensee may elect to apply the Risk Informed Completion Time Program which permits calculation of a Risk Informed Completion Time (RICT) that may be used to complete the Required Action beyond the 7 day Completion Time. The RICT cannot exceed 30 days. After the 7 day Completion Time has expired, the subsystem must be restored to OPERABLE status within the RICT or Condition B~~C~~ must also be entered.

~~If a second subsystem is declared inoperable, Condition B may also be entered. The Condition is modified by a Note stating it is not applicable if the second subsystem is intentionally made inoperable. The Required Actions of Condition B are not intended for voluntary removal of redundant subsystems from service. The Required Action is only applicable if one subsystem is inoperable for any reason and the second subsystem is found to be inoperable, or if both subsystems are found to be inoperable at the same time. If Condition B is applicable, at least one subsystem must be restored to OPERABLE status within 1 hour or Condition C must also be entered. The licensee may be able to apply a RICT to extend the Completion Time beyond 1 hour if the requirements of the Risk Informed Completion Time Program are met. If two subsystems are inoperable and Condition B is not applicable (i.e., the second subsystem was intentionally made inoperable), LCO 3.0.3 is entered as there is no applicable Condition.~~

The Risk Informed Completion Time Program requires recalculation of the RICT to reflect changing plant conditions. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration. 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.

If the 7 day Completion Time clock of Condition A ~~or the 1 hour Completion Time clock of Condition B have~~ has expired and subsequent changes in plant condition result in exiting the applicability of the Risk Informed Completion Time Program without restoring the inoperable subsystem to OPERABLE status, Condition B~~C~~ is also entered and the Completion Time clocks for Required Actions B~~C~~.1 and B~~C~~.2 start.

If the RICT expires or is recalculated to be less than the elapsed time since the Condition was entered and the inoperable subsystem has not been restored to OPERABLE status, Condition B~~C~~ is also entered and the Completion Time clocks for Required Actions B~~C~~.1 and B~~C~~.2 start. If the inoperable subsystems are restored to OPERABLE status after Condition B~~C~~ is entered, Conditions A~~, B,~~ and B~~C~~ are exited, and therefore, the Required Actions of Condition B~~C~~ may be terminated.]

Recommended Changes to the Risk Informed Completion Time Program

[5.5.18 Risk Informed Completion Time Program

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

a. The RICT may not exceed 30 days;

---------- REVIEWER'S NOTE ----------
The Risk Informed Completion Time is only applicable in MODES supported by the Licensees PRA. Licensee's applying the RICT Program to MODES other than Modes 1 and 2 must demonstrate that they have the capability to calculate a RICT in those MODES or that the risk indicated by their MODE 1 and 2 PRA model is bounding with respect to the lower MODE conditions.
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b. A RICT may only be utilized in MODE 1, 2 [, and 3, and MODE 4 while relying on steam generators for heat removal];

c. When a RICT is being used, any *change to the* plant configuration*, as defined in NEI 06-09-A, Appendix A,* ~~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.

~~d. 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.~~

~~e. Use of a RICT 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.]~~

Recommended Changes to the Risk Informed Completion Time Program

d. If the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:

1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or

2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.

e. [This paragraph will describe when prior NRC approval is needed for changes to the methodology used to calculate a RICT. The wording for this provision is currently under discussion between the NRC and the industry.]

Discussion of Recommended Changes to the Risk Informed Completion Time Program

1. The reference to NEI 06-09 is revised to refer to the approved version, NEI 06-09-A, Revision 0.

2. Paragraphs d. and e. of TSTF-505 are deleted. These paragraphs discuss determining a RICT when all trains of a system are inoperable and are not applicable to the near-term submittals that are the subject of this letter.

3. The NRC questioned the difference between the TSTF-505 Risk Informed Completion Time (RICT) Program in paragraph 5.5.c and the NEI 06-09 Configuration Risk Management Program (CRMP). The traveler justification stated that the TS Section 5.5 RICT Program was the same as the NEI 06-09 CRMP; however, users of the TS may not have TSTF-505 available, which may lead to confusion when applying NEI 06-09 in accordance with the TS 5.5 RICT Program. The program was revised to clarify the application of the requirements.

4. A new paragraph d. is added addressing common cause failure considerations.

5. A new paragraph e. is added. The NRC's Safety Evaluation for NEI 06-09 stated:

> As part of its review and approval of a licensee's application requesting to implement the RMTS, the NRC staff intends to impose a license condition that will explicitly address the scope of the PRA and non-PRA methods approved by the NRC staff for use in the plant-specific RMTS program. If a licensee wishes to change its methods, and the change is outside the bounds of the license condition, the licensee will need NRC approval, via a license amendment, of the implementation of the new method in its RMTS program. The focus of the NRC staff's review and approval will be on the

Recommended Changes to the Risk Informed Completion Time Program

technical adequacy of the methodology and analyses relied upon for the RMTS application.

There is no legal difference between a license condition and a Technical Specification and it is less error prone to put all requirements related to calculation of a RICT in the same location. Therefore, in lieu of a license condition, the restriction is added as paragraph e. of the program.

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1430, Babcock and Wilcox STS

Specification	LCO Requirements and Condition	Condition on Use
~~3.3.2.A~~	~~**LCO:** The Reactor Protection System (RPS) Manual Reactor Trip Function shall be OPERABLE.~~ ~~**Condition:** Manual Reactor Trip Function inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM1].~~

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1430, Babcock and Wilcox STS

Specification	LCO Requirements and Condition	Condition on Use
3.3.8.B	**LCO:** Three channels of loss of voltage Function and three channels of degraded voltage Function EDG LOPS instrumentation per EDG shall be OPERABLE. **Condition:** One or more Functions with two or more channels per EDG inoperable.	Licensee must justify that two *or more* channels per EDG inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~An acceptable alternative would be to limit the TS Condition to when the minimum number of channels needed to perform the function are operable (assuming no additional failures).~~ *See Note 1 at the end of Attachment 2.*~~The Required Actions and Completion Times would be the same and would provide the option to calculate a RICT. Either a new condition would be created that applies when less than the minimum number of channels are operable or, depending on the construction of the TS, LCO 3.0.3 would apply. The licensee would need to justify that the function can still be performed in the revised Action.~~

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1430, Babcock and Wilcox STS

Specification	LCO Requirements and Condition	Condition on Use
3.3.12.B	**LCO:** Two manual initiation switches per actuation channel for each of the following emergency feedwater initiation and control (EFIC) Functions shall be OPERABLE: a. Steam generator (SG) A Main Feedwater (MFW) Isolation, b. SG B MFW Isolation, c. SG A Main Steam Line Isolation, d. SG B Main Steam Line Isolation, and e. Emergency Feedwater Actuation. **Condition:** One or more EFIC Function(s) with one or both manual initiation switches inoperable in both actuation channels.	Licensee must justify that one *or both* channels inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~*See Note 1 at the end of Attachment 2.*
3.4.9.C	**LCO:** The pressurizer shall be OPERABLE. **Condition:** Capacity of pressurizer heaters [capable of being powered by emergency power supply] less than limit.	Pressurizer is typically not modeled in the PRA. Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1430, Babcock and Wilcox STS

Specification	LCO Requirements and Condition	Condition on Use
3.4.10.A	**LCO:** Two pressurizer safety valves shall be OPERABLE with lift settings ≥ [2475] psig and ≤ [2525] psig. **Condition:** One pressurizer safety valve inoperable.	The Applicable Safety Analysis section of the Bases states that the accident analysis assumes both PSVs actuate to mitigate an overpressure event. Licensee must justify that the condition does not represent the inability to perform the safety function assumed in the FSAR. Licensee must also explain how the PSVs are modeled in the PRA[BM2].
3.4.14.C	**LCO:** RCS Pressure Isolation Valve (PIV) Leakage **Condition:** Decay Heat Removal (DHR) System autoclosure interlock function inoperable.	Licensee must justify that applying a RICT to the action to isolate the affected penetration is equivalent to isolating a Containment Isolation Valve and is acceptable[BM3]
3.5.1.B	**LCO:** Two CFTs shall be OPERABLE **Condition:** One CFT inoperable for reasons other than to boron concentration not within limits.	The Applicable Safety Analysis Bases states that both CFTs are required to function in the event of a large break LOCA or the ECCS acceptance criteria may be violated. Licensee must justify that the condition does not represent the inability to perform the safety function assumed in the FSAR[BM4].

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1430, Babcock and Wilcox STS

Specification	LCO Requirements and Condition	Condition on Use
3.5.2.B	**LCO:** Two ECCS trains shall be OPERABLE. **Condition:** One or more [ECCS] trains inoperable for reasons other than one LPI subsystem inoperable.	Licensee must justify that one *or more* ECCS trains inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~Acceptable justification is TS Condition requiring 100% flow equivalent to a single ECCS train.~~
3.6.2.C	***LCO:*** *[Two] containment air lock[s] shall be OPERABLE.* ***Condition:*** *One or more containment air locks inoperable for reasons other than an inoperable door or inoperable interlock mechanism.*	*Licensee must justify that an inoperable containment air lock is not a condition in which all required trains or subsystems of a TS required system are inoperable. An acceptable argument may be that a note in TS 3.6.2 requires the condition to be assessed in accordance with TS 3.6.1, Containment Integrity, and any loss of function would require an immediate plant shutdown under that TS.*
~~3.5.3.B~~	~~**LCO:** One ECCS train shall be OPERABLE. **Condition:** Required ECCS HPI subsystem inoperable in Mode 4.~~	~~Licensee must justify that it is not a condition in which all required trains or subsystems of a TS required system are inoperable[BMS].~~

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1430, Babcock and Wilcox STS

Specification	LCO Requirements and Condition	Condition on Use
3.5.4.B	**LCO:** The BWST shall be OPERABLE. **Condition:** BWST inoperable for other than boron concentration or water temperature not within limits.	Licensee must justify that it is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM6].
3.6.2.C	**LCO:** [Two] containment air lock[s] shall be OPERABLE. **Condition:** One or more containment air locks inoperable for reasons other than an inoperable door or inoperable interlock mechanism.	Licensee must justify that an inoperable containment air lock is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM7].
3.6.3.B	**LCO:** Each containment isolation valve shall be OPERABLE. **Condition:** One or more penetration flow paths with two [or more] containment isolation valves inoperable [for reasons other than purge valve leakage not within limit].	Licensee must justify that two or more inoperable containment isolation valves on a penetration with two valves is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM8].
3.6.3.D	**LCO:** Each containment isolation valve shall be OPERABLE. **Condition:** One or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits.	Licensee must justify that inoperable containment purge valves is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM9].

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1430, Babcock and Wilcox STS

Specification	LCO Requirements and Condition	Condition on Use
3.6.6	**LCO:** Containment Spray and Cooling Systems **Condition A**: One containment spray train inoperable **Condition C**: One [required] containment cooling train inoperable. **Condition D**: One containment spray train and one [required] containment cooling train inoperable. **Condition E**: Two [required] containment cooling trains inoperable.	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
~~3.7.4.B~~	~~**LCO:** [Two] Atmospheric Vent Valves (AW) [lines per steam generator] shall be OPERABLE.~~ ~~**Condition:** Two or more required AVV lines inoperable~~	~~Licensee must justify that *two or more* inoperable ADVs is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM10].~~
~~3.7.6.A~~	~~**LCO:** The [two] Condensate Storage Tanks (CST) shall be OPERABLE.~~ ~~**Condition:** [Two] CSTs inoperable~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM11].~~
~~3.8.1.E~~	~~Two [required] DGs inoperable~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM12].~~
~~3.8.4.A~~	~~**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE.~~ ~~**Condition:** One [or two] battery charger[s] on one subsystem inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1430, Babcock and Wilcox STS

Specification	LCO Requirements and Condition	Condition on Use
~~3.8.4.B~~	~~**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE.~~ ~~**Condition:** One [or two] batter[y][ies on one subsystem] inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.4.C~~	~~**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE.~~ ~~**Condition:** One DC electrical power subsystem inoperable for reasons other than Condition A [or B].~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.7.A~~	~~**LCO:** The required Train A and Train B inverters shall be OPERABLE.~~ ~~**Condition:** One [required] inverter inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.9.A~~	~~**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.~~ ~~**Condition:** One or more AC electrical power distribution subsystems inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.9.B~~	~~**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.~~ ~~**Condition:** One or more AC vital buses inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.9.C~~	~~**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.~~ ~~**Condition:** One or more DC electrical power distribution subsystems inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1431, Westinghouse STS

Specification	LCO Requirements and Condition	Condition on Use
3.3.1.F	**LCO:** The RTS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE. **Condition:** One Power Range Neutron Flux - High channel inoperable.	Licensee must justify that the condition does not represent the inability to perform the safety function assumed in the FSAR given the loss of spacial distribution of the remaining Power Range detectors. *The justification can include that the Actions require periodic monitoring of spacial power distribution and imposition of compensatory limits and reduced power.*
~~3.3.1.S~~	~~**LCO:** The RTS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE.~~ ~~**Condition:** One Reactor Coolant Pump Breaker Position (Single Loop) channel inoperable.~~	~~This function is a single channel per RCP. Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable. Adequate justification may be that the RCP Breaker Position trip is an anticipatory trip, and the low flow trip is credited in the analysis[BM13].~~

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1431, Westinghouse STS

Specification	LCO Requirements and Condition	Condition on Use
~~3.3.1.V~~	~~**LCO:** The RTS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE.~~ ~~**Condition:** One Reactor Coolant Breaker Position (Two Loops) channel~~	~~This function is a single channel per RCP. Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable. Adequate justification may be that the RCP Breaker Position trip is an anticipatory trip, and the low flow trip is credited in the analysis[BM14].~~
3.3.1.DD	**LCO:** The RTS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE. **Condition:** One RTB train inoperable.	~~There are two RTB trains and either can perform the function. Unclear why loss of one would be considered a potential LOF.~~*The licensee must include information regarding how the TSTF-411 conditions and limitations will be implemented (or similar conditions if TSTF-411 has not been adopted), including discussion of ATWS Mitigation System Actuation (AMSAC), and why those actions are sufficient, including a discussion of defense in depth.*

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1431, Westinghouse STS

Specification	LCO Requirements and Condition	Condition on Use
3.3.5.B	**LCO:** [Three] channels per bus of the loss of voltage Function and [three] channels per bus of the degraded voltage Function shall be OPERABLE. **Condition:** One or more Functions with two or more channels per bus inoperable.	Licensee must justify that two *or more* channels per bus inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~*See Note 1 at the end of Attachment 2.*
3.3.9.A	**LCO:** Boron Dilution Protection System (BDPS) **Condition:** One train inoperable (applicable to MODES [2,] 3, 4, and 5.)	BDPS is typically not modeled in the PRA. Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1431, Westinghouse STS

Specification	LCO Requirements and Condition	Condition on Use
3.4.9.B	**LCO:** The pressurizer shall be OPERABLE… **Condition:** One [required] group of pressurizer heaters inoperable.	Pressurizer is typically not modeled in the PRA. Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.~~.~~
~~3.4.10.A~~	~~**LCO:** [Three] pressurizer safety valves shall be OPERABLE with lift settings ≥ [2460] psig and ≤ [2510] psig.~~ ~~**Condition:** One pressurizer safety inoperable~~	~~The Applicable Safety Analysis section of the Bases states that the accident analysis assumes all PSVs actuate to mitigate an overpressure event. Licensee must justify that the condition does not represent the inability to perform the safety function assumed in the FSAR. Licensee must also explain how the PSVs are modeled in the PRA[BM15].~~
~~3.4.11.E~~	~~**LCO:** Each PORV and associated block valve shall be OPERABLE.~~ ~~**Condition:** Two [three] PORVs inoperable and not capable of being manually cycled.~~	~~Licensee must justify that all PORVs inoperable and incapable of being cycled is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM16].~~

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1431, Westinghouse STS

Specification	LCO Requirements and Condition	Condition on Use
~~3.4.11.F~~	~~**LCO:** Each PORV and associated block valve shall be OPERABLE.~~ ~~**Condition:** Two [three] block valves inoperable.~~	~~Licensee must justify that all block valves inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable~~[BM17]~~.~~
~~3.5.1.B~~	~~**LCO:** [Four] ECCS accumulators shall be OPERABLE.~~ ~~**Condition:** One accumulator inoperable for reasons other than boron concentration.~~	~~The Applicable Safety Analysis Bases state that three accumulators are required to inject to meet the ECCS acceptance criteria and the contents of one accumulator are assumed lost through the break. Licensee must justify that the condition does not represent the inability to perform the safety function assumed in the FSAR~~[BM18]~~.~~
3.5.2.A	**LCO:** Two ECCS trains shall be OPERABLE. **Condition:** One or more [ECCS] trains inoperable.	Licensee must justify that one *or more* ECCS trains inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable. Acceptable justification is TS Condition requiring 100% flow equivalent to a single ECCS train.

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1431, Westinghouse STS

Specification	LCO Requirements and Condition	Condition on Use
3.6.2.C	***LCO:*** *[Two] containment air lock[s] shall be OPERABLE.* ***Condition:*** *One or more containment air locks inoperable for reasons other than an inoperable door or inoperable interlock mechanism.*	*Licensee must justify that an inoperable containment air lock is not a condition in which all required trains or subsystems of a TS required system are inoperable. An acceptable argument may be that a note in TS 3.6.2 requires the condition to be assessed in accordance with TS 3.6.1, Containment Integrity, and any loss of function would require an immediate plant shutdown under that TS.*
~~3.5.3.B~~	~~**LCO:** One ECCS train shall be OPERABLE.~~ ~~**Condition:** Required ECCS [high head subsystem] in operable. (Mode 4).~~	~~Licensee must justify that it is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM19].~~
~~3.5.4.B~~	~~**LCO:** The Refueling Water Storage Tank (RWST) shall be OPERABLE.~~ ~~**Condition:** RWST inoperable for reasons other than boron concentration or temperature~~	~~Licensee must justify that it is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM20].~~
~~3.5.6.A~~	~~**LCO:** The Boron Injection Tank (BIT) shall be OPERABLE.~~ ~~**Condition:** BIT inoperable~~	~~Licensee must justify that it is not a condition in which all required trains or subsystems of a TS required system are inoperable. If included, licensee must justify how the BIT is modeled in the PRA as it does not typically affect CDF or LERF[BM21].~~

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1431, Westinghouse STS

Specification	LCO Requirements and Condition	Condition on Use
3.6.2.C	**LCO:** [Two] containment air lock[s] shall be OPERABLE. **Condition:** One or more containment air locks inoperable for reasons other than an inoperable door or inoperable interlock.	Licensee must justify that an inoperable containment air locks is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM22].
3.6.3.B	**LCO:** Each containment isolation valve shall be OPERABLE. **Condition:** One or more penetration flow paths with two [or more] containment isolation valves inoperable [for reasons other than shield building bypass leakage and containment purge valves not within leakage limit]]	Licensee must justify that both inoperable containment isolation valves on a penetration is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM23].
3.6.3.C	**LCO:** Each containment isolation valve shall be OPERABLE. **Condition:** One or more penetration flow paths with one containment isolation valve inoperable (for penetrations with only one isolation valve).	Licensee must justify that inoperable containment isolation valve on a penetration is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM24].
3.6.3.D	**LCO:** Each containment isolation valve shall be OPERABLE. **Condition:** [One or more shield building bypass leakage [or purge valve leakage] not within limit].	Licensee must justify that leakage in excess of the limit is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM25].
3.6.3.E	**LCO:** Each containment isolation valve shall be OPERABLE. **Condition:** [One or more penetration flow paths with one or more containment purge valves not within leakage limits.]	Licensee must justify that excessive leakage is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM26].

NUREG-1431, Westinghouse STS

Specification	LCO Requirements and Condition	Condition on Use
3.6.6A	**LCO:** Containment Spray and Cooling Systems (Atmospheric and Dual) (Credit taken for iodine removal by the Containment Spray System) **Condition A**: One containment spray train inoperable. **Condition C:** One [required] containment cooling train inoperable. **Condition D**: Two [required] containment cooling trains inoperable.	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
3.6.6B	**LCO:** Containment Spray and Cooling Systems (Atmospheric and Dual (Credit not taken for iodine removal by the Containment Spray System) **Condition A**: One containment spray train inoperable. **Condition B:** One [required] containment cooling train inoperable. **Condition C**: Two containment spray trains inoperable. **Condition D:** One containment spray train and one [required] containment cooling train inoperable. **Condition E:** Two [required] containment cooling trains inoperable.	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
3.6.6C.A	**LCO:** Containment Spray System (Ice Condenser) **Condition:** One containment spray train inoperable.	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.

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Specification	LCO Requirements and Condition	Condition on Use
3.6.6D.A	**LCO:** Quench Spray (QS) System (Subatmospheric) **Condition:** One QS train inoperable	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
3.6.6E	**LCO:** Recirculation Spray (RS) System (Subatmospheric) **Condition A:** One RS subsystem inoperable. **Condition B:** Two RS subsystems inoperable in one train. **Condition C:** Two inside RS subsystems inoperable **Condition D:** Two outside RS subsystems inoperable. **Condition E:** Casing cooling tank inoperable.	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
3.6.16.A	**LCO:** The ice condenser inlet doors, intermediate deck doors, and top deck [doors] shall be OPERABLE and closed. **Condition:** One or more ice condenser doors physically restrained from opening	Licensee must justify that one *or more* inoperable doors is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~An acceptable alternative may be to create a separate condition for all doors inoperable that does not apply a Risk Informed Completion Time.~~*See Note 1 at the end of Attachment 2.*

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Specification	LCO Requirements and Condition	Condition on Use
~~3.6.17.A~~	~~**LCO:** Divider barrier integrity shall be maintained.~~ ~~**Condition:** One or more personnel access doors or equipment hatches open or inoperable, except for entry and exit.~~	~~Licensee must justify that one *or more* inoperable doors or hatches is not a condition in which all required trains or subsystems of a TS required system are inoperable~~[BM27]~~.~~
~~3.6.17.B~~	~~**LCO:** Divider barrier integrity shall be maintained.~~ ~~**Condition:** Divider barrier seal inoperable~~	~~Licensee must justify that it is not a condition in which all required trains or subsystems of a TS required system are inoperable~~[BM28]~~.~~
3.7.4.B	LOC: [Three] Atmospheric Dump Valves (ADV) lines shall be OPERABLE. **Condition:** Two or more required ADV lines inoperable	Licensee must justify that two *or more* inoperable ADVs is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~*See Note 1 at the end of Attachment 2.*
~~3.7.6.A~~	~~LOC: The Condensate Storage Tank (CST) shall be OPERABLE.~~ ~~**Condition:** CST inoperable~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable~~[BM29]~~.~~

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Specification	LCO Requirements and Condition	Condition on Use
3.8.1.E	**LCO:** The following AC electrical sources shall be OPERABLE…: **Condition:** Two [required] DGs inoperable.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM30].
3.8.4.A	**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE. **Condition:** One [or two] battery charger[s] on one subsystem inoperable.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.
3.8.4.B	**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE. **Condition:** One [or two] batter[y][ies on one subsystem] inoperable.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.
3.8.4.C	**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE. **Condition:** One DC electrical power subsystem inoperable for reasons other than Condition A [or B].	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.
3.8.7.A	**LCO:** The required Train A and Train B inverters shall be OPERABLE. **Condition:** One [required] inverter inoperable.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.
3.8.9.A	**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE. **Condition:** One or more AC electrical power distribution subsystems inoperable.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.

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Specification	LCO Requirements and Condition	Condition on Use
~~3.8.9.B~~	~~**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.~~ ~~**Condition:** One or more AC vital buses inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.9.C~~	~~**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.~~ ~~**Condition:** One or more DC electrical power distribution subsystems inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~

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Specification	LCO Requirements and Condition	Condition on Use
3.3.6.C (analog)	**LCO:** [Four] channels of Loss of Voltage Function and [four] channels of Degraded Voltage Function auto-initiation instrumentation per DG shall be OPERABLE. **Condition:** One or more Functions with more than two channels inoperable.	Licensee must justify that *more than two* channels per bus inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~*See Note 1 at the end of Attachment 2.*
3.4.9.B	**LCO:** The pressurizer shall be OPERABLE… **Condition:** One [required] group of pressurizer heaters inoperable.	Pressurizer is typically not modeled in the PRA. Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.

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Specification	LCO Requirements and Condition	Condition on Use
3.4.10.A	**LCO:** [Two] pressurizer safety valves shall be OPERABLE with lift settings ≥ [2475] psia and ≤ [2525] psia. **Condition:** One pressurizer safety valve inoperable	The Applicable Safety Analysis section of the Bases states that the accident analysis assumes all PSVs actuate to mitigate an overpressure event. Licensee must justify that the condition does not represent the inability to perform the safety function assumed in the FSAR. Licensee must also explain how the PSVs are modeled in the PRA[BM31].
3.4.11.E	**LCO:** Each Power Operated Relief Valve (PORV) and associated block valve shall be OPERABLE **Condition:** Two PORVs inoperable and incapable of being manually cycled.	Licensee must justify that all PORVs inoperable and incapable of being cycled is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM32].
3.4.11.F	**LCO:** Each PORV and associated block valve shall be OPERABLE **Condition:** Two block valves inoperable	Licensee must justify that all block valves inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM33].
3.4.14.C	**LCO:** Leakage from each reactor coolant system (RCS) pressure isolation valve (PIV) shall be within limits. **Condition:** Shutdown Cooling System autoclosure interlock function inoperable.	Licensee must justify that applying a RICT to the action to isolate the affected penetration is equivalent to isolating a Containment Isolation Valve and is acceptable[BM34]

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Specification	LCO Requirements and Condition	Condition on Use
~~3.5.1.B~~	~~**LCO:** [Four] Safety Injection Tanks (SIT) shall be OPERABLE.~~ ~~**Condition:** One SIT inoperable~~	~~The Applicable Safety Analysis Bases state that three SITs are required to inject to meet the ECCS acceptance criteria and the contents of one SIT are assumed lost through the break. Licensee must justify that the condition does not represent the inability to perform the safety function assumed in the FSAR [BM35].~~
3.5.2.D	**LCO:** Two ECCS trains shall be OPERABLE. **Condition:** Less than 100% of the ECCS flow equivalent to a single OPERABLE train available.	Licensee must justify that one *or more* ECCS trains inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable. Acceptable justification is TS Condition requiring 100% flow equivalent to a single ECCS train.

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Specification	LCO Requirements and Condition	Condition on Use
3.6.2.C	***LCO:*** *[Two] containment air lock[s] shall be OPERABLE.* ***Condition:*** *One or more containment air locks inoperable for reasons other than an inoperable door or inoperable interlock mechanism.*	*Licensee must justify that an inoperable containment air lock is not a condition in which all required trains or subsystems of a TS required system are inoperable. An acceptable argument may be that a note in TS 3.6.2 requires the condition to be assessed in accordance with TS 3.6.1, Containment Integrity, and any loss of function would require an immediate plant shutdown under that TS.*
~~3.5.3.A~~	~~**LCO:** One high pressure safety injection (HPSI) train shall be OPERABLE.~~ ~~**Condition:** Required HPCI train inoperable (Mode 4)~~	~~Licensee must justify that it is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM36].~~
~~3.5.4.A~~	~~**LCO:** The Refueling Water Tank (RWT) shall be OPERABLE.~~ ~~**Condition:** RWT inoperable due to boron concentration or borated water temperature not within limits.~~	~~Licensee must justify that it is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM37].~~
~~3.5.4.B~~	~~**LCO:** The Refueling Water Tank (RWT) shall be OPERABLE.~~ ~~**Condition:** RWT inoperable other than Condition A (above).~~	~~Licensee must justify that it is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM38].~~

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Specification	LCO Requirements and Condition	Condition on Use
3.6.2.C	**LCO:** [Two] containment air lock[s] shall be OPERABLE. **Condition:** One or more containment air locks inoperable for reasons other than an inoperable door or inoperable interlock	Licensee must justify that an inoperable containment air lock is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM39].
3.6.3.B	**LCO:** Each containment isolation valve shall be OPERABLE. **Condition:** One or more penetration flow paths with two [or more] containment isolation valves inoperable [for reasons other than leakage limits	Licensee must justify that all inoperable containment isolation valves on a penetration is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM40].
3.6.3.C	**LCO:** Each containment isolation valve shall be OPERABLE. **Condition:** One or more penetration flow paths with one containment isolation valve inoperable.	Licensee must justify that an inoperable containment isolation valve on a penetration is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM41].
3.6.3.D	**LCO:** Each containment isolation valve shall be OPERABLE. **Condition:** One or more secondary containment bypass leakage [or purge valve leakage] not within limit.	Licensee must justify that purge valve leakage is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM42].
3.6.3.E	**LCO:** Each containment isolation valve shall be OPERABLE. **Condition:** One or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits.	Licensee must justify that purge valve leakage is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM43].

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Specification	LCO Requirements and Condition	Condition on Use
3.6.6A	**LCO:** Containment Spray and Cooling Systems (Atmospheric and Dual) (Credit taken for iodine removal by the Containment Spray System) **Condition A:** One containment spray train inoperable. **Condition C**: One containment cooling train inoperable. **Condition D:** One containment spray and one containment cooling train inoperable. **Condition E:** Two containment cooling trains inoperable.	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
3.6.6B	**LCO:** Containment Spray and Cooling Systems (Atmospheric and Dual) (Credit not taken for iodine removal by the Containment Spray System) **Condition A:** One containment spray train inoperable. **Condition B:** One containment cooling train inoperable. **Condition C:** Two containment spray trains inoperable. **Condition D:** One containment spray train and one containment cooling train inoperable. **Condition E:** Two containment cooling trains inoperable.	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
~~3.7.4.B~~	~~**LCO:** [Two] Atmospheric Dump Valve (ADV) lines shall be OPERABLE. **Condition:** Two or more [required] ADV lines inoperable.~~	~~Licensee must justify that *two or more* inoperable ADVs is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM44].~~
~~3.7.6.A~~	~~**LCO:** The Condensate Storage Tank (CST) shall be OPERABLE.~~ ~~**Condition:** CST inoperable~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM45].~~

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Specification	LCO Requirements and Condition	Condition on Use
3.8.1.E	**LCO:** The following AC electrical sources shall be OPERABLE: … **Condition:** Two DGs inoperable	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM46].
3.8.4.A	**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE. **Condition:** One [or two] battery charger[s] on one subsystem inoperable.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.
3.8.4.B	**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE. **Condition:** One [or two] batter[y][ies on one subsystem] inoperable.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.
3.8.4.C	**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE. **Condition:** One DC electrical power subsystem inoperable for reasons other than Condition A [or B].	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.
3.8.7.A	**LCO:** The required Train A and Train B inverters shall be OPERABLE. **Condition:** One [required] inverter inoperable.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.
3.8.9.A	**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE. **Condition:** One or more AC electrical power distribution subsystems inoperable.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.

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Specification	LCO Requirements and Condition	Condition on Use
~~3.8.9.B~~	~~**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.~~ ~~**Condition:** One or more AC vital buses inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.9.C~~	~~**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.~~ ~~**Condition:** One or more DC electrical power distribution subsystems inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~

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Specification	LCO Requirements and Condition	Condition on Use
~~3.3.1.1.C~~	~~**LCO:** The RPS instrumentation for each Function in Table 3.3.1.1-1 shall be OPERABLE.~~ ~~**Condition:** One or more Functions with RPS trip capability not maintained.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable~~[BM47]~~.~~
3.3.1.2.A	**LCO:** The SRM instrumentation in Table 3.3.1.2-1 shall be OPERABLE. **Condition:** One or more required SRMs inoperable in MODE 2 with intermediate range monitors (IRMs) on Range 2 or below	Licensee must justify that one *or more* inoperable SRMs is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~ *See Note 1 at the end of Attachment 2.* Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.

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Specification	LCO Requirements and Condition	Condition on Use
3.3.2.2.B	**LCO:** [Three] channels of feedwater and main turbine high water level trip instrumentation shall be OPERABLE. **Condition:** Two or more feedwater and main turbine high water level trip channels inoperable.	Licensee must justify that two *or more* inoperable trip channels is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~*See Note 1 at the end of Attachment 2.*

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Specification	LCO Requirements and Condition	Condition on Use
3.3.4.1.A	**LCO:** End of Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation **Condition:** One or more required channels inoperable.	Licensee must justify that one *or more* inoperable EOC-RPT channels is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable. See Note 1 at the end of Attachment 2.* Licensee must justify the ability to calculate a RICT given that EOC-RPT channels are not typically modeled in the PRA. ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~

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Specification	LCO Requirements and Condition	Condition on Use
3.3.4.1.B	**LCO:** a. Two channels per trip system for each EOC-RPT instrumentation Function listed below shall be OPERABLE … **Condition:** One or more Functions with EOC-RPT trip capability not maintained. AND [MCPR limit for inoperable EOC-RPT not made applicable.]	Licensee must justify that one *or more* inoperable EOC-RPT channels is not a condition in which all required trains or subsystems of a TS required system are inoperable. Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative[BM48].
3.3.4.2.B	**LCO:** Two channels per trip system for each ATWS-RPT instrumentation Function listed below shall be OPERABLE … **Condition:** One Function with ATWS-RPT trip capability not maintained.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable. Licensee must justify the ability to calculate a RICT given that ATWS-RPT channels are not typically modeled in the PRA[BM49].

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Specification	LCO Requirements and Condition	Condition on Use
3.3.4.2.C	**LCO:** Two channels per trip system for each ATWS-RPT instrumentation Function listed below shall be OPERABLE … **Condition:** Both Functions with ATWS-RPT trip capability not maintained.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable. Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative[BM50].
3.3.5.2.C	**LCO:** The RCIC System instrumentation for each Function in Table 3.3.5.2-1 shall be OPERABLE. **Condition:** As required by Required Action A.1 and referenced in Table 3.3.5.2-1. (i.e., One or more channels inoperable: - Reactor Vessel Water – High, Level 8 - [Manual Initiation])	Licensee must justify that inoperability of this single channel function is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM51].
3.3.6.1.B	**LCO:** The primary containment isolation instrumentation for each Function in Table 3.3.6.1-1 shall be OPERABLE. **Condition:** One or more automatic Functions with isolation capability not maintained.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM52].

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Specification	LCO Requirements and Condition	Condition on Use
3.3.6.3.A	**LCO:** Low-Low Set (LLS) Instrumentation **Condition:** One LLS valve inoperable due to inoperable channel(s).	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
~~3.3.6.3.C~~	~~**LCO:** The LLS valve instrumentation for each Function in Table 3.3.6.3-1 shall be OPERABLE.~~ ~~**Condition:** --NOTE--~~ ~~Separate Condition entry is allowed for each S/RV.------~~ ~~One or more S/RVs with two Function 3 channels inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable. Licensee must justify the ability to calculate a RICT for this inoperability[BM53].~~
3.3.8.1.A	**LCO:** The LOP instrumentation for each Function in Table 3.3.8.1-1 shall be OPERABLE. **Condition:** One or more channels inoperable.	Licensee must justify that one *or more* channels inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~*See Note 1 at the end of Attachment 2.*

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Specification	LCO Requirements and Condition	Condition on Use
~~3.6.1.2.C~~	~~**LCO:** The primary containment air lock shall be OPERABLE.~~ ~~**Condition:** Primary containment air lock inoperable for reasons other than an inoperable door or inoperable interlock~~	~~Licensee must justify that an inoperable airlock is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM54].~~
~~3.6.1.3.B~~	~~**LCO:** Each PCIV, except reactor building-to-suppression chamber vacuum breakers, shall be OPERABLE.~~ ~~**Condition:** One or more penetration flow paths with two [or more] PCIVs inoperable for reasons other than {leak rate}~~	~~Licensee must justify that all inoperable PCIVs in a flow path is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM55].~~
~~3.6.1.3.C~~	~~**LCO:** Each PCIV, except reactor building-to-suppression chamber vacuum breakers, shall be OPERABLE.~~ ~~**Condition:** One or more penetration flow paths with one inoperable isolation valve (for penetrations with only one valve)~~	~~Licensee must justify that inoperability of the single PCIV in a flow path is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM56].~~
3.6.1.2.C	***LCO:*** *The primary containment air lock shall be OPERABLE.* ***Condition:*** *Primary containment air lock inoperable for reasons other than Condition A or B.*	*Licensee must justify that an inoperable containment air lock is not a condition in which all required trains or subsystems of a TS required system are inoperable. An acceptable argument may be that a note in TS 3.6.1.2 requires the condition to be assessed in accordance with TS 3.6.1.1, Primary Containment, and any loss of function would require an immediate plant shutdown under that TS.*

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Specification	LCO Requirements and Condition	Condition on Use
3.6.1.3.E	**LCO:** Each PCIV, except reactor building-to-suppression chamber vacuum breakers, shall be OPERABLE. **Condition:** One or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits.	Licensee must justify that PCIV leakage in excess of the limits is not a condition in which all required trains or subsystems of a TS required system are inoperable. Licensee must justify the ability to calculate a RICT for this inoperability.
3.6.1.7.D	**LCO:** Each reactor building-to-suppression chamber vacuum breaker shall be OPERABLE. **Condition:** Two or more lines with one or more reactor building –to-suppression chamber vacuum breakers inoperable for opening.	Licensee must justify that *one or more* inoperable vacuum breakers on *two or more lines* is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable. See Note 1 at the end of Attachment 2.*

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Specification	LCO Requirements and Condition	Condition on Use
3.7.7.A	**LCO:** The Main Turbine Bypass System shall be OPERABLE. OR The following limits are made applicable: [a. LCO 3.2.1, "AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)," limits for an inoperable Main Turbine Bypass System, as specified in the [COLR]; and] [b. LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)," limits for an inoperable Main Turbine Bypass System, as specified in the [COLR].] **Condition:** [Requirements of the LCO not met or Main Turbine Bypass System inoperable].	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
~~3.8.1.E~~	~~**LCO:** The following AC electrical power sources shall be OPERABLE …:~~ ~~**Condition:** Two [or three] required DGs inoperable~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM57].~~
~~3.8.4.A~~	~~**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE.~~ ~~**Condition:** One [or two] battery charger[s] on one subsystem inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.4.B~~	~~**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE.~~ ~~**Condition:** One [or two] batter[y][ies on one subsystem] inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.4.C~~	~~**LCO:** The Train A and Train B DC electrical power subsystems shall be OPERABLE.~~ ~~**Condition:** One DC electrical power subsystem inoperable for reasons other than Condition A [or B].~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~

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Specification	LCO Requirements and Condition	Condition on Use
~~3.8.7.A~~	~~**LCO:** The required Train A and Train B inverters shall be OPERABLE.~~ ~~**Condition:** One [required] inverter inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.9.A~~	~~**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.~~ ~~**Condition:** One or more AC electrical power distribution subsystems inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.9.B~~	~~**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.~~ ~~**Condition:** One or more AC vital buses inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~
~~3.8.9.C~~	~~**LCO:** Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.~~ ~~**Condition:** One or more DC electrical power distribution subsystems inoperable.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1434, BWR/6 STS

Specification	LCO Requirements and Condition	Condition on Use
~~3.3.1.1.C~~	~~**LCO:** The RPS instrumentation for each Function in Table 3.3.1.1-1 shall be OPERABLE.~~ ~~**Condition:** One or more Functions with RPS trip capability not maintained.~~	~~Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM58].~~
3.3.1.2.A	**LCO:** The SRM instrumentation in Table 3.3.1.2-1 shall be OPERABLE. **Condition:** One or more required SRMs inoperable in MODE 2 with intermediate range monitors (IRMs) on Range 2 or below.	Licensee must justify that one *or more* inoperable SRMs is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable. See Note 1 at the end of Attachment 2.* Licensee must justify the ability to calculate a RICT given that SRMs are not typically modeled in the PRA. ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

NUREG-1434, BWR/6 STS

Specification	LCO Requirements and Condition	Condition on Use
3.3.4.1.A	**LCO:** End of Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation **Condition:** One or more required channels inoperable.	Licensee must justify that one *or more* inoperable channels is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. *See Note 1 at the end of Attachment 2.* ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~ Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.

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Specification	LCO Requirements and Condition	Condition on Use
3.3.4.1.B	**LCO:** a. Two channels per trip system for each EOC-RPT instrumentation Function listed below shall be OPERABLE: 1. Turbine Stop Valve (TSV) - Closure and 2. Turbine Control Valve (TCV) Fast Closure, Trip Oil Pressure -Low. [OR b. LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)," limits for inoperable EOC-RPT as specified in the COLR are made applicable.] **Condition:** One or more Functions with EOC-RPT trip capability not maintained. AND [MCPR limit for inoperable EOC-RPT not made applicable.]	Licensee must justify that one *or more* inoperable EOC-RPT channels is not a condition in which all required trains or subsystems of a TS required system are inoperable. Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative[BM59].
3.3.4.2.B	**LCO:** Two channels per trip system for each ATWS-RPT instrumentation Function listed below shall be OPERABLE: a. Reactor Vessel Water Level - Low Low, Level 2 and b. Reactor Steam Dome Pressure - High. **Condition:** One Function with ATWS-RPT trip capability not maintained.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable. Licensee must justify the ability to calculate a RICT given that ATWS-RPT channels are not typically modeled in the PRA[BM60].

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Specification	LCO Requirements and Condition	Condition on Use
3.3.4.2.C	**LCO:** Two channels per trip system for each ATWS-RPT instrumentation Function listed below shall be OPERABLE: a. Reactor Vessel Water Level - Low Low, Level 2 and b. Reactor Steam Dome Pressure - High. **Condition:** Both Functions with ATWS-RPT trip capability not maintained.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable. Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative[BM61].
3.3.5.2.C	**LCO:** The RCIC System instrumentation for each Function in Table 3.3.5.2-1 shall be OPERABLE. **Condition:** As required by Required Action A.1 and referenced in Table 3.3.5.2-1. (i.e., One or more channels inoperable: - Reactor Vessel Water Level – High, Level 8 - [Manual Initiation)	Licensee must justify that inoperability of this single channel function is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM62].
3.3.6.1.B	**LCO:** The primary containment isolation instrumentation for each Function in Table 3.3.6.1-1 shall be OPERABLE. **Condition:** One or more automatic Functions with isolation capability not maintained.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM63].
3.3.6.4.B	**LCO:** The SPMU System instrumentation for each Function in Table 3.3.6.4-1 shall be OPERABLE. **Condition:** As required by Required Action A.1 and referenced in Table 3.3.6.4-1.B.1.	Licensee must justify that this condition, which can include all channels in a function inoperable, is not a Condition in which all required trains or subsystems of a TS required system are inoperable[BM64].

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Specification	LCO Requirements and Condition	Condition on Use
3.3.6.5.A	**LCO:** Relief and Low-Low Set (LLS) Instrumentation **Condition:** One trip system inoperable.	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
3.3.8.1.A	**LCO:** The LOP instrumentation for each Function in Table 3.3.8.1-1 shall be OPERABLE. **Condition:** One or more channels inoperable.	Licensee must justify that one *or more* channels inoperable is not a condition in which all required trains or subsystems of a TS required system are inoperable *or modify the Action to not apply a RICT when all required trains or subsystems are inoperable*. ~~An acceptable alternative may be to create a separate condition for all channels inoperable that does not apply a Risk Informed Completion Time.~~ *See Note 1 at the end of Attachment 2.*
~~3.6.1.3.B~~	~~**LCO:** Each PCIV shall be OPERABLE.~~ ~~**Condition:** One or more penetration flow paths with two [or more] PCIVs inoperable for reasons other than {leak rate}~~	~~Licensee must justify that both inoperable PCIVs in a flow path is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM65].~~

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Specification	LCO Requirements and Condition	Condition on Use
~~3.6.1.3.C~~	~~**LCO:** Each PCIV shall be OPERABLE.~~ ~~**Condition:** One or more penetration flow paths with one inoperable isolation valve (for penetrations with only one valve)~~	~~Licensee must justify that inoperability of the single PCIV in a flow path is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM66].~~
~~3.6.1.3.D~~	~~**LCO:** Each PCIV shall be OPERABLE.~~ ~~**Condition:** [One or more [secondary containment bypass leakage rate,] [MSIV leakage rate,] [purge valve leakage rate,] [hydrostatically tested line leakage rate,] [or] [EFCV leakage rate] not within limit.~~	~~Licensee must justify that PCIV leakage in excess of the limits is not a condition in which all required trains or subsystems of a TS required system are inoperable.~~ ~~Licensee must justify the ability to calculate a RICT for this inoperability[BM67].~~
3.6.1.2.C	***LCO:*** *The primary containment air lock shall be OPERABLE.* ***Condition:*** *Primary containment air lock inoperable for reasons other than Condition A or B.*	*Licensee must justify that an inoperable containment air lock is not a condition in which all required trains or subsystems of a TS required system are inoperable. An acceptable argument may be that a note in TS 3.6.1.2 requires the condition to be assessed in accordance with TS 3.6.1.1, Primary Containment, and any loss of function would require an immediate plant shutdown under that TS.*

Attachment 2
Conditional Variations from TSTF-505-A in Near-Term Plant-Specific License Amendment Requests

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Specification	LCO Requirements and Condition	Condition on Use
3.6.1.3.E	**LCO:** Each PCIV shall be OPERABLE. **Condition:** One or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits.	Licensee must justify that PCIV leakage in excess of the limits is not a condition in which all required trains or subsystems of a TS required system are inoperable. Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
3.6.1.7.A	**LCO:** Residual Heat Removal (RHR) Containment Spray System **Condition:** One RHR containment spray subsystem inoperable.	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
~~3.6.2.4.A~~	~~**LCO:** Two Suppression Pool Makeup (SPMU) System subsystems shall be OPERABLE.~~ ~~**Condition:** Upper containment pool water level not within limit.~~	~~Licensee must justify that this condition, which affects both SPMU subsystems, is not a Condition in which all required trains or subsystems of a TS required system are inoperable.~~ ~~Licensee must justify the ability to calculate a RICT for this inoperability~~[BM68]~~.~~

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Specification	LCO Requirements and Condition	Condition on Use
3.6.2.4.B	**LCO:** Two SPMU subsystems shall be OPERABLE. **Condition:** Upper containment pool water temperature not within limit.	Licensee must justify that this condition, which affects both SPMU subsystems, is not a Condition in which all required trains or subsystems of a TS required system are inoperable. Licensee must justify the ability to calculate a RICT for this inoperability[BM69].
3.6.5.3.B	**LCO:** Each drywell isolation valve [,except for Drywell Vacuum Relief System valves,] shall be OPERABLE. **Condition:** One or more penetration flow paths with two drywell isolation valves inoperable.	Licensee must justify that both inoperable valves in a flow path is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM70].
3.6.5.6.D	**LCO:** [Two] drywell post-LOCA and [two] drywell purge vacuum relief subsystems shall be OPERABLE. **Condition:** [Two] drywell purge vacuum relief subsystems inoperable for reasons other than vacuum relief subsystem not closed.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM71].
3.6.5.6.E	**LCO:** [Two] drywell post-LOCA and [two] drywell purge vacuum relief subsystems shall be OPERABLE. **Condition:** [Two] drywell post-LOCA vacuum relief subsystems inoperable for reasons other than Condition A. AND One drywell purge vacuum relief subsystem inoperable for reasons other than Condition A.	Licensee must justify that this is not a condition in which all required trains or subsystems of a TS required system are inoperable[BM72].

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Specification	LCO Requirements and Condition	Condition on Use
3.7.4.A	**LCO:** Two [control room AC] subsystems shall be OPERABLE. **Condition:** One [control room AC] subsystem inoperable.	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.
3.7.6.A	**LCO:** The Main Turbine Bypass System shall be OPERABLE. OR The following limits are made applicable: [a. LCO 3.2.1, "AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)," limits for an inoperable Main Turbine Bypass System, as specified in the [COLR] and] [b. LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)," limits for an inoperable Main Turbine Bypass System, as specified in the [COLR].] **Condition:** [Requirements of the LCO not met or Main Turbine Bypass System inoperable].	Licensee must justify the ability to calculate a RICT for the condition, including how the system is modeled in the PRA, whether all functions of the system are modeled, and, if a surrogate is used, why that modeling is conservative.

Note 1

Some Conditions are applicable when an unspecified number of subsystems or instrument channels are inoperable, typically written as "One or more…" or "Two or more…". These conditions currently apply when all subsystems or channels required to be operable to perform a function are inoperable, and application of a RICT in this situation is prohibited in the near-term TSTF-505 submittals.

To address this, it is recommended that the following modification to TSTF-505 be made to the Required Actions indicated in the Attachment 2 tables for Completion Times potentially applicable when all required subsystems or channels are inoperable.

The typical Completion Time is modified by TSTF-505 to state:

> *72 hours (i.e., the existing Completion Time)*
>
> *OR*
>
> *In accordance with the Risk Informed Completion Time Program*

It is recommended that the second Completion Time be modified with a Note, as shown below:

> *72 hours (i.e., the existing Completion Time)*
>
> *OR*
>
> *----------NOTE----------*
> *Not applicable when [all/four/both] required channels are inoperable.*
> *----------*
> *In accordance with the Risk Informed Completion Time Program*

The bracketed number of channels will depend on the specification. This approach retains the existing requirements and limits the use of a RICT to conditions in which the function can still be performed. The licensee must justify that the required function can still be performed absent an additional failure when a RICT is applied.

Alternatively, the licensee may modify the Condition to only apply when at least one subsystem or channel is operable, but this approach may require creating a new Condition or modifying an existing condition to retain the current requirements, or accepting a more restrictive requirement (such a LCO 3.0.3 entry).

Attachment 3
Response to Additional NRC Questions on TSTF-505

At the December 13, 2016, public meeting, the NRC asked for more information on the inclusion of a Risk Informed Completion Time (RICT) provision for Required Actions that do not require restoration of the system to Operable status.

Response

At a September 8, 2010, public meeting between the NRC and the TSTF to discuss TSTF-505, the NRC raised concerns with including changes in TSTF-505 that were not in the South Texas Project (STP) lead plant submittal scope of applying a RICT to Required Actions that either 1) require restoring the inoperable system to operable status, 2) require placing an instrument channel in trip, or 3) require isolating a containment isolation valve. As a result, Revision 1 of TSTF-505 removed changes that did not fall into these categories.

In a Request for Additional Information (RAI) on TSTF-505 dated July 27, 2010, the NRC questioned the calculation of a RICT for placing a channel in trip or bypass. The TSTF agreed to remove changes applying a RICT to placing a channel in bypass, and justified applying a RICT for placing a channel in trip. The RAI response stated:

> The TSTF believes that the TSTF-505 option to calculate a RICT for placing channels in trip should be retained. The NRC has reviewed and approved risk-based Topical Reports that change the Completion Time for placing a channel in trip, such as WCAP-14333, "Probabilistic Risk Analysis of the RPS and ESFAS Test Times and Completion Times," approved July 15, 1998. A licensee could choose to model these actions and calculate a RICT for placing a channel in trip.

The NRC approved TSTF-505 with provisions to calculate a RICT for Required Actions that require placing a channel in trip.

2. At the December 13, 2016, public meeting, the NRC asked for an explanation of the difference between the TSTF-505 RICT program and the NEI 06-09 Configuration Risk Management Program.

Response

The TSTF-505 justification, Section 2.0, "Proposed Change," states:

> There is a new Chapter 5 Program entitled, "Risk Informed Completion Time Program" which is invoked when utilizing a RICT. In NEI 06-09 this program is called the Configuration Risk Management Program. That title is not used in the Traveler because some licensees already have a Chapter 5 program of that name serving a different purpose and the proposed name is more descriptive of the purpose of the new program.

Therefore, the TSTF-505 Risk Informed Completion Time program is the same as the NEI 06-09 Configuration Risk Management Program.

3. At the December 13, 2016, public meeting, the NRC asked for a more detailed discussion regarding treatment of common cause failure term adjustments when calculating a RICT.

Response

The NEI 06-09 and the associated safety evaluation state that common cause must be considered for emergent failures and require consideration and implementation of Risk Management Actions (RMAs) to address the risk of potential common cause failures as identified by the extent of condition evaluation.

The last paragraph of section 2.3.1 of NEI 06-09 states:

> 15. Operability determinations should follow regulatory guidance established in Part 9900 of the NRC Inspection Manual [9]. RMAT and RICT calculations performed for emergent conditions shall be performed assuming that all equipment not declared inoperable during the operability determination process are functional. However, the station shall establish appropriate RMAs based on an assessment of the potential for increased risks due to common cause failure of similar equipment. (Note that if there is not evidence for increased potential for common cause failures, no RMAs are required).

The safety evaluation for NEI 06-09, in the section titled "emergent failures," states:

> Emergent Failures. During the time when an RICT is in effect and risk is being assessed and managed, it is possible that emergent failures of SSCs may occur, and these must be assessed to determine the impact on the RICT. If a failed component is one of two or more redundant components in separate trains of a system, then there is potential for a common cause failure mechanism. Licensees must continue to assess the remaining redundant components to determine there is reasonable assurance of their continued operability, and this is not changed by implementation of the RMTS. If a licensee concludes that the redundant components remain operable, then these components are functional for purposes of the RICT. However, the licensee is required to consider and implement additional risk management actions (RMAs), due to the potential for increased risks from common cause failure of similar equipment. The staff interprets TR NEI 06-09, Revision 0, as requiring consideration of such RMAs whenever the redundant components are considered to remain operable, but the licensee has not completed the extent of condition evaluations, and additionally, as required by a follow-up prompt operability determination. (emphasis added)

NEI 06-09 includes the following guidance on consideration of common cause failures:

> 3.3.6 Common Cause Failure Consideration
>
> Common cause failures are required to be considered for all RICT assessments. For all RICT assessments of planned configurations, the treatment of common cause failures in the quantitative CRM Tools may be performed by considering only the removal of the planned equipment and not adjusting common cause failure terms. For RICT assessments involving unplanned or emergent conditions, the potential for common cause failure is

~~considered during the operability determination process. This assessment is more accurately described as an "extent of condition" assessment. Licensed operators recognize that an emergent condition identified on a Technical Specifications component may have the potential to affect a redundant component or similar components. In addition to a determination of operability on the affected component, the operator should make a judgment with regard to whether the operability of similar or redundant components might be affected. In accordance with the operability determination guidance in Part 9900 of the NRC Inspection Manual (provided in Regulatory Information Summary 2005-20), the determination of operability should be done promptly, commensurate with the safety significance of the affected component. If a common condition affects the operability of multiple components (e.g., that more than one common cause group functional train is affected), action should be taken via the Technical Specifications. Based on the information available, the licensed operator is often able to make an immediate determination that there is reasonable assurance that redundant or similar components are not affected. Using judgment with regard to the specific condition, the operator may direct that similar or redundant components be inspected for evidence of the degradation. For conditions where the operator has less information, assistance from other organizations, such as Station Engineering, is typically requested. These support organizations continue to perform the evaluation promptly, as described above. The guidance contained in Part 9900 of the Inspection Manual is used as well as conservative decision-making for extent of condition evaluations. The components are considered functional in the PRA unless the operability evaluation determines otherwise.~~

~~While quantitative changes to the PRA are not required, the PRA should be used as appropriate to provide insights for the qualitative treatment of potential common cause failures and RMAs that may be applied for the affected configuration. Such information may be used in prioritizing the repair, ensuring proper resource application, and taking other compensatory measures as deemed prudent by station management."~~

~~NRC Regulatory Guide 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," addresses common cause failure treatment for risk-informed changes to Technical Specifications. Appendix A, Section 1.3.1.1, discusses quantitative adjustment of the common cause failure probabilities based on the cause of the equipment unavailability. Section 2.3 of the Regulatory Guide states that Appendix A outlines issues associated with Tier 1. Tier 1 is an assessment of the risk impact of a proposed change that is submitted to the NRC as part of a license amendment request. This is contrasted with Tier 3, which is a contemporaneous configuration risk management risk assessment performed by the licensee while the equipment is out of service.~~

~~As noted in NEI 06-09, Section 1.1, and throughout the document, the assessment and management of configuration-specific risk is within the context of a configuration risk management program, and the RICT is required to be re-calculated for any configuration changes. Since common cause failure quantitative adjustments are explicitly excluded from Tier 3 methods in Regulatory Guide 1.177 and since the RICT calculations are configuration risk~~

assessments associated with Tier 3 assessments, these quantitative adjustments are not applicable to calculating a RICT.

Therefore, the RICT process explicitly addresses common cause failure and mitigates the associated risk by development and implementation of RMAs specifically targeted toward common cause failure, consistent with regulatory guidance.

4. At the December 13, 2016, public meeting, the NRC asked for a discussion regarding the differences between the Risk Informed Completion Time Program and the 10 CFR 50.65 Maintenance Rule program.

Response

Most TS provide a Completion Time during which the LCO may not be met to permit a licensee to perform required testing, maintenance, or repair activities. Normally, upon expiration of the Completion Time, the requirement to shut down the reactor or follow remedial action is imposed. NEI 06-09 provides a means for the licensee to extend the Completion Time and thereby delay reactor shutdown or remedial actions, if risk is assessed and managed within specified limits and programmatic requirements established by the TS. The regulatory requirements for the content of LCOs will continue to be met, since only the Completion Time is changed. The specific functional capabilities or performance levels of equipment required by the safety analyses are unchanged, and the remedial actions, including the requirement to shut down the reactor, are also unchanged; only the specific time limits for initiating actions are extended by the methodology documented in NE1-06-09.

The maintenance rule, 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," requires licensees to monitor the performance or condition of structures, systems and components (SSCs) against licensee-established goals in a manner sufficient to provide a reasonable assurance that these SSCs are capable of fulfilling their intended functions. In addition, 10 CFR 50.65(a)(4) requires the assessment and management of the increase in risk that may result from a proposed maintenance activity. The methodology in NE1-06-09 uses processes that are complementary to the requirements of 10 CFR 50.65(a)(4).

Both processes recognize that plant risk is increased when equipment is out of service. Both processes take actions commensurate with the risk due to the specific configuration. If a system is addressed in the Technical Specifications any work performed under the Maintenance Rule program is performed within the constraints of the TS completion time. The RICT program allows the completion time available to perform work to potentially be adjusted within the constraints of the program and plant configuration. Thus, the two programs are interrelated and implementation of the RICT program builds on the existing Maintenance Rule configuration control process.

5. At the December 13, 2016, public meeting, the NRC questioned applying a RICT to existing TS Actions that appeared to be a loss of function. In particular, the staff questioned calculating a RICT for the existing Actions for two inoperable emergency diesel generators and two inoperable offsite circuits.

Response

The ISTS defines "operable/operability" as:

> A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s). (emphasis added)

In order to be operable, a system must have either normal electrical power (offsite circuits) or emergency electrical power (emergency diesel generators). Losing one power source does not render the supported systems inoperable. TS 3.8.1, "AC Sources – Operating," contains requirements on both the offsite circuits and the emergency diesel generators because either system can perform the safety function.

TS Administrative Controls Section 5.5, "Safety Function Determination Program," defines a loss of safety function. It states:

> A loss of safety function exists when, assuming no concurrent single failure, no concurrent loss of offsite power, or no concurrent loss of onsite diesel generator(s), a safety function assumed in the accident analysis cannot be performed.

Under this TS definition, a single offsite circuit or a single emergency diesel generator can perform the safety function. Therefore, the existing TS 3.8.1 Actions for two inoperable offsite circuits (Action C) or two inoperable diesel generators (Action E) do not represent a loss of safety function. This is consistent with the TS Bases. The Bases for Condition H, which is applicable when three or more required AC sources are inoperable, states, "Condition H corresponds to a level of degradation in which all redundancy in the AC electrical power supplies has been lost. At this severely degraded level, any further losses in the AC electrical power system will cause a loss of function" (emphasis added). In other words, a loss of safety function occurs when there is no operable offsite circuits or emergency diesel generators. Therefore, a RICT can be calculated for two inoperable offsite circuits (Condition C) or two inoperable emergency diesel generators (Condition E) without considering PRA Functionality or a loss of function.

Attachment 3
TSTF-505 Model Application

PROPOSED MODEL APPLICATION FOR PLANT-SPECIFIC ADOPTION OF TSTF-505, REVISION 1, "PROVIDE RISK-INFORMED EXTENDED COMPLETION TIMES – RITSTF INITIATIVE 4B"

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

SUBJECT: [PLANT]
DOCKET NO. 50-[XXX]
LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATIONS TO ADOPT RISK INFORMED COMPLETION TIMES TSTF-505, REVISION 1, "PROVIDE RISK-INFORMED EXTENDED COMPLETION TIMES - RITSTF INITIATIVE 4B."

REFERENCE: *Letter from the TSTF to U.S. NRC, "Response to NRC Questions on TSTF-505, 'Provide Risk-Informed Extended Completion Times'," dated DATE*

In accordance with the provisions of Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), [LICENSEE] is submitting a request for an amendment to the Technical Specifications (TS) for [PLANT.]

The proposed amendment would modify TS requirements to permit the use of Risk Informed Completion Times in accordance with TSTF-505, Revision 1, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b,~~.~~" *as modified by the [DATE] letter from the TSTF to the NRC (Reference).* The availability of this TS improvement was announced in the Federal Register on *March 15, 2012* ~~[Date]~~ (*77*~~[ ]~~ FR *15399)*~~[ ]~~).

- Attachment 1 provides a description and assessment of the proposed change, the requested confirmation of applicability, and plant-specific verifications.
- Attachment 2 provides the existing TS pages marked up to show the proposed changes.
- Attachment 3 provides revised (clean) TS pages.
- Attachment 4 provides existing TS Bases pages marked up to show the proposed changes.

[LICENSEE] requests approval of the proposed license amendment by [DATE], with the amendment being implemented [BY DATE OR WITHIN X DAYS].

In accordance with 10 CFR 50.91(a)(1), "Notice for Public Comment," the analysis about the issue of no significant hazards consideration using the standards in 10 CFR 50.92 is being provided to the Commission.

In accordance with 10 CFR 50.91(b)(1), "Notice for Public Comment; State Consultation," a copy of this application, with attachments, is being provided to the designated [STATE] Official.

I declare [or certify, verify, state] under penalty of perjury that the foregoing is true and correct.

Executed on [date][Signature]

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

Sincerely,

[Name, Title]

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

Enclosures:
1. List of Revised Required Actions to Corresponding PRA Functions
2. Information Supporting Consistency with Regulatory Guide 1.200, Revision 2.
3. Information Supporting Technical Adequacy of PRA Models Without PRA Standards Endorsed by Regulatory Guide 1.200, Revision 2.
4. Information Supporting Justification of Excluding Sources of Risk Not Addressed by the PRA Models.
5. Baseline CDF and LERF.
6. Justification of Application Of At-Power PRA Models to Shutdown Modes.
7. PRA Model Update Process.
8. Attributes of the CRMP Model.
9. Key Assumptions and Sources of Uncertainty.
10. Program Implementation
11. Monitoring Program
12. Risk Management Action Examples

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

ATTACHMENT 1
DESCRIPTION AND ASSESSMENT OF THE PROPOSED CHANGE

License Amendment Request for Adoption of TSTF-505, Revision 1, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b"

1.0 DESCRIPTION

The proposed amendment would modify the Technical Specification (TS) requirements related to Completion Times (CTs) for Required Actions to provide the option to calculate a longer, risk-informed CT (RICT). A new program, the Risk-Informed Completion Time Program, is added to TS Section 5 Administrative Controls.

The methodology for using the RICT Program is described in NEI 06-09-*A*, "Risk-Informed Technical Specifications Initiative 4b, Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0, which was approved by the NRC on May 17, 2007. Adherence to ~~NEI~~ *NEI* 06-09-*A* is required by the RICT Program.

The proposed amendment is consistent with TSTF-505, Revision 1, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b~~,~~" *as modified by the TSTF's [DATE] letter to the NRC, "Response to NRC Questions on TSTF-505, 'Provide Risk-Informed Extended Completion Times'."* However, only those Required Actions described in Enclosure 1 are proposed to be changed, [which does not include all of the modified Required Actions in TSTF-505 and which includes some plant-specific Required Actions not included in TSTF-505].

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

[LICENSEE] has reviewed the model safety evaluation dated [DATE] as part of the Federal Register Notice for Comment. This review included a review of the NRC staff's evaluation, as well as the supporting information provided to support TSTF-505 and the safety evaluation for NEI 06-09*, as well as the TSTF's [DATE] letter on TSTF-505*. [As described in the subsequent paragraphs,][LICENSEE] has concluded that the technical basis presented in the TSTF-505 proposal*,* ~~and~~ the associated model safety evaluation prepared by the NRC staff*, as modified by the TSTF letter on TSTF-505* are applicable to [PLANT, UNIT NOS.] and support incorporation of this amendment in the [PLANT] TS.]

2.2 Verifications and Regulatory Commitments

In accordance with Section 4.0, Limitations and Conditions, of the safety evaluation for NEI 06-09-*A*, the following is provided:

1. Enclosure 1 identifies each of the TS Required Actions to which the RICT Program will apply, with a comparison of the TS functions to the functions modeled in the probabilistic risk assessment (PRA) of the structures, systems and components (SSCs) subject to those actions.

2. Enclosure 2 provides a discussion of the results of peer reviews and self-assessments conducted for the plant-specific PRA models which support the RICT Program, as required by Regulatory Guide (RG) 1.200 Section 4.2.

3. [Enclosure 3 provides a description of all PRA models used to support the RICT Program for which Nuclear Regulatory Commission endorsed standards are not available.] [Enclosure 3 is not applicable since each PRA model used for the RICT Program is addressed using a standard endorsed by the Nuclear Regulatory Commission.]

4. Enclosure 4 provides appropriate justification for excluding sources of risk not addressed by the PRA models.

5. Enclosure 5 provides the plant-specific baseline CDF and LERF to confirm that the potential risk increases allowed under the RICT Program are acceptable.

6. [Enclosure 6 provides appropriate plant-specific justification for using at power PRA models in shutdown modes to which the RICT Program applies (modes 3 [and 4]).] [Enclosure 6 is not applicable since the RICT Program is not being applied to shutdown modes.]

7. Enclosure 7 provides a discussion of the licensee's programs and procedures that assure the PRA models that support the RICT Program are maintained consistent with the as-built, as-operated plant.

8. Enclosure 8 provides a description of how the baseline PRA model, which calculates average annual risk, is evaluated and modified for use in the Configuration Risk Management Program (CRMP) to assess real-time configuration risk, and describes the scope of, and quality controls applied to, the CRMP

9. Enclosure 9 provides a discussion of how the key assumptions and sources of uncertainty in the PRA models were identified, and how their impact on the RICT Program was assessed and dispositioned.

10. Enclosure 10 provides a description of the implementing programs and procedures regarding the plant staff responsibilities for the RICT Program implementation, including risk management action (RMA) implementation.

11. Enclosure 11 provides a description of the implementation and monitoring program as described in NEI 06-09, Section 2.3.2, Step 7.

12. Enclosure 12 provides a description of the process to identify and provide RMAs.

2.3 Optional Changes and Variations

[LICENSEE is not proposing any changes, variations, or deviations from the TS changes described in the TSTF-505, Revision 1, or the applicable parts of the NRC staff's model safety evaluation dated [DATE]*, except as described in the TSTF letter dated [DATE]*.] [LICENSEE is proposing the following changes or variations from the TS changes described in the TSTF-505, Revision 1, or the applicable parts of the NRC staff's model safety evaluation dated [DATE]. These options were recognized as acceptable changes or variations in TSTF-505 and the NRC staff's model safety evaluation.]

{NOTE: If a change or variation is not identified in TSTF-505, the NRC staff's model safety evaluation, or NEI 06-09 then provide the description and justification.}

[The [PLANT] TS utilize different [numbering][and][titles] than the Standard Technical Specifications on which TSTF-505 was based. Specifically, [describe differences between the plant-specific TS numbering and/or titles (including Required Actions and programs) and the TSTF-505 numbering and titles.] These differences are administrative and do not affect the applicability of TSTF-505 to the [PLANT] TS.]

3.0 REGULATORY SAFETY ANALYSIS

3.1 No Significant Hazards Consideration Determination

[LICENSEE] has evaluated the proposed change to the TS using the criteria in 10 CFR 50.92 and has determined that the proposed change does not involve a significant hazards consideration.

[PLANT, UNIT NOS.] requests adoption of an approved change to the standard technical specifications (STS) and plant-specific technical specifications (TS), to modify the TS requirements related to Completion Times for Required Actions to provide the option to calculate a longer, risk-informed Completion Time. The allowance is described in a new program in Chapter 5, "Administrative Controls," entitled the "Risk-Informed Completion Time Program."

As required by 10 CFR 50.91(a), an analysis of the issue of no significant hazards consideration is presented below:

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

Response: No.

The proposed change permits the extension of Completion Times provided the associated risk is assessed and managed in accordance with the NRC approved Risk-Informed Completion Time Program. The proposed change does not involve a significant increase in the probability of an accident previously evaluated because the change involves no change to the plant or its modes of operation. The proposed change does not increase the consequences of an accident because the design-basis mitigation function of the affected systems is not changed and the consequences of an accident during the extended Completion Time are no different from those during the existing Completion Time.

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

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

Response: No.

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

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

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

Response: No.

The proposed change permit the extension of Completion Times provided risk is assessed and managed in accordance with the NRC approved Risk-Informed Completion Time Program. The proposed change implements 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 TS.

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

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

4.0 ENVIRONMENTAL CONSIDERATION

[LICENSEE] has reviewed the environmental evaluation included in the model safety evaluation published on [DATE] ([ ] FR [ ]) as part of the Notice of Availability. [LICENSEE] has concluded that the NRC staff findings presented in that evaluation are applicable to [PLANT, NO.].

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

ATTACHMENT 2
PROPOSED TECHNICAL SPECIFICATION CHANGES (MARK-UP)

{provided by the licensee}

ATTACHMENT 3
REVISED TECHNICAL SPECIFICATION PAGES

{provided by the licensee}

ATTACHMENT 4
PROPOSED CHANGES TO TECHNICAL SPECIFICATION BASES CHANGES
(MARK-UP) PAGES

{provided by the licensee}

ENCLOSURE 1
LIST OF REVISED REQUIRED ACTIONS TO CORRESPONDING PRA FUNCTIONS

{NOTE: This enclosure provides confirmation that the PRA models include the necessary scope of structures, systems, and components (SSCs) and their functions to address each proposed application of the RICT Program to the TS Required Actions.

TS conditions with insufficient TS operable equipment to meet the specified safety function of the system, are not to be included in the application.

List each TS Required Action to which the RICT Program may be applied and, for each Required Action, describe the following:

- *The TS Required Action;*
- *The corresponding SSC;*
- *Each design basis function of the SSC;*
- *How each design basis function is modeled in the PRA. If one of the design basis functions of an SSC or the SSC is not modeled in the PRA, describe any proposed surrogates and why the proposed surrogate adequately captures the configuration risk; and*
- *The success criteria used in the PRA model compared to the licensing basis criteria. The success criteria should include both train-level and component/parameter level.*

Note that the above description should be at the level of the TS condition/TS Required Action (not at the LCO level only). If the TS condition/ TS Required action covers multiple SSCs or multiple design basis functions, such as in the case ESFAS Instrumentation or Containment Sprays, describe each one individually.

The enclosure should also include clear definitions of any used terms, such as “train,” “division,” “loop,” "subsystem," etc.
~~The licensee lists each TS Required Action to which the RICT Program may be applied and, for each Required Action, describes the corresponding SSC and associated function modeled in the PRA. This is to include the applicable success criteria used in the PRA model compared to the licensing basis criteria, and if applicable a disposition of any differences which justifies use of the PRA success criteria when calculating RICTs. The calculated RICT is provided for the condition to which the RICT applies.~~

~~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. For example, the number and identity of instrumentation and control channels (or functions) required to be PRA functional is highly dependent on the specific plant and associated equipment design.~~
The enclosure should provide a detailed system description of TS 3.8, "Electrical Power Systems," Required Actions if the loading scheme is not uniform (e.g., Train A and B have similar loading, except Train B supplies power to additional SSCs.) Also, provide

a description in Enclosure 12 of representative RMAs for non-uniform trains to demonstrate that the system's safety function is maintained with either train or subsystem operable.}

ENCLOSURE 2
INFORMATION SUPPORTING CONSISTENCY WITH REGULATORY GUIDE 1.200, REVISION 2

{NOTE: This enclosure provides information supporting the licensee evaluation of the technical adequacy of the PRA models supporting the RICT Program based on peer reviews and self-assessments against the relevant PRA standards as endorsed in the current applicable revision of RG 1.200, including consideration of staff clarifications of the standards.

Per NEI 06-09 Rev. 0, capability category II of the standards is applicable; therefore, the licensee identifies those parts of the PRAs that conform to capability categories lower than II, and provides a disposition for the RICT Program. Consistent with RG 1.200 Section 4.2, the licensee identifies and provides a discussion of the resolution of any findings and observations from the peer reviews or self-assessments.

The licensee assessment must also address the clarifications and qualifications found in RG 1.200, either by a separate discussion provided by the licensee, or by confirmation that the peer reviews or self-assessments included consideration of the clarifications and qualifications of the current applicable RG 1.200 revision.

Licensees are strongly encouraged to apply the guidance in Appendix X, "Close out of Facts and Observations," of NEI 05-04, "Process for Performing Internal Events PRA Peer Reviews Using the ASME/ANS PRA Standard, Rev 3, November 2009," NEI 07-12, "Fire Probabilistic Risk Assessment Peer Review Process Guidelines, Rev 1, June 2010," and NEI 12-13, "External Hazards PRA Peer Review Process Guidelines, Rev 0, August 2012," to close PRA peer review findings, as this will make more efficient use of the NRC and industry resources needed to develop and review of the application. }

ENCLOSURE 3
INFORMATION SUPPORTING TECHNICAL ADEQUACY OF PRA MODELS WITHOUT PRA STANDARDS ENDORSED BY REGULATORY GUIDE 1.200, REVISION 2

{NOTE: This enclosure provides information supporting the licensee evaluation of the PRA models supporting the RICT Program for which the relevant PRA standards are not yet endorsed in the current applicable revision of RG 1.200.

RG 1.200 Rev. 2 endorses standards for internal and external events including internal floods and fires, seismic events, and other external hazards for full power conditions. This scope includes the relevant hazard groups applicable to a RICT Program unless the program is to apply to lower modes of operation. In this case, shutdown and transition risk PRA models may apply but are not be covered by an endorsed standard. If applicable, the licensee should provide a detailed description of these PRA models and the basis for its determination of their technical adequacy to support the RICT Program.}

ENCLOSURE 4
INFORMATION SUPPORTING JUSTIFICATION OF EXCLUDING SOURCES OF RISK NOT ADDRESSED BY THE PRA MODELS

{NOTE: This enclosure identifies and provides a justification for excluding sources of risk which are not in the scope of the PRA models applied to the RICT Program.

Exclusion of risk sources determined to be insignificant to the calculation of configuration specific risk, or the use of conservative or bounding analyses for the calculation of RICTs in lieu of realistic PRA models, are described. A qualitative treatment may be sufficient if the licensee demonstrates that those risk contributions would not affect decisions in a RICT Program. The use of conservative bounding calculations in a RICT Program may also be acceptable. However, when the risk associated with a particular hazard group would affect decisions, it is the Commission's policy that risk be assessed using a PRA that meets the staff-endorsed PRA standard.

External hazards screened out from inclusion in RICT calculations should be clearly identified as such, and should be done in a manner consistent with Part 6 of the ASME ANS PRA Standard. The justification should address baseline and configuration-specific considerations.

For external hazards that are not screened out from inclusion in RICT calculations, the licensee may propose a bounding approach to address the hazard. If the bounding approach involves assuming a uniform increase in baseline risk to address the hazard, the licensee will need to address potential RICT-specific impacts by doing one of the following:

- *Demonstrate in the LAR that this approach is bounding for all TS actions included in the LAR, or*

- *Establish a procedure to evaluate the validity of the bounding approach when calculating an RICT that is not demonstrated to be bounded in the LAR, or*

- *For RICTs not demonstrated to be bounded in the LAR, establish a procedure to qualitatively evaluate the impact of the specific external hazard for each RICT when calculated and apply risk management actions as appropriate.* }

ENCLOSURE 5
BASELINE CDF AND LERF

{NOTE: This enclosure provides the plant-specific total CDF and total LERF to confirm that these are less than 10-4/year and 10-5/year, respectively. This assures that the potential risk increases allowed under the RICT Program are consistent with RG 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," Revision 2.

The licensee should provide the totals and the contributions from each hazard group (internal events, fires, floods, seismic, other external).
}

ENCLOSURE 6
JUSTIFICATION OF APPLICATION OF AT-POWER PRA MODELS TO SHUTDOWN MODES

{NOTE: This enclosure provides a justification for the use of existing PRA models during shutdown conditions if the RICT Program is applicable in these shutdown conditions.

The at-power PRA models may potentially be applied to lower modes of operation (hot standby for PWRs, and hot shutdown for PWRs and BWRs) for some Required Actions. If the licensee is not proposing to use the RICT Program in these modes, then this information is not required and this Enclosure should be marked "Not applicable." Otherwise, the licensee provides a detailed justification for those Required Actions proposed to apply the RICT Program in lower modes of operation using the at-power PRA models.}

ENCLOSURE 7
PRA MODEL UPDATE PROCESS

{NOTE: This enclosure describes how the PRA models used in the calculation of completion times is maintained consistent with the as-built, as-operated plant.

The licensee provides a discussion of its programs and procedures to assure the PRA models that support the RICT Program are maintained consistent with the as-built, as-operated plant. This should include a discussion of the timing of significant PRA model changes as described in NEI 06-09, Section 2.3.4, Step 7.}

ENCLOSURE 8
ATTRIBUTES OF THE CRMP MODEL

{NOTE: This enclosure describes how the baseline PRA model, which calculates average annual risk, is evaluated and modified for use in the Configuration Risk Management Program (CRMP) to assess real-time configuration risk, and describes the scope of, and quality controls applied to, the CRMP.

The licensee provides a description of the PRA models and CRMP used to support the RICT Program. The following specific attributes must also be addressed:

- The baseline PRA models assess the average annual risk. However, some risk is not consistent throughout the year or the operating cycle, and the PRA models used for the CRMP need to properly assess the change in risk for the existing plant conditions. For example, success criteria may be different at core beginning of life compared to end of life, or at different times of the year for room cooling systems. The licensee describes these issues and how they are addressed in the CRMP.
- The baseline PRA models may assume some configurations are not allowable, but these assumptions may not be applicable to a CRMP. The licensee describes these issues and how they are addressed in the CRMP.
- The scope of SSCs within the CRMP is provided, along with confirmation that the CRMP tools can be readily applied for each TS Required Action within the scope of the Risk-Informed Completion Time Program. The licensee should also identify and justify SSCs that are not included in the CRMP that could provide accident mitigation functions.
- The licensee describes how consistency of calculated results from the baseline PRA model and the CRMP are verified to assure the CRMP PRA models are consistent with the baseline model and updated when the baseline PRA model is updated.
- The licensee describes the quality requirements applied to the CRMP PRA models.
- The licensee describes the training and qualification programs applicable to personnel responsible for development and use of the CRMP.}

ENCLOSURE 9

KEY ASSUMPTIONS AND SOURCES OF UNCERTAINTY

{NOTE: This enclosure describes the key assumptions and sources of uncertainty in the PRA models, and how their impact on the RICT Program was assessed and dispositioned. Sensitivity analyses for various plant configuration cases under different assumptions should be provided to justify conclusions.}

ENCLOSURE 10
PROGRAM IMPLEMENTATION

{NOTE: This enclosure provides a description of the implementing programs and procedures regarding the plant staff responsibilities for the RICT Program implementation including training of plant personnel, and specifically discusses the decision process for risk management action (RMA) implementation during extended CTs.}

ENCLOSURE 11
MONITORING PROGRAM

{NOTE: This enclosure describes the monitoring program for cumulative risk impacts as described in NEI 06-09, Revision 0, Section 2.3.2, Step 7. This should include a description of how the calculations are made and what actions and thresholds are applied when corrective measures are necessary due to excessive risk increases.}

ENCLOSURE 12
RISK MANAGEMENT ACTION EXAMPLES

{NOTE: This enclosure describes the process for identification of RMAs applicable during extended CTs, and provides examples of RMAs.

Provide example RMAs for TS 3.8 Required Actions. These should be representative examples, such as a long and short RICTs. See the Plant Vogtle April 14, 2017 RAI response (ADAMS Accession No. ML17108A253) for an example.

If the TS-required electrical power loading scheme is not uniform (e.g., Train A and B have similar loading, except Train B supplies power to additional SSCs,) provide a description of representative RMAs for non-uniform trains to ensure that the system's safety function is maintained with either train or subsystem inoperable. }