

**ATTACHMENT 2**

**License Amendment Request**

**Callaway Unit No. 1  
Renewed Facility Operating License NPF-30  
NRC Docket No. 50-483**

**Revise Technical Specifications to Adopt Risk-Informed  
Completion Times TSTF-505, Revision 2, "Provide Risk-Informed  
Extended Completion Times – RITSTF Initiative 4b"**

**Proposed Technical Specification Changes (Mark-Up)**

This Attachment contains 56 pages.

1.3 Completion Times

DESCRIPTION  
(continued)

- a. Must exist concurrent with the first inoperability; and
- b. Must remain inoperable or not within limits after the first inoperability is resolved.

The total Completion Time allowed for completing a Required Action to address the subsequent inoperability shall be limited to the more restrictive of either:

- a. The stated Completion Time, as measured from the initial entry into the Condition, plus an additional 24 hours; or
- b. The stated Completion Time as measured from discovery of the subsequent inoperability.

The above Completion Time extensions do not apply to those Specifications that have exceptions that allow completely separate re-entry into the Condition (for each train, subsystem, component, or variable expressed in the Condition) and separate tracking of Completion Times based on this re-entry. These exceptions are stated in individual Specifications.

The above Completion Time extension does not apply to a Completion Time with a modified "time zero." This modified "time zero" may be expressed as a repetitive time (i.e., "once per 8 hours," where the Completion Time is referenced from a previous completion of the Required Action versus the time of Condition entry) or as a time modified by the phrase "from discovery ... " ~~Example 1.3-3 illustrates one use of this type of Completion Time. The 10 day Completion Time specified for Conditions A and B in Example 1.3-3 may not be extended.~~

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-3 (continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A One Function X train inoperable.	A.1 Restore Function X train to OPERABLE status.	7 days  <b>AND</b>  <del>10 days from discovery of failure to meet the LCO</del>
B. One Function Y train inoperable.	8.1 Restore Function Y train to OPERABLE status.	72 hours  <b>AND</b>  <del>10 days from discovery of failure to meet the LCO</del>
C. One Function X train inoperable.  <b>AND</b>  One Function Y train inoperable.	C.1 Restore Function X train to OPERABLE status.  <b>OR</b>  C.2 Restore Function Y train to OPERABLE status.	72 hours    72 hours

(continued)

1.3 Completion Times

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## EXAMPLES

EXAMPLE 1.3-3 (continued)

When one Function X train and one Function Y train are inoperable, Condition A and Condition B are concurrently applicable. The Completion Times for Condition A and Condition B are tracked separately for each train starting from the time each train was declared inoperable and the Condition was entered. A separate Completion Time is established for Condition C and tracked from the time the second train was declared inoperable (i.e., the time the situation described in Condition C was discovered).

If Required Action C.2 is completed within the specified Completion Time, Conditions B and C are exited. If the Completion Time for Required Action A.1 has not expired, operation may continue in accordance with Condition A. ~~The remaining Completion Time in Condition A is measured from the time the affected train was declared inoperable (i.e., initial entry into Condition A).~~

~~The Completion Times of Conditions A and B are modified by a logical connector with a separate 10-day Completion Time measured from the time it was discovered the LCO was not met. In this example, without the separate Completion Time, it would be possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. The separate Completion Time modified by the phrase "from discovery of failure to meet the LCO" is designed to prevent indefinite continued operation while not meeting the LCO. This Completion Time allows for an exception to the normal "time zero" for beginning the Completion Time "clock". In this instance, the Completion Time "time zero" is specified as commencing at the time the LCO was initially not met, instead of at the time the associated Condition was entered.~~

It is possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. However, doing so would be inconsistent with the basis of the Completion Times. Therefore, there shall be administrative controls to limit the maximum time allowed for any combination of Conditions that result in a single contiguous occurrence of failing to meet the LCO. These administrative controls shall ensure that the Completion Times for those Conditions are not inappropriately extended.

(continued)

1.3 Completion Times

EXAMPLES  
(continued)

EXAMPLE 1.3-7 (continued)

Condition A, provided the Completion Time for Required Action A.2 has not expired.

EXAMPLE 1.3-8

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One subsystem inoperable.	A.1 Restore <u>subsystem</u> to OPERABLE status.	7 days  <u>OR</u> In accordance with the Risk Informed Completion Time Program
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.  <u>AND</u> B.2 Be in MODE 5.	6 hours  36 hours

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 must also be entered.

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.

(continued)

EXAMPLES  
(continued)

EXAMPLE 1.3-8 (continued)

If the 7 day Completion Time clock of Condition A 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 is also entered and the Completion Time clocks for Required Actions B.1 and B.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 is also entered and the Completion Time clocks for Required Actions B.1 and B.2 start. If the inoperable subsystems are restored to OPERABLE status after Condition B is entered, Condition A is exited, and therefore, the Required Actions of Condition B may be terminated.

IMMEDIATE  
COMPLETION  
TIME

When “Immediately” is used as a Completion Time, the Required Action should be pursued without delay and in a controlled manner.

3.3 INSTRUMENTATION

3.3.1 Reactor Trip System (RTS) Instrumentation

LCO 3.3.1 The RTS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.1-1.

ACTIONS

-----NOTE-----  
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more required channels or trains inoperable.	A.1 Enter the Condition referenced in Table 3.3.1-1 for the channel(s) or train(s).	Immediately
B. One Manual Reactor Trip channel inoperable.	B.1 Restore channel to OPERABLE status.  <u>OR</u> B.2 Be in MODE 3	48 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program <u>54 hours</u>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>D. One Power Range Neutron Flux – High channel inoperable.</p>	<p>-----NOTE----- The inoperable channel may be bypassed for up to 12 hours for surveillance testing and setpoint adjustment of other channels. -----</p>	<p>12 hours from discovery of THERMAL POWER &gt; 75% RTP <u>AND</u> Once per 12 hours thereafter</p>
	<p>D.1.1 -----NOTE----- Only required when the Power Range Neutron Flux input to QPTR is inoperable -----</p>	
	<p>Perform SR 3.2.4.2.</p> <p><u>AND</u></p>	
	<p>D.1.2 Place channel in trip.</p>	<p>72 hours</p> <p><u>OR</u> In accordance with the Risk Informed Completion Time Program</p>
	<p><u>OR</u> <del>D.2 Be in MODE 3.</del></p>	<p><del>78 hours</del></p>

(continued)



ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. One channel inoperable	<p>-----NOTE----- The inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels. -----</p>	<p>72 hours</p> <p><u>OR</u></p> <p>In accordance with the Risk Informed Completion Time Program</p>
	E.1 Place channel in trip.	
	<p><u>OR</u></p> <p><del>E.2</del> Be in MODE 3</p>	
F. One Intermediate Range Neutron Flux channel inoperable.	F.1 Reduce THERMAL POWER to < P-6.	24 hours
	<p><u>OR</u></p> <p>F.2 Increase THERMAL POWER to &gt; P-10</p>	24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>G. Two Intermediate Range Neutron Flux channels inoperable.</p>	<p>G.1 -----NOTE-----                      Limited boron concentration changes associated with RCS inventory control or limited plant temperature changes are allowed.                      -----                      Suspend operations involving positive reactivity additions.</p> <p><u>AND</u></p> <p>G.2 Reduce the THERMAL POWER to &lt; P-6.</p>	<p>Immediately</p> <p>2 hours</p>
<p><del>H. Not used.</del></p>		
<p><del>H</del> One Source Range Neutron Flux channel inoperable.</p>	<p><del>H</del> 1 -----NOTE-----                      Limited boron concentration changes associated with RCS inventory control or limited plant temperature changes are allowed.                      -----                      Suspend operations involving positive reactivity additions.</p>	<p>Immediately</p>
<p><del>J</del> Two Source Range Neutron Flux channels inoperable.</p>	<p><del>J</del> 1 Open reactor trip breakers (RTBs).</p>	<p>Immediately</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p><b>KJ.</b> One Source Range Neutron Flux channel inoperable.</p>	<p><b>KJ.1</b> Restore channel to OPERABLE status.</p>	<p>48 hours</p>
	<p><u>OR</u></p> <p><b>KJ.2.1</b> Initiate action to fully insert all rods.</p>	<p>48 hours</p>
	<p><u>AND</u></p> <p><b>KJ.2.2</b> Place the Rod Control System in a condition incapable of rod withdrawal.</p>	<p>49 hours</p>
<p><del>L. Not used.</del></p>		
<p><b>MK.</b> One channel inoperable.</p>	<p>-----NOTE----- The inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels. -----</p>	
	<p><b>MK.1</b> Place channel in trip.</p>	<p>72 hours</p> <p><u>OR</u> In accordance with the Risk Informed Completion Time Program</p>
	<p><u>OR</u></p> <p><del>M.2 Reduce THERMAL POWER to &lt; P-7.</del></p>	<p><del>78 hours</del></p>
<p>L. Required Action and associated Completion Time of Condition K not met.</p>	<p>L.1 Reduce THERMAL POWER to &lt; P-7.</p>	<p>6 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<del>N. Not used.</del>		
<p><b>OM</b> One Low Fluid Oil Pressure Turbine Trip channel inoperable.</p>	<p>-----NOTE----- --- The inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels. ----- --- <b>OM</b> 1 Place channel in trip.</p>	<p>72 hours  <b>OR</b> In accordance with the Risk Informed Completion Time Program</p>
<p><b>PN</b> One or more Turbine Stop Valve Closure Turbine Trip channel(s) inoperable.</p>	<p><b>PN</b> 1 Place channel(s) in trip.</p>	<p>72 hours</p>
<p><b>O.</b> Required Action and associated Completion Time of Conditions M or N not met.</p>	<p><b>O.1</b> Reduce THERMAL POWER to &lt; P-9.</p>	<p>76 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p><b>QP</b>. One train inoperable</p>	<p>-----NOTE----- One train may be bypassed for up to 4 hours for surveillance testing provided the other train is OPERABLE. -----</p> <p><b>QP</b> 1 Restore train to OPERABLE status.</p> <p><b>OR</b></p> <p><del>Q.2 Be in MODE 3.</del></p>	<p>24 hours</p> <p><b>OR</b> In accordance with the Risk Informed Completion Time Program</p> <p><b>OR</b></p> <p><del>30 hours</del></p>
<p><b>RQ</b> One RTB train inoperable.</p>	<p>-----NOTE----- One train may be bypassed for up to 4 hours for surveillance testing provided the other train is OPERABLE</p> <p><b>RQ</b> 1 Restore train to OPERABLE status.</p> <p><b>OR</b></p> <p><del>R.2 Be in MODE 3.</del></p>	<p>24 hours</p> <p><b>OR</b> In accordance with the Risk Informed Completion Time Program</p> <p><b>OR</b></p> <p><del>30 hours</del></p>
<p><b>SR</b>. One or more required channel(s) inoperable.</p>	<p><b>SR</b> 1 Verify interlock is in required state for existing unit conditions.</p> <p><b>OR</b></p> <p><del>S.2 Be in MODE 3.</del></p>	<p>1 hour</p> <p><b>OR</b></p> <p><del>7 hours</del></p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p><b>TS.</b> One or more required channel(s) inoperable.</p>	<p><b>TS</b> 1 Verify interlock is in required state for existing unit conditions.</p>	<p>1 hour</p>
	<p><del>OR</del> <del>T.2 Be in MODE 2.</del></p>	<p><del>7 hours</del></p>
<p><b>T.</b> Required Action and associated Completion Time of Condition S not met.</p>	<p>T.1 Be in MODE 2.</p>	<p>6 hours</p>
<p><b>U.</b> One trip mechanism inoperable for one RTB.</p>	<p>U.1 Restore <b>inoperable</b> trip mechanism to OPERABLE status.</p>	<p>48 hours <del>OR</del> In accordance with the Risk Informed Completion Time Program</p>
	<p><del>OR</del> <del>U.2 Be in MODE 3.</del></p>	<p><del>54 hours</del></p>
<p><b>V.</b> Required Action and associated Completion Time of Conditions B, D, E, P, Q, R, or U not met.</p>	<p>V.1 Be in MODE 3.</p>	<p>6 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p><span style="border: 1px solid red; padding: 2px;">VW</span> One channel inoperable.</p>	<p>-----NOTE-----                      The inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels.                      -----</p> <p><span style="border: 1px solid red; padding: 2px;">VW</span>.1 Place channel in trip.</p> <p><u>OR</u></p> <p><span style="border: 1px solid red; padding: 2px;">VW</span>.2.1 Be in MODE 2 with <math>k_{eff} &lt; 1.0</math>.</p> <p><u>AND</u></p> <p><span style="border: 1px solid red; padding: 2px;">VW</span>.2.2.1 Initiate action to fully insert all rods.</p> <p><u>AND</u></p> <p><span style="border: 1px solid red; padding: 2px;">VW</span>.2.2.2 Initiate action to place the Rod Control System in a condition incapable of rod withdrawal.</p> <p><u>OR</u></p> <p><span style="border: 1px solid red; padding: 2px;">VW</span>.2.3 Initiate action to borate the RCS to greater than the all rods out (ARO) critical boron concentration.</p>	<p></p> <p>72 hours</p> <p>78 hours</p> <p>78 hours</p> <p>78 hours</p> <p>78 hours</p>
<p><span style="border: 1px solid red; padding: 2px;">W.</span> <del>Not used.</del></p>		

(continued)

TABLE 3.3.1-1 (page 1 of 8)  
Reactor Trip System Instrumentation

	FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE <sup>(a)</sup>
1.	Manual Reactor Trip	1,2	2	B	SR 3.3.1.14	NA
		3 <sup>(b)</sup> , 4 <sup>(b)</sup> , 5 <sup>(b)</sup>	2	C	SR 3.3.1.14	NA
2.	Power Range Neutron Flux					
	a. High	1,2	4	D	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.7 SR 3.3.1.11 SR 3.3.1.16	≤112.3% RTP
	b. Low	1 <sup>(c)</sup> , 2 <sup>(f)</sup>	4	<span style="border: 1px solid red; padding: 2px;">VAV</span>	SR 3.3.1.1 SR 3.3.1.8 SR 3.3.1.11 SR 3.3.1.16	≤28.3% RTP
		2 <sup>(h)</sup> , 3 <sup>(i)</sup>	4	Y, Z	SR 3.3.1.1 SR 3.3.1.8 SR 3.3.1.11 SR 3.3.1.16	≤28.3% RTP
3.	Power Range Neutron Flux Rate– High positive Rate	1,2	4	E	SR 3.3.1.7 SR 3.3.1.11 SR 3.3.1.16	≤ 6.3% RTP with time constant ≥ 2 sec
4.	Intermediate Range Neutron Flux	1 <sup>(c)</sup> , 2 <sup>(d)</sup>	2	F, G	SR 3.3.1.1 SR 3.3.1.8 SR 3.3.1.11	≤35.3% RTP

- (a) The Allowable Value defines the limiting safety system setting except for Trip Functions 14.a and 14.b (the Nominal Trip Setpoint defines the limiting safety system setting for these Trip Functions). See the Bases for the Nominal Trip Setpoints.
- (b) With Rod Control System capable of rod withdrawal or one or more rods not fully inserted.
- (c) Below the P-10 (Power Range Neutron Flux) interlock.
- (d) Above the P-6 (Intermediate Range Neutron Flux) interlock.
- (f) With  $k_{eff} \geq 1.0$
- (h) With  $k_{eff} < 1.0$ , and all RCS cold leg temperatures  $\geq 500^\circ\text{F}$ , and RCS boron concentration  $\leq$  the ARO critical boron concentration, and Rod Control System capable of rod withdrawal or one or more rods not fully inserted.
- (i) With all RCS cold leg temperatures  $\geq 500^\circ\text{F}$ , and RCS boron concentration  $\leq$  the ARO critical boron concentration, and Rod Control System capable of rod withdrawal or one or more rods not fully inserted



TABLE 3.3.1-1 (page 2 of 8)  
Reactor Trip System Instrumentation

	FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE <sup>(a)</sup>
5.	Source Range Neutron Flux	2 <sup>(e)</sup>	2	I, J, H, I	SR 3.3.1.1 SR 3.3.1.8 SR 3.3.1.11	≤ 1.6 E5 cps
		3 <sup>(b)</sup> , 4 <sup>(b)</sup> , 5 <sup>(b)</sup>	2	J, K, I, J	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.11	≤ 1.6 E5 cps
6.	Overtemperature ΔT	1,2	4	E	SR 3.3.1.1 SR 3.3.1.3 SR 3.3.1.6 SR 3.3.1.7 SR 3.3.1.10 SR 3.3.1.16	Refer to Note 1 (at the end of this Table)
7.	Overpower ΔT	1,2	4	E	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.10 SR 3.3.1.16	Refer to Note 2 (at the end of this Table)
8.	Pressurizer Pressure					
a.	Low	1 <sup>(g)</sup>	4	MK	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.10 SR 3.3.1.16	≥ 1874 psig
b.	High	1,2	4	E	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.10 SR 3.3.1.16	≤ 2393 psig

- (a) The Allowable Value defines the limiting safety system setting except for Trip Functions 14.a and 14.b (the Nominal Trip Setpoint defines the limiting safety system setting for these Trip Functions). See the Bases for the Nominal Trip Setpoints.
- (b) With Rod Control System capable of rod withdrawal or one or more rods not fully inserted.
- (e) Below the P-6 (Intermediate Range Neutron Flux) interlock.
- (g) Above the P-7 (Low Power Reactor Trip Block) interlock.

TABLE 3.3.1-1 (page 3 of 8)  
Reactor Trip System Instrumentation

	FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE <sup>a</sup>
9.	Pressurizer Water Level - High	1 <sup>(g)</sup>	3	MK	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.10	≤ 93.8% of instrument span
10.	Reactor Coolant Flow - Low	1 <sup>(g)</sup>	3 per loop	MK	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.10 SR 3.3.1.16	≥ 88.85 of indicated loop flow
11.	Not Used					
12.	Undervoltage RCPs	1 <sup>(g)</sup>	2/bus	MK	SR 3.3.1.9 SR 3.3.1.10 SR 3.3.1.16	≥ 10105 Vac
13.	Underfrequency RCPs	1 <sup>(g)</sup>	2/bus	MK	SR 3.3.1.9 SR 3.3.1.10 SR 3.3.1.16	≥ 57.1 Hz
14.	Steam Generator (SG) Water Level Low-Low <sup>(l)</sup>					
a.	Steam Generator Water level Low-Low (Adverse Containment Environment)	1, 2	4 per SG	E	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.10 SR 3.3.1.16	≥ 20.6% <sup>(q)</sup> of Narrow Range Instrument Span

(a) The Allowable Value defines the limiting safety system setting except for Trip Functions 14.a and 14.b (the Nominal Trip Setpoint defines the limiting safety system setting for these Trip Functions). See the Bases for the Nominal Trip Setpoints.

(g) Above the P-7 (Low Power Reactor Trip Block ) interlock.

(l) The applicable MODES for these channels in Table 3.3.2-1 are most restrictive.

(m) Not Used.

(q)

1. If the as-found instrument channel setpoint is conservative with respect to the Allowable Value, but outside its as-found test acceptance criteria band, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service. If the as-found instrument channel setpoint is not conservative with respect to the Allowable Value, the channel shall be declared inoperable.
2. The instrument channel setpoint shall be reset to a value that is within the as-left setpoint tolerance band on either side of the Nominal Trip Setpoint, or to a value that is more conservative than the Nominal Trip Setpoint; otherwise, the channel shall be declared inoperable. The Nominal Trip Setpoints and the methodology used to determine the as-found test acceptance criteria band and the as-left set-point tolerance band shall be specified in the Bases

TABLE 3.3.1-1 (page 5 of 8)  
Reactor Trip System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE <sup>(a)</sup>
16. Turbine Trip					
a. Low Fluid Oil Pressure	1 <sup>(f)</sup>	3	OM	SR 3.3.1.10 SR 3.3.1.15	≥ 539.42 psig
b. Turbine Stop Valve Closure	1 <sup>(f)</sup>	4	PN	SR 3.3.1.10 SR 3.3.1.15	≥ 1% open
17. Safety Injection (SI) Input from Engineered Safety Feature Actuation System (ESFAS)	1, 2	2 trains	QP	SR 3.3.1.14	NA
18. Reactor Trip System Interlocks					
a. Intermediate Range Neutron Flux, P-6	2 <sup>(e)</sup>	2	SR	SR 3.3.1.11 SR 3.3.1.13	≥ 6E-11 amp
b. Low Power Reactor Trips Block, P-7	1	1 per train	FS	SR 3.3.1.5	NA
c. Power Range Neutron Flux, P-8	1	4	FS	SR 3.3.1.11 SR 3.3.1.13	≥ 51.3% RTP
d. Power Range Neutron Flux, P-9	1	4	FS	SR 3.3.1.11 SR 3.3.1.13	≤ 53.3% RTP

- a. The Allowable Value defines the limiting safety system setting except for Trip Functions 14.a and 14.b (the Nominal Trip Setpoint defines the limiting safety system setting for these Trip Functions). See the Bases for the Nominal Trip Setpoints.
- e. Below the P-6 (Intermediate Range Neutron Flux) interlock.
- j. Above the P-9 (Power Range Neutron Flux) interlock.

TABLE 3.3.1-1 (page 6 of 8)  
Reactor Trip System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE <sup>(a)</sup>
18. Reactor Trip System Interlocks					
e. Power Range Neutron Flux, P-10	1, 2	4	SR	SR 3.3.1.11 SR 3.3.1.13	≥ 6.7% RTP and ≤12.4% RTP
f. Turbine Impulse Pressure, P-13	1	2	TS	SR 3.3.1.10 SR 3.3.1.13	≤ 12.4% turbine power
19. Reactor Trip Breakers (RTBs) <sup>(k)</sup>	1, 2	2 trains	RQ	SR 3.3.1.14	NA
	3 <sup>(b)</sup> , 4 <sup>(b)</sup> , 5 <sup>(b)</sup>	2 trains	C	SR 3.3.1.14	NA
20. Reactor Trip Breaker Undervoltage and Shunt Trip Mechanisms <sup>(k)</sup>	1, 2	1 each per RTB	U	SR 3.3.1.4	NA
	3 <sup>(b)</sup> , 4 <sup>(b)</sup> , 5 <sup>(b)</sup>	1 each per RTB	C	SR 3.3.1.4	NA
21. Automatic Trip Logic	1, 2	2 trains	QP	SR 3.3.1.5	NA
	3 <sup>(b)</sup> , 4 <sup>(b)</sup> , 5 <sup>(b)</sup>	2 trains	C	SR 3.3.1.5	NA

a. The Allowable Value defines the limiting safety system setting except for Trip Functions 14.a and 14.b (the Nominal Trip Setpoint defines the limiting safety system setting for these Trip Functions). See the Bases for the Nominal Trip Setpoints.

b. With Rod Control System capable of rod withdrawal or one or more rods not fully inserted.

k. Including any reactor trip bypass breakers that are racked in and closed for bypassing an RTB.

3.3 INSTRUMENTATION

3.3.2 Engineered Safety Feature Actuation System (ESFAS) Instrumentation

LCO 3.3.2            The ESFAS instrumentation for each Function in Table 3.3.2-1 shall be OPERABLE.

APPLICABILITY:    According to Table 3.3.2-1.

ACTIONS

-----NOTE-----  
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more required channels or trains inoperable.	A.1 Enter the Condition referenced in Table 3.3.2-1 for the channel(s) or train(s).	Immediately
B. One channel or train inoperable.	B.1 Restore channel or train to OPERABLE status.	48 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
	<u>OR</u> B.2.1 <del>Be in MODE 3.</del> <u>AND</u> B.2.2 <del>Be in MODE 5.</del>	54 hours  84 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One train inoperable.	<p>-----NOTE----- One train may be bypassed for up to 4 hours for surveillance testing provided the other train is OPERABLE. -----</p>	Immediately
	<p>C.1 -----NOTE----- Only required if Function 3.a.(2) is inoperable. -----  Place and maintain containment purge supply and exhaust valves in closed position.</p>	
	<p><u>AND</u>  C.2 Restore train to OPERABLE status.</p>	
	<p><u>OR</u> C.3.1 Be in MODE 3. <u>AND</u> C.3.2 Be in MODE 5.</p>	
		<p>24 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program</p>
		<p>30 hours  60 hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>D. One channel inoperable.</p>	<p>-----NOTE----- The inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels. -----</p>	<p>72 hours</p> <p><u>OR</u></p> <p>-----NOTE----- Not applicable to Function 9.b ----- In accordance with the Risk Informed Completion Time Program</p>
	<p>D.1 Place channel in trip.</p>	
	<p><u>OR</u></p> <p>D.2.1 <del>Be in MODE 3.</del></p> <p><u>AND</u></p> <p>D.2.2 <del>Be in MODE 4.</del></p>	<p>78 hours</p> <p>84 hours</p>
	<p>E. One Containment Pressure channel inoperable.</p>	<p>-----NOTE----- One additional channel may be bypassed for up to 12 hours for surveillance testing. -----</p>
<p>E.1 Place channel in bypass</p>		
<p><u>OR</u></p> <p>E.2.1 <del>Be in MODE 3.</del></p> <p>E.2.2 <del>Be in MODE 4.</del></p>		<p>78 hours</p> <p>84 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. One channel or train inoperable.	F.1 Restore channel or train to OPERABLE status.	48 hours  <u>OR</u>  -----NOTE----- Not applicable to Function 8.a  ----- In accordance with the Risk Informed Completion Time Program
	<u>OR</u> F.2.1 <del>Be in MODE 3.</del>	54 hours
	<u>AND</u> F.2.2 <del>Be in MODE 4.</del>	60 hours
G. One train inoperable.	-----NOTE----- One train may be bypassed for up to 4 hours for surveillance testing provided the other train is OPERABLE. -----	
	G.1 Restore train to OPERABLE status.	24 hours  <u>OR</u> In accordance with the Risk Informed Completion Time Program
	<u>OR</u> G.2.1 <del>Be in MODE 3.</del> <u>AND</u> G.2.2 <del>Be in MODE 4.</del>	30 hours  36 hours

(continued)



ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>H. One or more trains inoperable.</p>	<p>-----NOTE----- One train may be bypassed for up to 4 hours for surveillance testing provided the other train is OPERABLE. -----</p> <p>H.1 Declare associated Pressurizer PORV(s) inoperable.</p>	<p>Immediately</p>
<p>I. One channel inoperable.</p>	<p>-----NOTE----- The inoperable channel may be bypassed for up to 12 hour for surveillance testing of other channels. -----</p> <p>I.1 Place channel in trip.</p>	<p>72 hours</p> <p><u>OR</u> In accordance with the Risk Informed Completion Time Program</p> <hr/> <p><u>OR</u> <del>I.2 Be in MODE 3.</del> 78 hours</p>
<p>J. One channel inoperable.</p>	<p>-----NOTE----- The inoperable channel may be bypassed for up to 2 hours for surveillance testing of other channels. -----</p> <p>J.1 Place channel in trip.</p>	<p>24 hours</p> <p><u>OR</u> In accordance with the Risk Informed Completion Time Program</p> <hr/> <p><u>OR</u> <del>J.2 Be in MODE 3.</del> 30 hours</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME	
<p>K. One channel inoperable.</p>	<p>-----NOTE----- An inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels. -----</p>	<p>72 hours <b>OR</b> In accordance with the Risk Informed Completion Time Program</p>	
	<p>K.1 Restore channel to OPERABLE status.</p>		
	<p><b>OR</b> <del>K.2.1 Be in MODE 3.</del></p>		<p>78 hours</p>
	<p><b>AND</b> <del>K.2.2 Be in MODE 5.</del></p>		<p>108 hours</p>
<p>L. One or more required channel(s) inoperable.</p>	<p>L.1 Verify interlock is in required state for existing unit condition.</p>	<p>1 hour</p>	
	<p><b>OR</b> <del>L.2.1 Be in MODE 3.</del></p>		<p>7 hours</p>
	<p><b>OR</b> <del>L.2.2 Be in MODE 4.</del></p>		<p>13 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>M. Two channels inoperable.</p> <p><u>AND</u></p> <p>AFW actuation on Trip of all Main Feedwater Pumps maintained from one actuation train.</p>	<p>M.1 Place channels in trip.</p> <p><u>OR</u></p> <p><del>M.2 Be in MODE 3.</del></p>	<p>24 hours</p> <p><del>30 hours</del></p>
<p>N. One or more Containment Pressure – Environmental Allowance Modifier channel(s) inoperable.</p>	<p>N.1 Place channel(s) in trip.</p> <p><u>OR</u></p> <p><del>N.2.1 Be in MODE 3.</del></p> <p><u>AND</u></p> <p><del>N.2.2 Be in MODE 4.</del></p>	<p>72 hours</p> <p><del>78 hours</del></p> <p><del>84 hours</del></p>
<p>O. One channel inoperable.</p>	<p>O.1 Place channel in trip.</p> <p><u>AND</u></p> <p>O.2 Restore channel to OPERABLE status.</p>	<p>24 hours</p> <p>During performance of the next required COT</p>
<p>P. One or more channel(s) inoperable.</p>	<p>P.1 Declare associated auxiliary feedwater pump(s) inoperable.</p> <p><u>AND</u></p> <p>P.2 Declare associated steam generator blowdown and sample line isolation valve(s) inoperable.</p>	<p>Immediately</p> <p>Immediately</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>Q. One train inoperable.</p>	<p>-----NOTE----- One train may be bypassed for up to 2 hours for surveillance testing provided the other train is OPERABLE. -----</p> <p>Q.1 Restore train to OPERABLE status.</p> <p><u>OR</u></p> <p>Q.2.1 <del>Be in MODE 3.</del></p> <p><u>AND</u></p> <p>Q.2.2 <del>Be in MODE 4.</del></p>	<p>24 hours</p> <p><u>OR</u> In accordance with the Risk Informed Completion Time Program</p> <p><u>OR</u></p> <p>Q.2.1 <del>Be in MODE 3.</del> 30 hours</p> <p><u>AND</u></p> <p>Q.2.2 <del>Be in MODE 4.</del> 36 hours</p>
<p>R. One or both train(s) inoperable.</p>	<p>R.1 Restore train(s) to OPERABLE status.</p> <p><u>OR</u></p> <p>R.2.1 <del>Be in MODE 3.</del></p> <p><u>AND</u></p> <p>R.2.2 <del>Be in MODE 4.</del></p>	<p>48 hours</p> <p><u>OR</u> -----NOTE----- Not applicable when both trains are inoperable ----- In accordance with the Risk Informed Completion Time Program</p> <p><u>OR</u></p> <p>R.2.1 <del>Be in MODE 3.</del> 54 hours</p> <p><u>AND</u></p> <p>R.2.2 <del>Be in MODE 4.</del> 60 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>S. One train inoperable</p>	<p>-----NOTE----- One train may be bypassed for up to 4 hours for surveillance testing provided the other train is OPERABLE. -----</p> <p>S.1 Restore train to OPERABLE status.</p> <p><u>OR</u></p> <p>S.2.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>S.2.2 Be in MODE 4.</p>	<p>6 hours</p> <p><u>OR</u> In accordance with the Risk Informed Completion Time Program</p> <p>12 hours</p> <p>18 hours</p>
<p>T. Required Action and associated Completion Time of Conditions B, C, or K not met.</p>	<p>T.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>T.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>
<p>U. Required Action and associated Completion Time of Conditions D, E, F, G, L, N, Q, R, or S not met.</p>	<p>U.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>U.2 Be in MODE 4.</p>	<p>6 hours</p> <p>12 hours</p>
<p>V. Required Action and associated Completion Time of Conditions I, J, or M not met.</p>	<p>V.1 Be in MODE 3.</p>	<p>6 hours</p>

3.3 INSTRUMENTATION

3.3.5 Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation

LCO 3.3.5 Four channels per 4.16-kV NB bus of the loss of voltage Function and four channels per 4.16-kV NB bus of the degraded voltage Function shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4,  
When associated DG is required to be OPERABLE by LCO 3.8.2, "AC  
← Sources – Shutdown."

ACTIONS

-----NOTE-----  
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one channel per bus inoperable.	A.1 -----NOTE----- The inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels. ----- Place channel in trip.	6 hours  <b>OR</b> In accordance with the Risk Informed Completion Time Program
B. One or more Functions with two or more channels per bus inoperable.  <u>OR</u> Required Action and associated Completion Time of Condition A not met.	B.1 Declare associated load shedder and emergency load sequencer (LSELS) inoperable.	Immediately

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.11 Pressurizer Power Operated Relief Valves (PORVs)

LCO 3.4.11            Each PORV and associated block valve shall be OPERABLE.  
 APPLICABILITY:    MODES 1, 2, and 3.

ACTIONS

-----NOTE-----  
 Separate Condition entry is allowed for each PORV and each block valve.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more PORVs inoperable solely due to excessive seat leakage.	A.1      Close and maintain power to associated block valve.	1 hour
B. One PORV inoperable for reasons other than excessive seat leakage.	B.1      Close associated block valve.	1 hour
	<u>AND</u>	
	B.2      Remove power from associated block valve.	1 hour
	<u>AND</u>	
	B.3      Restore PORV to OPERABLE status.	72 hours
		<u>OR</u> In accordance with the Risk Informed Completion Time Program

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. One block valve inoperable.</p>	<p>-----NOTE----- Required Actions do not apply when block valve is inoperable solely as a result of complying with Required Actions B.2 or E.2. -----</p> <p>C.1 Place associated PORV in manual control.</p> <p><u>AND</u></p> <p>C.2 Restore block valve to OPERABLE status.</p>	<p>1 hour</p> <p>72 hours</p> <p><b>OR</b> In accordance with the Risk Informed Completion Time Program</p>
<p>D. Required Action and associated Completion Time of Condition A, B, or C not met.</p>	<p>D.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>D.2 Be in MODE 4.</p>	<p>6 hours</p> <p>12 hours</p>
<p>E. Two PORVs inoperable for reasons other than excessive seat leakage.</p>	<p>E.1 Close associated block valves.</p> <p><u>AND</u></p> <p>E.2 Remove power from associated block valves.</p> <p><u>AND</u></p> <p>E.3 Be in MODE 3.</p> <p><u>AND</u></p> <p>E.4 Be in MODE 4.</p>	<p>1 hour</p> <p>1 hour</p> <p>6 hours</p> <p>12 hours</p>

(continued)



3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.2 ECCS - Operating

LCO 3.5.2 Two ECCS trains shall be OPERABLE.

-----NOTES-----

1. In Mode 3, both safety injection (SI) pump flow paths may be isolated by closing the isolation valves for up to 2 hours to perform pressure isolation valve testing per SR 3.4.14.1.
2. Operation in MODE 3 with ECCS pumps made incapable of injecting, pursuant to LCO 3.4.12, "Cold Overpressure Mitigation System," is allowed for up to 4 hours or until the temperature of all RCS cold legs exceeds 375°F, whichever comes first.

-----

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more trains inoperable. <u>AND</u> At least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available.	A.1 Restore train(s) to OPERABLE status.	72 hours <div style="border: 1px solid red; padding: 5px; color: red; font-weight: bold;">                         OR                          In accordance with the Risk Informed Completion Time Program                     </div>
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 4.	12 hours

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	<p>B.3</p> <p>-----NOTE-----</p> <p>Air lock doors in high radiation areas may be verified locked closed by administrative means.</p> <p>-----</p> <p>Verify an OPERABLE door is locked closed in the affected air lock.</p>	<p>Once per 31 days</p>
C. One or more containment air locks inoperable for reasons other than Condition A or B.	<p>C.1</p> <p>Initiate action to evaluate overall containment leakage rate per LCO 3.6.1.</p> <p><u>AND</u></p> <p>C.2</p> <p>Verify a door is closed in the affected air lock.</p> <p><u>AND</u></p> <p>C.3</p> <p>Restore air lock to OPERABLE status.</p>	<p>Immediately</p> <p>1 hour</p> <p>24 hours</p> <p><u>OR</u></p> <p>In accordance with the Risk Informed Completion Time Program</p>
D. Required Action and associated Completion Time not met.	<p>D.1</p> <p>Be in MODE 3.</p> <p><u>AND</u></p> <p>D.2</p> <p>Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>

3.6 CONTAINMENT SYSTEMS

3.6.3 Containment Isolation Valves

LCO 3.6.3 Each containment isolation valve shall be OPERABLE.

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

ACTIONS

- NOTE-----
1. Penetration flow path(s) except for containment shutdown purge valve flow paths may be unisolated intermittently under administrative controls.
  2. Separate Condition entry is allowed for each penetration flow path.
  3. Enter applicable Conditions and Required Actions for systems made inoperable by containment isolation valves.
  4. Enter applicable Conditions and Required Actions of LCO 3.6.1, "Containment," when isolation valve leakage results in exceeding the overall containment leakage rate acceptance criteria.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE-----</p> <p>Only applicable to penetration flow paths with two containment isolation valves.</p> <p>-----</p> <p>One or more penetration flow paths with one containment isolation valve inoperable except for containment purge valve leakage not within limit.</p>	<p>A.1</p> <p>Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.</p> <p><u>AND</u></p>	<p>4 hours</p> <div style="border: 1px solid red; padding: 5px; color: red;"> <p><u>OR</u></p> <p>In accordance with the Risk Informed Completion Time Program</p> </div> <p>(continued)</p>

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<p>A.2</p> <p>-----NOTE-----</p> <ol style="list-style-type: none"> <li>1. Isolation devices in high radiation areas may be verified by use of administrative means.</li> <li>2. Isolation devices that are locked, sealed or otherwise secured may be verified by administrative means.</li> </ol> <p>-----</p> <p>Verify the affected penetration flow path is isolated.</p>	<p>Once per 31 days following isolation for isolation devices outside containment</p> <p><u>AND</u></p> <p>Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment</p>

(continued)



3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Spray and Cooling Systems

LCO 3.6.6 Two containment spray trains and two containment cooling trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One containment spray train inoperable.	A.1 Restore containment spray train to OPERABLE status.	72 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program <u>AND</u> 10 days from discovery of failure to meet the LCO
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	84 hours
C. One containment cooling train inoperable.	C.1 Restore containment cooling train to OPERABLE status.	7 days <u>OR</u> In accordance with the Risk Informed Completion Time Program <u>AND</u> 10 days from discovery of failure to meet the LCO

(continued)

3.7 PLANT SYSTEMS

3.7.2 Main Steam Isolation Valves (MSIVs), Main Steam Isolation Valve Bypass Valves (MSIVBVs), and Main Steam Low Point Drain Isolation Valves (MSLPDIVs)

LCO 3.7.2 The MSIV and its associated actuator trains, the MSIVBV, and the MSLPDIV in each of the four main steam lines shall be OPERABLE.

APPLICABILITY: For the MSIV and its associated actuator trains in each main stream line:

MODE 1,  
MODE 2 and 3 except when the MSIV is closed and de-activated.

For the MSIVBV in each main steam line:

MODES 1, 2, and 3 except when:

- a. MSIVBV is closed and de-activated, or
- b. MSIVBV is closed and isolated by a closed manual valve, or
- c. MSIVBV is isolated by two closed manual valves.

For the MSLPDIV in each main steam line:

MODES 1, 2, and 3 except when:

- a. MSLPDIV is closed and de-activated, or
- b. MSLPDIV is closed and isolated by a closed manual valve, or
- c. MSLPDIV is isolated by two closed manual valves.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One MSIV actuator train inoperable.	A.1 Restore MSIV actuator train to OPERABLE status.	72 hours <b>OR</b> In accordance with the Risk Informed Completion Time Program

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Two MSIV actuator trains inoperable for different MSIVs when the inoperable actuator trains are <u>not</u> in the same separation group.	B.1 Restore one MSIV actuator train to OPERABLE status.	24 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
C. Two MSIV actuator trains inoperable when the inoperable actuator trains <u>are</u> in the same separation group.	C.1 Restore one MSIV actuator train to OPERABLE status.	4 hours
D. Two actuator trains for one MSIV inoperable.	D.1 Declare the affected MSIV inoperable.	Immediately
E. Three or more MSIV actuator trains inoperable.  <u>OR</u> Required Action and associated Completion Time of Condition A, B, or C not met.	E.1 Declare each affected MSIV inoperable.	Immediately
F. One MSIV inoperable in MODE 1.	F.1 Restore MSIV to OPERABLE status.	8 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
G. Required Action and associated Completion Time of Condition F not met.	G.1 Be in MODE 2.	6 hours

(continued)



3.7 PLANT SYSTEMS

3.7.4 Atmospheric Steam Dump Valves (ASDs)

LCO 3.7.4 Four ASD lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One required ASD line inoperable for reasons other than excessive ASD seat leakage.</p>	<p>A.1 Restore required ASD line to OPERABLE status.</p>	<p>7 days</p> <p><b>OR</b></p> <p>-----NOTE----- Not applicable when more than 2 ASD lines are inoperable for any reason -----</p> <p>In accordance with the Risk Informed Completion Time Program</p>
<p>B. Two required ASD lines inoperable for reasons other than excessive ASD seat leakage.</p>	<p>B.1 Restore all but one required ASD line to OPERABLE status.</p>	<p>72 hours</p> <p><b>OR</b></p> <p>-----NOTE----- Not applicable when more than 2 ASD lines are inoperable for any reason -----</p> <p>In accordance with the Risk Informed Completion Time Program</p>
<p>C. Three or more required ASD lines inoperable for reasons other than excessive ASD seat leakage.</p>	<p>C.1 Restore all but two required ASD lines to OPERABLE status.</p>	<p>24 hours</p>

(continued)

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

APPLICABILITY: MODE 1, 2, and 3.

ACTIONS

-----NOTE-----  
LCO 3.0.4.b is not applicable when entering MODE 1.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One stream supply to turbine driven AFW pump inoperable.	A.1 Restore steam supply to OPERABLE status.	7 days <u>OR</u> In accordance with the Risk Informed Completion Time Program <u>AND</u> 40 days from discovery of failure to meet the LCO
B. One ESW supply to turbine driven AFW pump inoperable.	B.1 Restore ESW supply to OPERABLE status.	72 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program <u>AND</u> 40 days from discovery of failure to meet the LCO

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. One AFW train inoperable for reasons other than Condition A or B.</p>	<p>C.1 Restore AFW train to OPERABLE status.</p>	<p>72 hours* <u>OR</u> In accordance with the Risk Informed Completion Time Program <u>AND</u> <del>40 days from discovery of failure to meet the LCO</del></p>
<p>D. Required Action and associated Completion Time for Condition A, B, or C not met.</p> <p><u>OR</u></p> <p>Two AFW trains inoperable.</p>	<p>D.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>D.2 Be in MODE 4.</p>	<p>6 hours</p> <p>12 hours</p>
<p>E. Three AFW trains inoperable.</p>	<p>E.1 -----NOTE-----</p> <p>LCO 3.0.3 and all other LCO Required Actions requiring MODE changes are suspended until one AFW train is restored to OPERABLE status.</p> <p>-----</p> <p>Initiate action to restore one AFW train to OPERABLE status.</p>	<p>Immediately</p>

~~\*With the exception that the Completion Time associated with the Condition C entry on 2/3/04 for the turbine driven auxiliary feedwater pump has been extended on a one-time only basis to 144 hours. At the time a formal cause of the inoperability is determined, Condition D will be entered immediately.~~

3.7 PLANT SYSTEMS

3.7.7 Component Cooling Water (CCW) System

LCO 3.7.7 Two CCW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CCW train inoperable.	<p>A.1</p> <p>-----NOTE-----</p> <p>Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops – MODE 4," for residual heat removal loops made inoperable by CCW.</p> <p>-----</p> <p>Restore CCW train to OPERABLE status.</p>	<p>72 hours</p> <p><b>OR</b></p> <p>In accordance with the Risk Informed Completion Time Program</p>
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	B.2 Be in MODE 5.	36 hours

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3.7 PLANT SYSTEMS

3.7.8 Essential Service Water System (ESW)

LCO 3.7.8 Two ESW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ESW train inoperable.	<p>A.1</p> <p style="text-align: center;">-----NOTE-----</p> <ol style="list-style-type: none"> <li>1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources-Operating," for emergency diesel generator made inoperable by ESW.</li> <li>2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops – MODE 4," for residual heat removal loops made inoperable by ESW.</li> </ol> <p style="text-align: center;">-----</p>	(continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ESW train inoperable.	A.1 (continued)  Restore ESW train to OPERABLE status.	<div style="border: 1px solid red; padding: 5px; margin-bottom: 5px;"> <p style="text-align: center;"><del>NOTE</del></p> <p>A one time Completion Time of 14 days is allowed to support planned replacement of ESW 'B' train piping prior to April 30, 2009.</p> </div> <p>72 hours</p> <div style="border: 1px solid red; padding: 5px;"> <p><u>OR</u></p> <p>In accordance with the Risk Informed Completion Time Program</p> </div>
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3.  <u>AND</u>  B.2 Be in Mode 5	6 hours          36 hours

3.7 PLANT SYSTEMS

3.7.9 Ultimate Heat Sink (UHS)

LCO 3.7.9                    The UHS shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One cooling tower train inoperable.	A.1            Restore cooling tower train to OPERABLE status.	72 hours  <u>OR</u>  In accordance with the Risk Informed Completion Time Program
B. Required Action and associated Completion Time of Condition A not met.  <u>OR</u>  UHS inoperable for reasons other than Condition A.	B.1            Be in MODE 3.  <u>AND</u>  B.2            Be in MODE 5.	6 hours    36 hours

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One offsite circuit inoperable. (continued)</p>	<p>Declare required feature(s) with no offsite power available inoperable when its redundant required feature(s) is inoperable.</p> <p><u>AND</u></p> <p>A.3 Restore offsite circuit to OPERABLE status.</p>	<p>24 hours from discovery of no offsite power to one train concurrent with inoperability of redundant required feature(s)</p> <p>72 hours</p> <div style="border: 1px solid red; padding: 5px;"> <p><u>OR</u></p> <p>In accordance with the Risk Informed Completion Time Program</p> <p><u>AND</u></p> <p><del>6 days from discovery of failure to meet LCO</del></p> </div>
<p>B. One DG inoperable.</p>	<p>B.1 Perform SR 3.8.1.1 for the offsite circuit(s).</p> <p><u>AND</u></p> <p>B.2 -----NOTE----- In MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature. -----</p>	<p>1 hour</p> <p><u>AND</u></p> <p>Once per 8 hours thereafter</p> <p>(continued)</p>



ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One DG inoperable. (continued)</p>	<p>B.4 Restore DG to OPERABLE status.</p>	<p><del>NOTE</del> A one-time Completion Time of 14 days is allowed to support planned replacement of ESW 'B' train piping prior to April 30, 2009</p> <p>72 hours</p> <p><u>OR</u> In accordance with the Risk Informed Completion Time Program</p> <p><u>AND</u> 6 days from discovery of failure to meet LCO</p>
<p>C. Two offsite circuits inoperable.</p>	<p>C.1</p> <p>-----NOTE----- In MODES 1, 2, and 3, the turbine driven auxiliary feedwater pump is considered a required redundant feature. -----</p> <p>Declare required feature(s) inoperable when its redundant required feature(s) is inoperable.</p> <p><u>AND</u></p>	<p>12 hours from discovery of Condition C concurrent with inoperability of redundant required features</p> <p>(continued)</p>

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Two offsite circuits inoperable. (continued)	C.2 Restore one offsite circuit to OPERABLE status.	24 hours  <b>OR</b> In accordance with the Risk Informed Completion Time Program
D. One offsite circuit inoperable.  <u>AND</u>  One DG inoperable.	<p>-----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems – Operating," when Condition D is entered with no AC power source to any train. -----</p> <p>D.1 Restore offsite circuit to OPERABLE status.</p> <p><u>OR</u></p> <p>D.2 Restore DG to OPERABLE status.</p>	<p>12 hours</p> <p><b>OR</b> In accordance with the Risk Informed Completion Time Program</p> <p>12 hours</p> <p><b>OR</b> In accordance with the Risk Informed Completion Time Program</p>
E. Two DGs inoperable.	E.1 Restore one DG to OPERABLE status.	2 hours

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. One required LSELS inoperable.	F.1  Declare the affected DG and offsite circuit inoperable.	Immediately
	<u>AND</u> F.2  Restore required LSELS to OPERABLE status.	12 hours  <u>OR</u> In accordance with the Risk Informed Completion Time Program
G. Required Action and associated Completion Time of Condition A, B, C, D, E, or F not met.	G.1  Be in MODE 3.	6 hours
	<u>AND</u> G.2  Be in MODE 5.	36 hours
H. Three or more AC sources inoperable.	H.1  Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.1.1    Verify correct breaker alignment and indicated power availability for each required offsite circuit.	In accordance with the Surveillance Frequency Control Program

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources - Operating

LCO 3.8.4            The Train A and Train B DC electrical power subsystems shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One DC electrical power subsystem inoperable.	A.1            Restore DC electrical power subsystem to OPERABLE status.	2 hours  <div style="border: 1px solid red; padding: 5px; color: red;">OR In accordance with the Risk Informed Completion Time Program</div>
B. Require Action and Associated Completion Time not met.	B.1            Be in MODE 3.	6 hours
	<u>AND</u> B.2            Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.4.1    Verify battery terminal voltage is $\geq 130.2$ V on float charge.	In accordance with the Surveillance Frequency Control Program

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Inverters - Operating

LCO 3.8.7                The required Train A and Train B inverters shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required inverter inoperable.	<p>A.1</p> <p>-----NOTE-----</p> <p>Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems – Operating" with any vital bus de-energized.</p> <p>-----</p> <p>Restore inverter to OPERABLE status.</p>	<p>24 hours</p> <p><b>OR</b></p> <p>In accordance with the Risk Informed Completion Time Program</p>
B. Required Action and associated Completion Time not met.	B.1                Be in MODE 3.	6 hours
	<u>AND</u>	
	B.2                Be in MODE 5.	36 hours

3.8 ELECTRICAL POWER SYSTEMS

3.8.9 Distribution Systems – Operating

LCO 3.8.9 Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One AC electrical power distribution subsystem inoperable.	A.1 Restore AC electrical power distribution subsystem to OPERABLE status.	<p>8 hours</p> <p><u>OR</u></p> <p>In accordance with the Risk Informed Completion Time Program</p> <p><u>AND</u></p> <p><del>16 hours from discovery of failure to meet LCO</del></p>
B. One AC vital bus subsystem inoperable.	B.1 Restore AC vital bus subsystem to OPERABLE status.	<p>2 hours</p> <p><u>OR</u></p> <p>In accordance with the Risk Informed Completion Time Program</p> <p><u>AND</u></p> <p><del>16 hours from discovery of failure to meet LCO</del></p>

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One DC electrical power distribution subsystem inoperable.	C.1 Restore DC electrical power distribution subsystem to OPERABLE status.	2 hours  <b>OR</b> In accordance with the Risk Informed Completion Time Program <b>AND</b> <del>16 hours from discovery of failure to meet LCO</del>
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3.	6 hours
	<u>AND</u> D.2 Be in MODE 5.	36 hours
E. Two trains with inoperable distribution subsystems that result in a loss of safety function.	E.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.9.1 Verify correct breaker alignments and voltage to required AC, DC, and AC vital bus electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program

## 5.5 Programs and Manuals

### 5.5.19 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;
- b. A RICT may only be utilized in MODE 1 and 2;
- c. When a RICT is being used, any change to the plant configuration, as defined in NEI 06-09-A, Appendix A, must be considered for the effect on the RICT.
  1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
  2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
  3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- d. For emergent conditions, if the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:
  1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or
  2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.
- e. The risk assessment approaches and methods shall be acceptable to the NRC. The plant PRA shall be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant, as specified in Regulatory Guide 1.200, Revision 2. Methods to assess the risk from extending the Completion Times must be PRA methods used to support this license amendment, or other methods approved by the NRC for generic use; and any change in the PRA methods to assess risk that are outside these approval boundaries require prior NRC approval.