



FEB 25 2017

L-2017-007

10 CFR 50.90

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

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

Supplement to License Amendment Request to Adopt Risk Informed Completion Times
TSTF-505, Revision 1, "Provide Risk-Informed Extended Completion Times – RITSTF
Initiative 4b"

References:

1. Florida Power & Light Company letter L-2014-242, "Application to Adopt TSTF-505, Revision 1, Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4B," December 5, 2014 (ML14353A016)
2. NRC E-mail "Request for Additional Information - St. Lucie TSTF-505 EICB - MF5372 & MF 5373," March 28, 2016 (ML16089A006)
3. NRC E-mail "Request for Additional Information - St. Lucie TSTF-505 APLA - MF5372 & MF5373," April 13, 2016 (ML16105A456)
4. NRC E-mail "Request for Additional Information - St. Lucie TSTF 505 APLA - MF5372 & MF5373," May 27, 2016 (ML16152A187)
5. Florida Power & Light Company letter L-2016-114, "Response to Request for Additional Information Regarding License Amendment Request to Adopt TSTF-505, 'Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4B'," July 8, 2016 (ML16193A659)
6. Florida Power & Light Company letter L-2016-135, "Second Response to Request for Additional Information Regarding License Amendment Request to Adopt TSTF-505, 'Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4B'," July 22, 2016 (ML16208A061)

In Reference 1, as supplemented by References 5 and 6, Florida Power & Light Company (FPL) submitted a license amendment request (LAR) for St. Lucie Units 1 and 2. The proposed amendment would revise the Technical Specifications (TS) to implement TSTF-505, Revision 1, "Provide Risk-Informed Extended Completion Times RITSTF [Risk Informed TSTF] Initiative 4b." This letter provides a supplement to the LAR to address NRC staff concerns with TSTF-505 to support approval of the requested license amendment.

Florida Power & Light Company

6501 S. Ocean Drive, Jensen Beach, FL 34957

Consistent with TSTF-505, the LAR added new TS Actions for configurations that currently would require entry into TS 3.0.3. These new Actions provide one hour or a time determined in accordance with the Risk Informed Completion Time (RICT) Program to restore at least one train of the inoperable system. TSTF-505 allows applying a RICT under emergent conditions that result in loss of a specified safety function or inoperability of all required trains of a system required to be operable provided one or more of the trains is probabilistic risk assessment (PRA) functional. The current St. Lucie TS also include Actions for conditions that represent a loss of function, and the LAR proposed adding a RICT to these Actions.

In a letter to the Technical Specifications Task Force on November 15, 2016, and during a public meeting on December 13, 2016, the NRC staff discussed its concerns with TSTF-505. The staff determined that reductions in safety margin and defense-in-depth have not been adequately evaluated for the loss of function conditions permitted in TSTF-505. As a result, the NRC has suspended approval of TSTF-505 until the staff's concerns are resolved. At the same time, the staff stated that it intends to continue its review of in-house applications requesting adoption of RICT programs.

One of the industry-proposed options to address the staff's concerns in future LARs is to exclude the use of the loss of function provisions currently provided in TSTF-505. FPL is using this approach in its supplement to the LAR by removing the loss of function provisions. This supplement revises the LAR to remove the new TS Actions for configurations that currently would require entry into TS 3.0.3. Similarly, the supplement removes the application of RICTs to existing Actions that represent a loss of function. In addition, the new Risk Informed Completion Time Program added to the administrative section of the TS is modified to exclude use of a RICT for any configuration that represents loss of a specified safety function or inoperability of all required trains of a system required to be operable. For the reasons discussed above, this supplement removes the proposed RICTs for which there is no consensus between staff and industry. This change is intended to allow the staff to move forward with a timely review and approval of the requested amendment.

Attachments 1 and 2 to this letter provide a table that displays the relevant TS changes previously proposed in References 1, 5, and 6 and the modifications to the proposed changes. Attachments 3 and 4 provide a complete markup of the Unit 1 and Unit 2 TS, respectively, including the modifications to the proposed changes presented in Attachments 1 and 2. These markups supersede the TS markups provided in References 1, 5, and 6. Revised TS pages for Units 1 and 2 are provided in Attachments 5 and 6, respectively, and supersede the corresponding pages provided in References 1, 5, and 6. Attachments 7 and 8 provide proposed changes to the TS Bases for Units 1 and 2, respectively, and supersede the corresponding Bases changes provided in References 1, 5, and 6.

This supplement does not alter the conclusions in Reference 1 that the changes do not involve a significant hazards consideration pursuant to 10 CFR 50.92, and there are no significant environmental impacts associated with the changes.

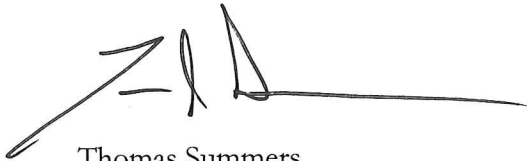
No new or revised commitments are included in this letter.

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

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

Executed on February

Sincerely,

A handwritten signature in black ink, appearing to read 'T. Summers', with a long horizontal line extending to the right.

Thomas Summers
Regional Vice President - Southern Region
St. Lucie Plant

Enclosure

cc: NRC Regional Administrator, Region II
NRC Senior Resident Inspector
NRC Project Manager
Ms. Cindy Becker, Florida Department of Health

ATTACHMENT 1

St. Lucie Unit 1

Summary of Modifications to the Proposed Changes to the Technical Specifications

St. Lucie Unit 1
Summary of Modifications to the Proposed Changes to the Technical Specifications

Technical Specification	Previously Proposed Change	Modification to Proposed Change
Table 3.3-3 ESFAS	Add new Action 10C with a risk informed completion time (RICT) for the condition that the number of operable channels is two or more less than the minimum channels operable requirement	Proposed change is deleted
	Add new Action 8.b with a RICT for the condition that two channels are inoperable	Proposed change is deleted
	Add new Action 11.b with a RICT for the condition that two auxiliary feedwater instruments channels are inoperable	Proposed change is deleted
TS 3.5.1 Safety Injection Tanks	Revise Action a to apply RICT: a. With one SIT inoperable due to boron concentration not within limits, or due to an inability to verify the required water volume or nitrogen cover-pressure, restore the inoperable SIT to OPERABLE status with 72 hours <i>or in accordance with the Risk Informed Completion Time Program</i> ; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. Add new Action c with a RICT for two or more safety injection tanks inoperable	Proposed changes are deleted.
TS 3.5.4 Refueling Water Tank	Revise Action to apply RICT: With the refueling water tank inoperable, restore the tank to OPERABLE status within 1 hour <i>or in accordance with the Risk Informed Completion Time Program</i> , or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.	Proposed change is deleted
TS 3.6.2.1 Containment Spray and Cooling Systems	Revise Action e to apply RICTs: e. With two containment spray trains inoperable or any combination of three or more trains inoperable, restore containment spray trains and containment cooling trains to OPERABLE status within 1 hour <i>or in accordance with the Risk Informed Completion Time Program</i> , or be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours.	Proposed change is deleted and TS markup is updated to Amendment 228.

St. Lucie Unit 1
Summary of Modifications to the Proposed Changes to the Technical Specifications

Technical Specification	Previously Proposed Change	Modification to Proposed Change
TS 3.7.1.2 Auxiliary Feedwater System	Add new Action with a RICT for the condition that two auxiliary feedwater pumps are inoperable	Proposed change is deleted
TS 3.7.1.3 Condensate Storage Tank	Revise Action to apply RICT: With the condensate storage tank inoperable, restore the condensate storage tank to OPERABLE status within 4 hours <i>or in accordance with the Risk Informed Completion Time Program</i> , or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.	Proposed change is deleted
TS 3.7.1.5 Main Steam Isolation Valves (MSIV)	Add new Action b with a RICT for the condition that two MSIVs are inoperable in Mode 1	Proposed change is deleted
TS 3.7.3.1 Component Cooling Water System	Add new Action b with a RICT for the condition that two component cooling water loops are inoperable	Proposed change is deleted
TS 3.7.4.1 Intake Cooling Water System	Add new Action b with a RICT for the condition that two intake cooling water loops are inoperable	Proposed change is deleted

St. Lucie Unit 1
Summary of Modifications to the Proposed Changes to the Technical Specifications

Technical Specification	Previously Proposed Change	Modification to Proposed Change
TS 3.8.1.1 AC Sources	<p>Revise Action e to apply RICT:</p> <p>With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; restore one of the inoperable diesel generators to OPERABLE status within 2 hours <i>or in accordance with the Risk Informed Completion Time Program</i>, or be in the at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.</p>	Proposed change is deleted
	Add new Action f with a RICT for the condition that three or more AC sources are inoperable	Proposed change is deleted
TS 3.8.2.3 D.C. Distribution - Operating	Add new Action c with a RICT for the condition that two DC electrical sources are inoperable.	Proposed change is deleted

St. Lucie Unit 1
Summary of Modifications to the Proposed Changes to the Technical Specifications

Technical Specification	Previously Proposed Change	Modification to Proposed Change
TS 6.8.4	<p>q. <u>Risk Informed Completion Time Program</u></p> <p>This program provides controls to calculate a Risk Informed Completion Time (RICT) and must be implemented in accordance with NEI 06-09, "Risk-Informed Technical Specification Initiative 4b: Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0-A, November 2006. The program shall include the following:</p> <ul style="list-style-type: none"> a. The RICT may not exceed 30 days; b. A RICT may only be utilized in MODES 1 and 2; c. When a RICT is being used, any plant configuration change within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT. <ul style="list-style-type: none"> 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, not to exceed 24 hours, is permitted for emergent conditions which represent a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE if one or more of the trains are considered "PRA functional" as defined in Section 2.3.1 of NEI 06-09. 	<p>Item d is revised to remove the term "voluntary"</p> <p>Item e is deleted</p>

ATTACHMENT 2

St. Lucie Unit 2

Summary of Modifications to the Proposed Changes to the Technical Specifications

St. Lucie Unit 2
Summary of Modifications to the Proposed Changes to the Technical Specifications

Technical Specification	Previously Proposed Change	Modification to Proposed Change
Table 3.3-3 ESFAS	Add new Action 12.b with a risk informed completion time (RICT) for the condition that two channels are inoperable	Proposed change is deleted
	Add new Action 15.b with a RICT for the condition that two channels are inoperable	Proposed change is deleted
	Add new Action 18.d for the condition that the number of operable channels is two or more less than the minimum channels operable requirement	Proposed change is deleted
TS 3.5.1 Safety Injection Tanks	Revise Action a to apply RICT: b. With one SIT inoperable due to boron concentration not within limits, or due to an inability to verify the required water volume or nitrogen cover-pressure, restore the inoperable SIT to OPERABLE status within 72 hours <i>or in accordance with the Risk Informed Completion Time Program</i> ; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. Add new Action c with a RICT for two or more safety injection tanks inoperable	Proposed changes are deleted.
TS 3.5.4 Refueling Water Tank	Revise Action to apply RICT: With the refueling water tank inoperable, restore the tank to OPERABLE status within 1 hour <i>or in accordance with the Risk Informed Completion Time Program</i> , or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.	Proposed change is deleted
TS 3.6.2.1 Containment Spray and Cooling Systems	Revise Action e to apply RICTs: f. With two containment spray trains inoperable or any combination of three or more trains inoperable, restore containment spray trains and containment cooling trains to OPERABLE status within 1 hour <i>or in accordance with the Risk Informed Completion Time Program</i> , or be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours.	Proposed change is deleted and TS markup is updated to Amendment 178.

St. Lucie Unit 2
Summary of Modifications to the Proposed Changes to the Technical Specifications

Technical Specification	Previously Proposed Change	Modification to Proposed Change
TS 3.7.1.2 Auxiliary Feedwater System	Add new Action with a RICT for the condition that two auxiliary feedwater pumps are inoperable	Proposed change is deleted
TS 3.7.1.3 Condensate Storage Tank	Revise Action to apply RICT: With the condensate storage tank inoperable, within 4 hours <i>or in accordance with the Risk Informed Completion Time Program</i> , restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.	Proposed change is deleted
TS 3.7.1.5 Main Steam Isolation Valves (MSIV)	Add new Action b with a RICT for the condition that two MSIVs are inoperable in Mode 1	Proposed change is deleted
TS 3.7.3 Component Cooling Water System	Add new Action b with a RICT for the condition that two component cooling water loops are inoperable	Proposed change is deleted
TS 3.7.4 Intake Cooling Water System	Add new Action b with a RICT for the condition that two intake cooling water loops are inoperable	Proposed change is deleted

St. Lucie Unit 2
Summary of Modifications to the Proposed Changes to the Technical Specifications

Technical Specification	Previously Proposed Change	Modification to Proposed Change
TS 3.8.1.1 AC Sources	<p>Revise Action e to apply RICT:</p> <p>With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; restore one of the inoperable diesel generators to OPERABLE status within 2 hours <i>or in accordance with the Risk Informed Completion Time Program</i>, or be in the at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.</p>	Proposed change is deleted
	Add new Action f with a RICT for the condition that three or more AC sources are inoperable	Proposed change is deleted
TS 3.8.2.1 D.C. Distribution - Operating	Add new Action d with a RICT for the condition that more than one AC vital panel either not energized from its associated inverter or inverters not connected to associated DC buses	Proposed change is deleted

St. Lucie Unit 2
Summary of Modifications to the Proposed Changes to the Technical Specifications

Technical Specification	Previously Proposed Change	Modification to Proposed Change
TS 6.8.4	<p>r. <u>Risk Informed Completion Time Program</u></p> <p>This program provides controls to calculate a Risk Informed Completion Time (RICT) and must be implemented in accordance with NEI 06-09, "Risk-Informed Technical Specification Initiative 4b: Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0-A, November 2006. The program shall include the following:</p> <ul style="list-style-type: none"> a. The RICT may not exceed 30 days; b. A RICT may only be utilized in MODES 1 and 2; c. When a RICT is being used, any plant configuration change within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT. <ul style="list-style-type: none"> 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, not to exceed 24 hours, is permitted for emergent conditions which represent a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE if one or more of the trains are considered "PRA functional" as defined in Section 2.3.1 of NEI 06-09. 	<p>Item d is revised to remove the term "voluntary"</p> <p>Item e is deleted</p>

ATTACHMENT 3

St. Lucie Unit 1
Markup of the Technical Specification Pages

INSERT 1

or in accordance with the Risk Informed Completion Time Program,

INSERT 2

or in accordance with the Risk Informed Completion Time Program

INSERT 3

q. 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, "Risk-Informed Technical Specifications Initiative 4b: Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0-A, November 2006. The program shall include the following:

- a. The RICT may not exceed 30 days;
- b. A RICT may only be utilized in MODES 1 and 2;
- c. When a RICT is being used, any plant configuration change within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT.
 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
 3. Revising the RICT is not required If the plant configuration change would lower plant risk and would result in a longer RICT.
- d. Use of a RICT is not permitted for 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.

TABLE 3.3-1 (Continued)

TABLE NOTATION

* With the protective system trip breakers in the closed position and the CEA drive system capable of CEA withdrawal.

- (a) Trip may be bypassed below 1% of RATED THERMAL POWER; bypass shall be automatically removed when Wide Range Logarithmic Neutron Flux power is $\geq 1\%$ of RATED THERMAL POWER.
- (b) Trip may be manually bypassed below 685 psig; bypass shall be automatically removed at or above 685 psig.
- (c) Trip may be bypassed below 15% of RATED THERMAL POWER; bypass shall be automatically removed when Power Range Neutron Flux power is $\geq 15\%$ of RATED THERMAL POWER.
- (d) Trip may be bypassed below $10^{-4}\%$ and above 15% of RATED THERMAL POWER; bypass shall be automatically removed when Wide Range Logarithmic Neutron Flux power is $\geq 10^{-4}\%$ and Power Range Neutron Flux power $\leq 15\%$ of RATED THERMAL POWER.
- (e) Deleted.
- (f) There shall be at least two decades of overlap between the Wide Range Logarithmic Neutron Flux Monitoring Channels and the Power Range Neutron Flux Monitoring Channels.

INSERT 1

ACTION STATEMENTS

- ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours and/or open the protective system trip breakers.
- ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. For the purposes of testing and maintenance, the inoperable channel may be bypassed for up to 48 hours from time of initial loss of OPERABILITY; however, the inoperable channel shall then be either restored to OPERABLE status or placed in the tripped condition.

TABLE 3.3-3
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
1. SAFETY INJECTION (SIAS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	8
b. Containment Pressure – High	4	2	3	1, 2, 3	9 ✕
c. Pressurizer Pressure – Low	4	2	3	1, 2, 3(a)	9 ✕
2. CONTAINMENT SPRAY (CSAS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	8
b. Containment Pressure – High-High	4	2(b)	3	1, 2, 3	8 10A, 10B 10a, 10b, 10c ✕
3. CONTAINMENT ISOLATION (CIS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	8
b. Containment Pressure – High	4	2	3	1, 2, 3	9 ✕
c. Containment Radiation – High	4	2	3	1, 2, 3, 4	9 ✕
d. SIAS	----- (See Functional Unit 1 above) -----				
4. MAIN STEAM LINE ISOLATION (MSIS)					
a. Manual (Trip Buttons)	2/steam generator	1/steam generator	2/operating steam generator	1, 2, 3, 4	8
b. Steam Generator Pressure – Low	4/steam generator	2/steam generator	3/steam generator	1, 2, 3(c)	9 ✕

TABLE 3.3-3 (Continued)
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. CONTAINMENT SUMP RECIRCULATION (RAS)					
a. Manual RAS (Trip Buttons)	2	1	2	1, 2, 3, 4	8
b. Refueling Water Tank - Low	4	2	3	1, 2, 3	13
6. LOSS OF POWER					
a. 4.16 kv Emergency Bus Under- voltage (Loss of Voltage)	2/Bus	2/Bus	1/Bus	1, 2, 3	12
b. 4.16 kv Emergency Bus Under- voltage (Degraded Voltage)	2/Bus	2/Bus	1/Bus	1, 2, 3	12
c. 480 V Emergency Bus Under- voltage (Degraded Voltage)	2/Bus	2/Bus	1/Bus	1, 2, 3	12
7. AUXILIARY FEEDWATER (AFAS)					
a. Manual (Trip Buttons)	4/SG	2/SG	4/SG	1, 2, 3	11
b. Automatic Actuation Logic	4/SG	2/SG	3/SG	1, 2, 3	11
c. SG Level (1A/1B) - Low	4/SG	2/SG	3/SG	1, 2, 3	14a, 14b, 14e
8. AUXILIARY FEEDWATER ISOLATION					
a. SG 1A – SG 1B Differential Pressure	4/SG	2/SG	3/SG	1, 2, 3	14a, 14b, 14e
b. Feedwater Header 1A – 1B Differential Pressure	4/SG	2/SG	3/SG	1, 2, 3	14a, 14e



TABLE 3.3-3 (Continued)

TABLE NOTATION

- (a) Trip function may be bypassed in this MODE when pressurizer pressure is < 1725 psia; bypass shall be automatically removed when pressurizer pressure is ≥ 1725 psia.
- (b) An SIAS signal is first necessary to enable CSAS logic.
- (c) Trip function may be bypassed in this MODE below 685 psig; bypass shall be automatically removed at or above 685 psig.

ACTION STATEMENTS

ACTION 8 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

INSERT 1

- ACTION 9 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. For the purposes of testing and maintenance, the inoperable channel may be bypassed for up to 48 hours from time of initial loss of OPERABILITY; however, the inoperable channel shall then be either restored to OPERABLE status or placed in the tripped condition.
 - b. Within one hour, all functional units receiving an input from the inoperable channel are also bypassed or tripped.
 - c. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 48 hours while performing tests and maintenance on that channel provided the other inoperable channel is placed in the tripped condition.

TABLE 3.3-3 (continued)

TABLE NOTATION

10A
↓

~~ACTION 10~~ - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in the bypassed or tripped condition and the Minimum Channels OPERABLE requirement is demonstrated within 1 hour. If the inoperable channel can not be restored to OPERABLE status within 48 hours, then place the inoperable channel in the tripped condition.
- b. Within 1 hour, all functional units receiving an input from the inoperable channel are also bypassed or tripped.

ACTION 10B -

- c. With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, operation may proceed provided one of the inoperable channels has been bypassed and the other inoperable channel has been placed in the tripped condition within 1 hour. Restore one of the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

INSERT 1

ACTION 11 - With the number of OPERABLE channels one less than the Total Number of Channels, ~~restore the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.~~ LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

ACTION 12 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed until performance of the next required CHANNEL FUNCTIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

TABLE 3.3-3 (continued)

TABLE NOTATION

ACTION 13 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

INSERT 2

- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. If OPERABILITY can not be restored within 48 hours, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 2 hours while performing tests and maintenance on that channel provided the other inoperable channel is placed in the tripped condition.

ACTION 14 - With the number of channels OPERABLE one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. If an inoperable SG level channel can not be restored to OPERABLE status within 48 hours, then AFAS-1 or AFAS-2 as applicable in the inoperable channel shall be placed in the bypassed condition. If an inoperable SG DP or FW Header DP channel can not be restored to OPERABLE status within 48 hours, then both AFAS-1 and AFAS-2 in the inoperable channel shall be placed in the bypassed condition. The channel shall be returned to OPERABLE status no later than during the next COLD SHUTDOWN.
- b. Within 1 hour, all functional units receiving an input from the inoperable channel are also bypassed or tripped.

ACTION 15

- With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, operation may proceed provided one of the inoperable channels has been bypassed and the other inoperable channel has been placed in the tripped condition within 1 hour. Restore one of the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

INSERT 1

REACTOR COOLANT SYSTEM

SAFETY VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

- 3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting of ≥ 2422.8 psig and ≤ 2560.3 psig. /

APPLICABILITY: MODES 1, 2, 3, and 4 with all RCS cold leg temperatures $> 281^{\circ}\text{F}$. /

ACTION:

INSERT 1

- a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the next 6 hours. /
- b. With two or more pressurizer code safety valves inoperable, be in HOT STANDBY within 6 hours and in HOT SHUTDOWN with all RCS cold leg temperatures $\leq 281^{\circ}\text{F}$ within the next 6 hours. /

SURVEILLANCE REQUIREMENTS

- 4.4.3 Verify each pressurizer code safety valves is OPERABLE in accordance with the Inservice Testing Program. Following testing, as-left lift settings shall be within $\pm 1\%$ of 2500 psia. /

REACTOR COOLANT SYSTEM

PORV BLOCK VALVES

LIMITING CONDITION FOR OPERATION

3.4.12 Each Power Operated Relief Valve (PORV) Block Valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

INSERT 2

ACTION:

With one or more block valve(s) inoperable, within 1 hour either restore the block valve(s) to OPERABLE status or close the block valve(s) and remove power from the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.12 Each block valve shall be demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program by operating the valve through one complete cycle of full travel.

✓

3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

SAFETY INJECTION TANKS (SIT)

LIMITING CONDITION FOR OPERATION

3.5.1 Each reactor coolant system safety injection tank shall be OPERABLE with:

- a. The isolation valve open,
- b. Between 1090 and 1170 cubic feet of borated water,
- c. A minimum boron concentration of 1900 ppm, and
- d. A nitrogen cover-pressure of between 230 and 280 psig.

APPLICABILITY: MODES 1, 2 and 3, with pressurizer pressure \geq 1750 psia

ACTION:

- a. With one SIT inoperable due to boron concentration not within limits, or due to an inability to verify the required water volume or nitrogen cover-pressure, restore the inoperable SIT to OPERABLE status with 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With one SIT inoperable due to reasons other than those stated in ACTION-a, restore the inoperable SIT to OPERABLE status within 24 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

INSERT 2

SURVEILLANCE REQUIREMENTS

4.5.1 Each safety injection tank shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by:
 1. Verifying that the borated water volume and nitrogen cover-pressure in the tanks are within their limits, and
 2. Verifying that each safety injection tank isolation valve is open.

~~* With pressurizer pressure \geq 1750 psia.~~

EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS - OPERATING

LIMITING CONDITION FOR OPERATION

- 3.5.2 Two independent ECCS subsystems shall be OPERABLE with each subsystem comprised of:
- One OPERABLE high-pressure safety injection (HPSI) pump,
 - One OPERABLE low-pressure safety injection pump,
 - An independent OPERABLE flow path capable of taking suction from the refueling water tank on a Safety Injection Actuation Signal and automatically transferring suction to the containment sump on a Recirculation Actuation Signal, and
 - One OPERABLE charging pump*.

APPLICABILITY: MODES 1, 2 and 3** with pressurizer pressure ≥ 1750 psia.

ACTION:

INSERT 1

- With one ECCS subsystem inoperable only because its associated LPSI train is inoperable, restore the inoperable subsystem to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
 - With one ECCS subsystem inoperable for reasons other than condition a.1., restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

INSERT 1

- In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

* ~~One ECCS subsystem charging pump shall satisfy the flow path requirements of Specification 3.1.2.2.a or 3.1.2.2.d. The second ECCS subsystem charging pump shall satisfy the flow path requirements of Specification 3.1.2.2.b or 3.1.2.2.e.~~

** ~~With pressurizer pressure ≥ 1750 psia.~~

NOTE

One ECCS subsystem charging pump shall satisfy the flow path requirements of Specification 3.1.2.2.a or 3.1.2.2.d. The second ECCS subsystem charging pump shall satisfy the flow path requirements of Specification 3.1.2.2.b or 3.1.2.2.e.

CONTAINMENT SYSTEMS

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE with:

- a. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and
- b. An overall air lock leakage rate in accordance with the Containment Leakage Rate Testing Program.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one containment air lock door inoperable:

1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed.
2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be closed at least once per 31 days.

in the affected air lock(s) and

3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

one or both

lock(s)

b. With the containment air lock inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

INSERT 2

SURVEILLANCE REQUIREMENTS

4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

NOTE

If the inner air lock door is inoperable, passage through the OPERABLE outer air lock door is permitted to effect repairs to the inoperable inner air lock door. No more than one air lock door shall be open at any time.

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY AND COOLING SYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two containment spray trains and two containment cooling trains shall be OPERABLE.

APPLICABILITY: Containment Spray System: MODES 1, 2, and MODE 3 with Pressurizer Pressure \geq 1750 psia.

Containment Cooling System: MODES 1, 2, and 3.

ACTION:

1. Modes 1, 2, and 3 with Pressurizer Pressure \geq 1750 psia: INSERT 2
 - a. With one containment spray train inoperable, restore the inoperable spray train to OPERABLE status within 72 hours, otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 54 hours. ✕
 - b. With one containment cooling train inoperable, restore the inoperable cooling train to OPERABLE status within 7 days, otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours. ✕
 - c. With one containment spray train and one containment cooling train inoperable, concurrently implement ACTIONS a. and b. The completion intervals for ACTION a. and ACTION b. shall be tracked separately for each train starting from the time each train was discovered inoperable.

NOTE

Action not applicable when second containment spray train intentionally made inoperable.

- d. With two containment spray trains inoperable, within 1 hour verify TS 3.7.7, "Control Room Emergency Ventilation System," is met, and restore at least one containment spray train to OPERABLE status within 24 hours; otherwise, be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours. INSERT 2
 - e. With two containment cooling trains inoperable, restore one cooling train to OPERABLE status within 72 hours, otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours.
 - f. With any combination of three or more trains inoperable, enter LCO 3.0.3 immediately.
2. Mode 3 with Pressurizer Pressure $<$ 1750 psia:
 - a. With one containment cooling train inoperable, restore the inoperable cooling train to OPERABLE status within 72 hours; otherwise be in MODE 4 within the next 6 hours.
 - b. With two containment cooling trains inoperable, enter LCO 3.0.3 immediately.

CONTAINMENT SYSTEMS

3/4.6.3 CONTAINMENT ISOLATION VALVES

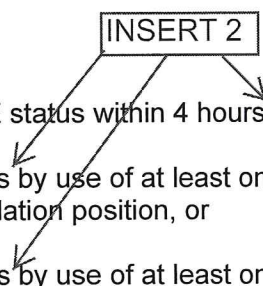
LIMITING CONDITION FOR OPERATION

3.6.3.1 The containment isolation valves shall be OPERABLE:

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) inoperable, either:

- 
- a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or
 - b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or
 - c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange; or
 - d. Be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

- 4.6.3.1.1 The isolation valves shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of the cycling test, and verification of isolation time.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

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

- a. Two motor driven feedwater pumps, and
- b. One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

INSERT 1

- a. With one auxiliary feedwater pump inoperable, restore the auxiliary feedwater pump to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With two auxiliary feedwater pumps inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

NOTE

LCO 3.0.3 and all other LCO Actions requiring MODE changes are suspended until one AFW pump is restored to OPERABLE status.

- c. With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status.
- d. LCO 3.0.4.b is not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by:

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

INSERT 2

MODE 1 - With one main steam line isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is either restored to OPERABLE status or closed within 4 hours; otherwise, be in ~~HOT STANDBY~~ within the next 6 hours.

MODE 2

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

SURVEILLANCE REQUIREMENTS

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

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

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

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

PLANT SYSTEMS

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3.1 At least two independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

INSERT 1

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

4.7.3.1 At least two component cooling water loops shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed or otherwise secured in position, is in its correct position.
- b. In accordance with the Surveillance Frequency Control Program during shutdown by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection Actuation Signal.

PLANT SYSTEMS

3/4.7.4 INTAKE COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.4.1 At least two independent intake cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

INSERT 1

With only one intake cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

4.7.4.1 At least two intake cooling water loops shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. In accordance with the Surveillance Frequency Control Program during shutdown by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection Actuation signal.

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

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

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Two separate and independent diesel generator sets each with:
 1. Engine-mounted fuel tanks containing a minimum of 152 gallons of fuel,
 2. A separate fuel storage system containing a minimum of 19,000 gallons of fuel, and
 3. A separate fuel transfer pump.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

INSERT 1

- a. With one offsite circuit of 3.8.1.1.a inoperable, except as provided in Action f. below, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- b. With one diesel generator of 3.8.1.1.b inoperable, demonstrate the OPERABILITY of the A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, unless it can be confirmed that the cause of the inoperable EDG does not exist on the remaining EDG; restore the diesel generator to OPERABLE status within 14 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Additionally, within 4 hours from the discovery of concurrent inoperability of required redundant feature(s) (including the steam driven auxiliary feed pump in MODE 1, 2, and 3), declare required feature(s) supported by the inoperable EDG inoperable if its redundant required feature(s) is inoperable.

INSERT 1

NOTE

If the absence of any common-cause failure cannot be confirmed, this test shall be completed regardless of when the inoperable EDG is restored to OPERABILITY

ELECTRICAL POWER SYSTEMS

ACTION (continued)

- c. With one offsite A.C. circuit and one diesel generator inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours unless it can be confirmed that the cause of the inoperable EDG does not exist on the remaining EDG. Restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Restore the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with the provisions of Section 3.8.1.1 ACTION Statement a or b, as appropriate, with the time requirement of that ACTION Statement based on the time of the initial loss of the remaining inoperable A.C. power source. Additionally, within 4 hours from the discovery of concurrent inoperability of required redundant feature(s) (including the steam driven auxiliary feed pump in MODE 1, 2, and 3), declare required feature(s) supported by the inoperable EDG inoperable if its redundant required feature(s) is inoperable.

INSERT 1

- d. With two of the required offsite A.C. circuits inoperable, restore one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. Following restoration of one offsite source, follow ACTION Statement a. with the time requirement of that ACTION Statement based on the time of the initial loss of the remaining inoperable offsite A.C. circuit.

INSERT 1

NOTE

If the absence of any common-cause failure cannot be confirmed, this test shall be completed regardless of when the inoperable EDG is restored to OPERABILITY.

ELECTRICAL POWER SYSTEMS

ACTION (continued)

- e. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; restore one of the inoperable diesel generators to OPERABLE status within 2 hours or be in the at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Following restoration of one diesel generator unit, follow ACTION Statement b. with the time requirement of that ACTION Statement based on the time of initial loss of the remaining inoperable diesel generator.
- f. With one Unit 1 startup transformer (1A or 1B) inoperable and with a Unit 2 startup transformer (2A or 2B) connected to the same A or B offsite power circuit and administratively available to both units, then should Unit 2 require the use of the startup transformer administratively available to both units, Unit 1 shall demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the inoperable startup transformer to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- g. LCO 3.0.4.b is not applicable to diesel generators.

INSERT 1

SURVEILLANCE REQUIREMENTS

- 4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:
 - a. Determined OPERABLE in accordance with the Surveillance Frequency Control Program by verifying correct breaker alignments, indicated power availability; and
 - b. Demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program by transferring (manually and automatically) unit power supply from the auxiliary transformer to the startup transformer.
- 4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:
 - a. In accordance with the Surveillance Frequency Control Program by:
 - 1. Verifying fuel level in the engine-mounted fuel tank,
 - 2. Verifying the fuel level in the fuel storage tank,
 - 3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the engine-mounted tank,

ELECTRICAL POWER SYSTEMS

3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

A.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 The following A.C. electrical busses shall be OPERABLE and energized from sources of power other than the diesel generator sets:

4160	volt Emergency Bus	1A3
4160	volt Emergency Bus	1B3
480	volt Emergency Bus	1A2
480	volt Emergency Bus	1B2
480	volt Emergency MCC Busses	1A5, 1A6, 1A7
480	volt Emergency MCC Busses	1B5, 1B6, 1B7
120	volt A.C. Instrument Bus	1MA
120	volt A.C. Instrument Bus	1MB
120	volt A.C. Instrument Bus	1MC
120	volt A.C. Instrument Bus	1MD

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

INSERT 1

With less than the above complement of A.C. busses OPERABLE, restore the inoperable bus to OPERABLE status within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.1 The specified A.C. busses shall be determined OPERABLE and energized from A.C. sources other than the diesel generators in accordance with the Surveillance Frequency Control Program by verifying indicated power availability.

ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

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

- a. 125-volt D.C. bus No. 1A, 125-volt Battery bank No. 1A and a full capacity charger.
- b. 125-volt D.C. bus No. 1B, 125-volt Battery bank No. 1B and a full capacity charger.

APPLICABILITY: MODES 1, 2, 3 and 4.

INSERT 1



ACTION:

- a. With one of the required battery banks or busses inoperable, restore the inoperable battery bank or bus to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- b. With one of the required full capacity chargers inoperable, demonstrate the OPERABILITY of its associated battery banks by performing Surveillance Requirement 4.8.2.3.2.a.1 within 1 hour, and at least once per 8 hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized in accordance with the Surveillance Frequency Control Program by verifying indicated power availability.

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

- a. In accordance with the Surveillance Frequency Control Program by verifying that:
 1. The parameters in Table 4.8-2 meet the Category A limits, and
 2. The total battery terminal voltage is greater than or equal to 129-volts on float charge.

ADMINISTRATIVE CONTROLS (continued)

o. Surveillance Frequency Control Program

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

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

p. Snubber Testing Program

This program conforms to the examination, testing and service life monitoring for dynamic restraints (snubbers) in accordance with 10 CFR 50.55a inservice inspection (ISI) requirements for supports. The program shall be in accordance with the following:

1. This program shall meet 10 CFR 50.55a(g) ISI requirements for supports.
2. The program shall meet the requirements for ISI of supports set forth in subsequent editions of the Code of Record and addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure (BPV) Code and the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) that are incorporated by reference in 10 CFR 50.55a(b) subject to the conditions listed in 10 CFR 50.55a(b) and subject to Commission approval.
3. The program shall, as required by 10 CFR 50.55a(b)(3)(v), meet Subsection ISTA, "General Requirements" and Subsection ISTD, "Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants".
4. The 120-month program updates shall be made in accordance with 10 CFR 50.55a(g)(4), 10 CFR 50.55a(g)(3)(v) and 10 CFR 50.55a(b) (including 10 CFR 50.55a(b)(3)(v)) subject to the conditions listed therein.

INSERT 3



ATTACHMENT 4

St. Lucie Unit 2
Markup of the Technical Specification Pages

INSERT 1

or in accordance with the Risk Informed Completion Time Program,

INSERT 2

or in accordance with the Risk Informed Completion Time Program

INSERT 3

r. Risk Informed Completion Time Program

This program provides controls to calculate a Risk Informed Completion Time (RICT) and must be implemented in accordance with NEI 06-09, "Risk-Informed Technical Specifications Initiative 4b: Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0-A, November 2006. The program shall include the following:

- a. The RICT may not exceed 30 days;
- b. A RICT may only be utilized in MODES 1 and 2;
- c. When a RICT is being used, any plant configuration change within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT.
 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
 3. Revising the RICT is not required If the plant configuration change would lower plant risk and would result in a longer RICT.
- d. Use of a RICT is not permitted for 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.

REACTIVITY CONTROL SYSTEMS

FLOW PATHS – OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.2 At least two of the following three boron injection flow paths shall be OPERABLE:

- a. One flow path from the boric acid makeup tank(s) with the tank meeting Specification 3.1.2.8 part a) or b), via a boric acid makeup pump through a charging pump to the Reactor Coolant System.
- b. One flow path from the boric acid makeup tank(s) with the tank meeting Specification 3.1.2.8 part a) or b), via a gravity feed valve through a charging pump to the Reactor Coolant System.
- c. The flow path from the refueling water storage tank via a charging pump to the Reactor Coolant System. ↖ editorial

OR

At least two of the following three boron injection flow paths shall be OPERABLE:

- d. One flow path from each boric acid makeup tank with the combined tank contents meeting Specification 3.1.2.8 c), via both boric acid makeup pumps through a charging pump to the Reactor Coolant System. †
- e. One flow path from each boric acid makeup tank with the combined tank contents meeting Specification 3.1.2.8 c), via both gravity feed valves through a charging pump to the Reactor Coolant System. †
- f. The flow path from the refueling water storage tank, via a charging pump to the Reactor Coolant System. †
↖ editorial

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one of the above required boron injection flow paths to the Reactor Coolant System OPERABLE, restore at least two boron injection flow paths to the Reactor Coolant System to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to its COLR limit at 200 °F within the next 6 hours; restore at least two flow paths to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.

TABLE 3.3-1 (Continued)

TABLE NOTATION

* With the protective system trip breakers in the closed position, the CEA drive system capable of CEA withdrawal, and fuel in the reactor vessel.

- (a) Trip may be manually bypassed below 0.5% of RATED THERMAL POWER in conjunction with (d) below; bypass shall be automatically removed when Wide Range Logarithmic Neutron Flux power is greater than or equal to 0.5% of RATED THERMAL POWER.
- (b) Trip may be manually bypassed below 705 psig; bypass shall be automatically removed at or above 705 psig.
- (c) Trip may be bypassed below 15% of RATED THERMAL POWER; bypass shall be automatically removed when Power Range Neutron Flux power is greater than or equal to 15% of RATED THERMAL POWER.
- (d) Trip may be bypassed during testing pursuant to Special Test Exception 3.10.3.
- (e) Trip may be bypassed below $10^{-4}\%$ and above 15% of RATED THERMAL POWER; bypass shall be automatically removed when Wide Range Logarithmic Neutron Flux power is $\geq 10^{-4}\%$ and Power Range Neutron Flux power $\leq 15\%$ of RATED THERMAL POWER.
- (f) Each channel shall be comprised of two trip breakers; actual trip logic shall be one-out-of-two taken twice.
- (g) There shall be at least two decades of overlap between the Wide Range Logarithmic Neutron Flux Monitoring Channels and the Power Range Neutron Flux Monitoring Channels.

ACTION STATEMENTS

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and/or open the protective system trip breakers.

↑
INSERT 1

TABLE 3.3-3

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>	
1. SAFETY INJECTION (SIAS)						
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	12	
b. Containment Pressure – High	4	2	3	1, 2, 3	13, 14	✗
c. Pressurizer Pressure – Low	4	2	3	1, 2, 3(a)	13, 14	✗
d. Automatic Actuation – Logic	2	1	2	1, 2, 3, 4	12	
						18A, 18B
2. CONTAINMENT SPRAY (CSAS)						
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	12	
b. Containment Pressure – High-High	4	2	3	1(b), 2(b), 3(b)	18a, 18b, 18c	✗
c. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	12	
3. CONTAINMENT ISOLATION (CIAS)						
a. Manual CIAS (Trip Buttons)	2	1	2	1, 2, 3, 4	12	
b. Safety Injection (SIAS)	See Functional Unit 1 for all Safety Injection Initiating Functions and Requirements					
c. Containment Pressure – High	4	2	3	1, 2, 3	13, 14	✗
d. Containment Radiation – High	4	2	3	1, 2, 3	13, 14	✗
e. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	12	

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
4. MAIN STEAM LINE ISOLATION (MSIS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3	16
b. Steam Generator Pressure – Low	4/steam generator	2/steam generator	3/steam generator	1, 2, 3(c)	13, 14 ✗
c. Containment Pressure – High	4	2	3	1, 2, 3	13, 14 ✗
d. Automatic Actuation Logic	2	1	2	1, 2, 3	12
5. CONTAINMENT SUMP RECIRCULATION (RAS)					
a. Manual RAS (Trip Buttons)	2	1	2	1, 2, 3, 4	12
b. Refueling Water Storage Tank - Low	4	2	3	1, 2, 3	19
c. Automatic Actuation Logic	2	1	2	1, 2, 3	12

Editorial

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
6. LOSS OF POWER (LOV)					
a. (1) 4.16 kV Emergency Bus Undervoltage (Loss of Voltage)	2/Bus	2/Bus	1/Bus	1, 2, 3	17
(2) 480 V Emergency Bus Undervoltage (Loss of Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3	17
b. (1) 4.16 kV Emergency Bus Undervoltage (Degraded Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3	17
(2) 480 V Emergency Bus Undervoltage (Degraded Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3	17
7. AUXILIARY FEEDWATER (AFAS)					
a. Manual (Trip Buttons)	4/SG	2/SG	4/SG	1, 2, 3	15
b. Automatic Actuation Logic	4/SG	2/SG	3/SG	1, 2, 3	15
c. SG Level (2A/2B) – Low	4/SG	2/SG	3/SG	1, 2, 3	20a, 20b, 20e
8. AUXILIARY FEEDWATER ISOLATION					
a. SG 2A – SG 2B Differential Pressure	4/SG	2/SG	3/SG	1, 2, 3	20a, 20b, 20e
b. Feedwater Header 2A – 2B Differential Pressure	4/SG	2/SG	3/SG	1, 2, 3	20a, 20e

21

TABLE 3.3-3 (Continued)

TABLE NOTATION

- (a) Trip function may be bypassed in this MODE when pressurizer pressure is less than 1836 psia; bypass shall be automatically removed when pressurizer pressure is greater than or equal to 1836 psia.
- (b) An SIAS signal is first necessary to enable CSAS logic.
- (c) Trip function may be bypassed in this MODE below 700 psia; bypass shall be automatically removed at or above 700 psia.

INSERT 1

ACTION OF STATEMENTS

- ACTION 12 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- ACTION 13 - With the number of channels OPERABLE one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may continue provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour. The channel shall be returned to OPERABLE status no later than during the next COLD SHUTDOWN.

With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below.

Process Measurement Circuit	Functional Unit Bypassed
1. Containment Pressure -	Containment Pressure – High (SIAS, CIAS, CSAS) Containment Pressure – High (RPS)
2. Steam Generator Pressure -	Steam Generator Pressure – Low (MSIS) AFAS-1 and AFAS-2 (AFAS) Thermal Margin/Low Pressure (RPS) Steam Generator Pressure – Low (RPS)
3. Steam Generator Level -	Steam Generator Level – Low (RPS) If SG-2A, then AFAS-1 (AFAS) If SG-2B, then AFAS-2 (AFAS)
4. Pressurizer Pressure -	Pressurizer Pressure – High (RPS) Pressurizer Pressure – Low (SIAS) Thermal Margin/Low Pressure (RPS)

TABLE 3.3-3 (Continued)

TABLE NOTATION

ACTION 14 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, STARTUP and/or POWER OPERATION may continue provided the following conditions are satisfied:

- a. Verify that one of the inoperable channels has been bypassed and place the other inoperable channel in the tripped condition within 1 hour.
- b. All functional units affected by the bypassed/tripped channel shall also be placed in the bypassed/tripped condition as listed below.

Process Measurement Circuit

Functional Unit Bypassed/Tripped

1. Containment Pressure -	Containment Pressure – High (SIAS, CIAS, CSAS) Containment Pressure – High (RPS)
2. Steam Generator Pressure -	Steam Generator Pressure – Low (MSIS) AFAS-1 and AFAS-2 (AFAS) Thermal Margin/Low Pressure (RPS) Steam Generator Pressure – Low (RPS)
3. Steam Generator Level -	Steam Generator Level – Low (RPS) If SG-2A, then AFAS-1 (AFAS) If SG-2B, then AFAS-2 (AFAS)
4. Pressurizer Pressure -	Pressurizer Pressure – High (RPS) Pressurizer Pressure – Low (SIAS) Thermal Margin/Low Pressure (RPS)

INSERT 1

ACTION 15 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

ACTION 16 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the ACTION required by Specification 3.7.1.5.

ACTION 17 - With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours, or place the inoperable channel in the tripped condition and verify that the Minimum Channels OPERABLE requirement is demonstrated within 1 hour; one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

INSERT 1

TABLE 3.3-3 (Continued)

TABLE NOTATION

18A



ACTION 18 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in either the bypassed or tripped condition and the Minimum Channels OPERABLE requirement is demonstrated within 1 hour. If the inoperable channel can not be restored to OPERABLE status within 48 hours, then place the inoperable channel in the tripped condition.
- b. With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed in ACTION 13.

ACTION 18B -

- c. With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, operation may proceed provided one of the inoperable channels has been bypassed and the other inoperable channel has been placed in the tripped condition within 1 hour. Restore one of the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

INSERT 1

ACTION 19 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

- a. Within 1 hour the inoperable channel is placed in either the bypassed or tripped condition. If OPERABILITY ~~can not~~ cannot be restored within 48 hours, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

INSERT 2

TABLE 3.3-3 (Continued)

TABLE NOTATION

ACTION 20 - With the number of channels OPERABLE one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. If an inoperable SG level channel can not be restored to OPERABLE status within 48 hours, then AFAS-1 or AFAS-2 as applicable in the inoperable channel shall be placed in the bypassed condition. If an inoperable SG DP or FW Header DP channel can not be restored to OPERABLE status within 48 hours, then both AFAS-1 and AFAS-2 in the inoperable channel shall be placed in the bypassed condition. The channel shall be returned to OPERABLE status no later than during the next COLD SHUTDOWN.
- b. With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed in ACTION 13.

ACTION 21 -

- e. With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, operation may proceed provided one of the inoperable channels has been bypassed and the other inoperable channel placed in the tripped condition within 1 hour. Restore one of the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

INSERT 1

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
5. CONTAINMENT SUMP RECIRCULATION (RAS)		
a. Manual RAS (Trip Buttons)	Not Applicable	Not Applicable
b. Refueling Water Storage Tank – Low editorial	5.67 feet above tank bottom	4.62 feet to 6.24 feet above tank bottom
c. Automatic Actuation Logic	Not Applicable	Not Applicable
6. LOSS OF POWER		
a. (1) 4.16 kV Emergency Bus Undervoltage (Loss of Voltage)	≥ 3120 volts	≥ 3120 volts
(2) 480 V Emergency Bus Undervoltage (Loss of Voltage)	≥ 360 volts	≥ 360 volts
b. (1) 4.16 kV Emergency Bus Undervoltage (Degraded Voltage)	≥ 3848 volts with < 10-second time delay	≥ 3848 volts with < 10-second time delay
(2) 480 V Emergency Bus Undervoltage (Degraded Voltage)	≥ 432 volts	≥ 432 volts
7. AUXILIARY FEEDWATER (AFAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Automatic Actuation Logic	Not Applicable	Not Applicable
c. SG 2A & 2B Level Low	$\geq 19.0\%$	$\geq 18.0\%$
8. AUXILIARY FEEDWATER ISOLATION		
a. Steam Generator ΔP – High	≤ 275 psid	89.2 to 281 psid
b. Feedwater Header ΔP – High	≤ 150.0 psid	56.0 to 157.5 psid

TABLE 4.3-2

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED	
1. SAFETY INJECTION (SIAS)					
a. Manual (Trip Buttons)	N.A.	N.A.	SFCP	1, 2, 3, 4	/
b. Containment Pressure – High	SFCP	SFCP	SFCP	1, 2, 3	
c. Pressurizer Pressure – Low	SFCP	SFCP	SFCP	1, 2, 3	
d. Automatic Actuation Logic	N.A.	N.A.	SFCP(1), SFCP(3)	1, 2, 3, 4	
2. CONTAINMENT SPRAY (CSAS)					
a. Manual (Trip Buttons)	N.A.	N.A.	SFCP	1, 2, 3, 4	/
b. Containment Pressure – High-High	SFCP	SFCP	SFCP	1, 2, 3	
c. Automatic Actuation Logic	N.A.	N.A.	SFCP(1), SFCP(3)	1, 2, 3, 4	
3. CONTAINMENT ISOLATION (CIAS)					
a. Manual CIAS (Trip Buttons)	N.A.	N.A.	SFCP	1, 2, 3, 4	/
b. Safety Injection SIAS	N.A.	N.A.	SFCP	1, 2, 3, 4	
c. Containment Pressure – High	SFCP	SFCP	SFCP	1, 2, 3	
d. Containment Radiation – High	SFCP	SFCP	SFCP	1, 2, 3	
e. Automatic Actuation Logic	N.A.	N.A.	SFCP(1), SFCP(3)	1, 2, 3, 4	
4. MAIN STEAM LINE ISOLATION					
a. Manual (Trip Buttons)	N.A.	N.A.	SFCP	1, 2, 3	/
b. Steam Generator Pressure – Low	SFCP	SFCP	SFCP	1, 2, 3	
c. Containment Pressure – High	SFCP	SFCP	SFCP	1, 2, 3	
d. Automatic Actuation Logic	N.A.	N.A.	SFCP(1), SFCP(3)	1, 2, 3, 4	
5. CONTAINMENT SUMP RECIRCULATION (RAS)					
a. Manual RAS (Trip Buttons)	N.A.	N.A.	SFCP	N.A.	/
b. Refueling Water Storage Tank – Low	SFCP	SFCP	SFCP	1, 2, 3	
c. Automatic Actuation Logic	N.A.	N.A.	SFCP(1), SFCP(3)	1, 2, 3	

TABLE 3.3-10
ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>REQUIRED NUMBER OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Containment Pressure	2	1
2. Reactor Coolant Outlet Temperature – T _{Hot} (Wide Range)	2	1
3. Reactor Coolant Inlet Temperature – T _{Cold} (Wide Range)	2	1
4. Reactor Coolant Pressure – Wide Range	2	1
5. Pressurizer Water Level	2	1
6. Steam Generator Pressure	2/steam generator	1/steam generator
7. Steam Generator Water Level – Narrow Range	1/steam generator	1/steam generator
8. Steam Generator Water Level – Wide Range	1/steam generator*	1/steam generator*
9. Refueling Water Storage Tank Water Level	2	1
10. Auxiliary Feedwater Flow Rate (Each pump) editorial	1/pump*	1/pump*
11. Reactor Cooling System Subcooling Margin Monitor	2	1
12. PORV Position/Flow Indicator	2/valve***	1/valve**
13. PORV Block Valve Position Indicator	1/valve**	1/valve**
14. Safety Valve Position/Flow Indicator	1/valve***	1/valve***
15. Containment Sump Water Level (Narrow Range)	1****	1****
16. Containment Water Level (Wide Range)	2	1
17. Incore Thermocouples	4/core quadrant	2/core quadrant
18. Reactor Vessel Level Monitoring System	2*****	1*****

* These corresponding instruments may be substituted for each other.

** Not required if the PORV block valve is shut and power is removed from the operator.

*** If not available, monitor the quench tank pressure, level and temperature, and each safety valve/PORV discharge piping temperature at least once every 12 hours.

**** The non-safety grade containment sump water level instrument may be substituted.

***** Definition of OPERABLE: A channel consists of eight (8) sensors in a probe of which four (4) sensors must be OPERABLE.

REACTOR COOLANT SYSTEM

OPERATING

LIMITING CONDITION FOR OPERATION

- 3.4.2.2 All pressurizer code safety valves shall be OPERABLE with a lift setting of ≥ 2410.3 psig and ≤ 2560.3 psig. ✕

APPLICABILITY: MODES 1, 2, 3, and 4 with all RCS cold leg temperatures $> 230^{\circ}\text{F}$.

ACTION:

- a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the next 6 hours.
- b. With two or more pressurizer code safety valves inoperable, be in HOT STANDBY within 6 hours and in HOT SHUTDOWN with all RCS cold leg temperatures at $\leq 230^{\circ}\text{F}$ within the next 6 hours.

INSERT 1

SURVEILLANCE REQUIREMENTS

- 4.4.2.2 Verify each pressurizer code safety valve is OPERABLE in accordance with the Inservice Testing Program. Following testing, as-left lift settings shall be within $\pm 1\%$ of 2500 psia.

✓ format change

NOTE

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

REACTOR COOLANT SYSTEM


3/4.4.4 PORV BLOCK VALVES

LIMITING CONDITION FOR OPERATION


3.4.4 Each Power Operated Relief Valve (PORV) Block valve shall be OPERABLE. No more than one block valve shall be open at any one time.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- 
- a. With one or more block valve(s) inoperable, within 1 hour either restore the block valve(s) to OPERABLE status or close the block valve(s) and remove power from the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
 - b. With both block valves open, close one block valve within 1 hour, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

- 4.4.4 Each block valve shall be demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program by operating the valve through one complete cycle of full travel unless the block valve is closed with power removed in order to meet the requirements of Action a. or b. above.
- 

3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3/4.5.1 SAFETY INJECTION TANKS (SIT)

LIMITING CONDITION FOR OPERATION

3.5.1 Each Reactor Coolant System safety injection tank shall be OPERABLE with:

- a. The isolation valve open,
- b. A contained borated water volume of between 1420 and 1556 cubic feet,
- c. A boron concentration of between 1900 and 2200 ppm of boron, and
- d. A nitrogen cover-pressure of between 500 and 650 psig.

APPLICABILITY: MODES 1, 2 and 3*, with pressurizer pressure \geq 1750 psia.

ACTION:

- a. With one SIT inoperable due to boron concentration not within limits, or due to an inability to verify the required water volume or nitrogen cover-pressure, restore the inoperable SIT to OPERABLE status with 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With one SIT inoperable due to reasons other than those stated in ACTION-a, restore the inoperable SIT to OPERABLE status within 24 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

INSERT 2

SURVEILLANCE REQUIREMENTS

4.5.1.1 Each safety injection tank shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by:
 1. Verifying that the borated water volume and nitrogen cover-pressure in the tanks are within their limits, and
 2. Verifying that each safety injection tank isolation valve is open.

NOTE

With pressurizer pressure greater than or equal to 1750 psia. When pressurizer pressure is less than 1750 psia, at least three safety injection tanks shall be OPERABLE, each with a minimum pressure of 235 psig and a maximum pressure of 650 psig and a contained water volume of between 1250 and 1556 cubic feet with a boron concentration of between 1900 and 2200 ppm of boron. With all four safety injection tanks OPERABLE, each tank shall have a minimum pressure of 235 psig and a maximum pressure of 650 psig and a contained water volume of between 833 and 1556 cubic feet with a boron concentration of between 1900 and 2200 ppm of boron.

in MODE 3
with

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS SUBSYSTEMS - OPERATING

LIMITING CONDITION FOR OPERATION

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

- a. One OPERABLE high pressure safety injection pump,
- b. One OPERABLE low pressure safety injection pump, and
- c. An independent OPERABLE flow path capable of taking suction from the refueling water tank on a Safety Injection Actuation Signal and automatically transferring suction to the containment sump on a Recirculation Actuation Signal, and
- d. One OPERABLE charging pump*.

format correction

format change

APPLICABILITY: MODES 1, 2, and 3* with pressurizer pressure ≥ 1750 psia.

ACTION:

- a. 1. With one ECCS subsystem inoperable only because its associated LPSI train is inoperable, restore the inoperable subsystem to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

INSERT 1
2. With one ECCS subsystem inoperable for reasons other than condition a.1., restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

INSERT 1
- b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

NOTE

One ECCS subsystem charging pump shall satisfy the flow path requirements of Specification 3.1.2.2.a or 3.1.2.2.d. The second ECCS subsystem charging pump shall satisfy the flow path requirements of Specification 3.1.2.2.b or 3.1.2.2.e.

~~*With pressurizer pressure greater than or equal to 1750 psia.~~

format change

CONTAINMENT SYSTEMS

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE with:

- a. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and
- b. An overall air lock leakage rate in accordance with the Containment Leakage Rate Testing Program.

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

ACTION:

- a. With one containment air lock door inoperable^{*}
 1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed.
 2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days.
 3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- b. With ^{one or both} the containment air lock^{lock(s)} inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours ^{in the affected air lock(s) and} or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

INSERT 2

; otherwise,

NOTE

If the inner air lock door is inoperable, passage through the OPERABLE outer air lock door is permitted to effect repairs to the inoperable inner air lock door. No more than one airlock door shall be open at any time.

CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

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

- a. Each 48-inch containment purge supply and exhaust isolation valve shall be sealed closed.
- b. The 8-inch containment purge supply and exhaust isolation valves may be open for purging and/or venting as required for safety related purposes such as:
 1. Maintaining containment pressure within the limits of Specification 3.6.1.4.
 2. Reducing containment atmosphere airborne radioactivity and/or improving air quality to an acceptable level for containment access.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With a 48-inch containment purge supply and/or exhaust isolation valve(s) open or not sealed closed, close and/or seal close the open valve(s) or isolate the penetration(s) within 4 hours; otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. INSERT 2
- b. With an 8-inch containment purge supply and/or exhaust isolation valve(s) open for reasons other than those stated in Specification 3.6.1.7.b, close the open 8-inch valve(s) or isolate the penetration(s) within 4 hours; otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. INSERT 2 INSERT 2
- c. With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate exceeding the limits of Surveillance Requirements 4.6.1.7.3 and/or 4.6.1.7.4, within 24 hours either restore the inoperable valve(s) to OPERABLE status or isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve with resilient seals or blind flange, verify the affected penetration flowpath is isolated, and perform Surveillance Requirement 4.6.1.7.3 or 4.6.1.7.4 for resilient seated valves closed to isolate the penetration flowpath, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
 1. Closed and de-activated automatic valve(s) with resilient seals used to isolate the penetration flowpath(s) shall be tested in accordance with either Surveillance Requirement 4.6.1.7.3 for 48-inch valves at least once per 6 months or Surveillance Requirement 4.6.1.7.4 for 8-inch valves at least once per 92 days. insert "following isolation"
 2. Verify the affected penetration flowpath is isolated once per 31 days for isolation devices outside containment and prior to entering MODE 4 from MODE 5 for isolation devices inside containment if not performed within the previous 92 days. format change

NOTE

Verification of isolation devices by administrative means is acceptable when they are located in high radiation areas or they are locked, sealed, or otherwise secured by administrative means.

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY AND COOLING SYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two containment spray trains and two containment cooling trains shall be OPERABLE.

APPLICABILITY: Containment Spray System: MODES 1, 2, and MODE 3 with Pressurizer Pressure \geq 1750 psia.

Containment Cooling System: MODES 1, 2, and 3.

ACTION:

1. Modes 1, 2, and 3 with Pressurizer Pressure \geq 1750 psia: INSERT 2
 - a. With one containment spray train inoperable, restore the inoperable spray train to OPERABLE status within 72 hours; otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 54 hours. X
 - b. With one containment cooling train inoperable, restore the inoperable cooling train to OPERABLE status within 7 days; otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours. X
 - c. With one containment spray train and one containment cooling train inoperable, concurrently implement ACTIONS a. and b. The completion intervals for ACTION a. and ACTION b. shall be tracked separately for each train starting from the time each train was discovered inoperable.

NOTE

Action not applicable when second containment spray train intentionally made inoperable.

- d. With two containment spray trains inoperable, within 1 hour verify TS 3.7.7, "CREACS," is met, and restore at least one containment spray train to OPERABLE status within 24 hours; otherwise, be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours. INSERT 2
 - e. With two containment cooling trains inoperable, restore one cooling train to OPERABLE status within 72 hours; otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours.
 - f. With any combination of three or more trains inoperable, enter LCO 3.0.3 immediately.
2. Mode 3 with Pressurizer Pressure $<$ 1750 psia:
 - a. With one containment cooling train inoperable, restore the inoperable cooling train to OPERABLE status within 72 hours; otherwise be in MODE 4 within the next 6 hours.
 - b. With two containment cooling trains inoperable, enter LCO 3.0.3 immediately.

CONTAINMENT SYSTEMS

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 The containment isolation valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of containment isolation valve(s) inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

- a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or
 - b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or
 - c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange; or
 - d. Be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- /

INSERT 2

SURVEILLANCE REQUIREMENTS

- 4.6.3.1 The containment isolation valves shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test and verification of isolation time.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.7.1.2 At least three independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:
- Two feedwater pumps, each capable of being powered from separate OPERABLE emergency busses, and
 - One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

INSERT 1

- With one auxiliary feedwater pump inoperable, restore the auxiliary feedwater pump to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- With two auxiliary feedwater pumps inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

NOTE

LCO 3.0.3 and all other LCO Actions requiring MODE changes are suspended until one AFW pump is restored to OPERABLE status.

- With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status.
- LCO 3.0.4.b is not applicable.

SURVEILLANCE REQUIREMENTS

- 4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:
- In accordance with the Surveillance Frequency Control Program by:
 - Verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

PLANT SYSTEMS

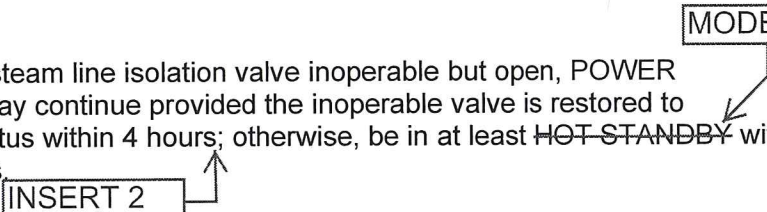
MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- MODE 1** - With one main steam line isolation valve inoperable but open, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 4 hours; otherwise, be in at least ~~HOT STANDBY~~ within the next 6 hours.
- MODES 2, 3 and 4** - With one or both main steam isolation valve(s) inoperable, subsequent operation in ~~MODES 2, 3 or 4~~ may proceed provided the isolation valve(s) is (are) maintained closed. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 24 hours.
- MODE 2**
- INSERT 2**
- 

SURVEILLANCE REQUIREMENTS

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

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

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

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

PLANT SYSTEMS

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

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

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

ACTION:

INSERT 1

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

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

- a. In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power-operated or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. In accordance with the Surveillance Frequency Control Program during shutdown by verifying that each automatic valve servicing safety-related equipment actuates to its correct position on an SIAS test signal.

NOTE

When CCW pump 2C is being used to satisfy the requirements of this specification, the alignment of the discharge valves shall be verified to be consistent with the appropriate power supply at least once per 24 hours. Upon receipt of annunciation for improper alignment of the pump 2C motor power in relation to any of its motor-operated discharge valves positions, restore proper system alignment within 2 hours.

PLANT SYSTEMS

3/4.7.4 INTAKE COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.4 → At least two independent intake cooling water loops shall be OPERABLE.*

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

ACTION:

INSERT 1

With only one intake cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

- 4.7.4 At least two intake cooling water loops shall be demonstrated OPERABLE:
- In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed or otherwise secured in position, is in its correct position.
 - In accordance with the Surveillance Frequency Control Program during shutdown, by verifying that each automatic valve servicing safety-related equipment actuates to its correct position on a SIAS test signal.

*

NOTE

When ICW pump 2C is being used to satisfy the requirements of this specification, the alignment of the discharge valves must be verified to be consistent with the appropriate power supply at least once per 24 hours.

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

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

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Two separate and independent diesel generators, each with:
 1. Two separate engine-mounted fuel tanks containing a minimum volume of 200 gallons of fuel each,
 2. A separate fuel storage system containing a minimum volume of 42,500 gallons of fuel, and
 3. A separate fuel transfer pump.

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

ACTION:

- a. With one offsite circuit of 3.8.1.1.a inoperable, except as provided in Action f. below, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

INSERT 1

INSERT 1

- b. With one diesel generator of 3.8.1.1.b inoperable, demonstrate the OPERABILITY of the A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2a.4 within 8 hours, unless it can be confirmed that the cause of the inoperable EDG does not exist on the remaining EDG; restore the diesel generator to OPERABLE status within 14 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Additionally, within 4 hours from the discovery of concurrent inoperability of required redundant feature(s) (including the steam driven auxiliary feed pump in MODE 1, 2, and 3), declare required feature(s) supported by the inoperable EDG inoperable if its redundant required feature(s) is inoperable.

NOTE

If the absence of any common-cause failure cannot be confirmed, this test shall be completed regardless of when the inoperable EDG is restored to OPERABILITY.

ELECTRICAL POWER SYSTEMS

ACTION: (Continued)

- c. With one offsite A.C. circuit and one diesel generator inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2a.4 within 8 hours, unless it can be confirmed that the cause of the inoperable EDG does not exist on the remaining EDG. Restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Restore the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with the provisions of Section 3.8.1.1 ACTION Statement a or b, as appropriate, with the time requirement of that ACTION Statement based on the time of the initial loss of the remaining inoperable A.C. power source. Additionally, within 4 hours from the discovery of concurrent inoperability of required redundant feature(s) (including the steam driven auxiliary feed pump in MODE 1, 2, and 3), declare required feature(s) supported by the inoperable EDG inoperable if its redundant required feature(s) is inoperable.

INSERT 1

NOTE

If the absence of any common-cause failure cannot be confirmed, this test shall be completed regardless of when the inoperable EDG is restored to OPERABILITY.

ELECTRICAL POWER SYSTEMS

ACTION: (Continued)

INSERT 1

- d. With two of the required offsite A.C. circuits inoperable, restore one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. Following restoration of one offsite source, follow ACTION Statement a. with the time requirement of that ACTION Statement based on the time of the initial loss of the remaining inoperable offsite A.C. circuit.
- e. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; restore one of the inoperable diesel generators to OPERABLE status within 2 hours or be in the at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Following restoration of one diesel generator unit, follow ACTION Statement b. with the time requirement of that ACTION Statement based on the time of initial loss of the remaining inoperable diesel generator.
- f. With one Unit 2 startup transformer (2A or 2B) inoperable and with a Unit 1 startup transformer (1A or 1B) connected to the same A or B offsite power circuit and administratively available to both units, then should Unit 1 require the use of the startup transformer administratively available to both units, Unit 2 shall demonstrate the operability of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter. Restore the inoperable startup transformer to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- g. LCO 3.0.4.b is not applicable to diesel generators.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Determined OPERABLE in accordance with the Surveillance Frequency Control Program by verifying correct breaker alignments, indicated power availability; and
- b. Demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program by transferring (manually and automatically) unit power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by:

ELECTRICAL POWER SYSTEMS

3/4.8.2 D.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

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

- a. 125-volt Battery bank No. 2A and a full capacity charger.
- b. 125-volt Battery bank No. 2B and a full capacity charger.

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

INSERT 1



ACTION:

- a. With one of the required battery banks inoperable, restore the inoperable battery bank to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- b. With one of the required full capacity chargers inoperable, demonstrate the OPERABILITY of its associated battery banks by performing Surveillance Requirement 4.8.2.1a.1 within 1 hour, and at least once per 8 hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable.

SURVEILLANCE REQUIREMENTS

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

- a. In accordance with the Surveillance Frequency Control Program by verifying that:
 1. The parameters in Table 4.8-2 meet the Category A limits, and
 2. The total battery terminal voltage is greater than or equal to 129-volts on float charge.

ELECTRICAL POWER SYSTEMS

ACTION:

INSERT 1

- a. With one of the required trains of A.C. Emergency busses not fully energized, re-energize the train within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one A.C. Instrument Bus either not energized from its associated inverter, or with the inverter not connected to its associated D.C. Bus: (1) re-energize the A.C. Instrument Bus within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours and (2) re-energize the A.C. Instrument Bus from its associated inverter connected to its associated D.C. Bus within 24 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. INSERT 1
- c. With one D.C. Bus not energized from its associated Battery Bank, re-energize the D.C. Bus from its associated Battery Bank within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

- 4.8.3.1 The specified busses shall be determined energized in the required manner in accordance with the Surveillance Frequency Control Program by verifying correct breaker alignment and indicated voltage on the busses.

ADMINISTRATIVE CONTROLS

q. Surveillance Frequency Control Program

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

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

INSERT 3



6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

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

STARTUP REPORT

- 6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier; and (4) modifications that may have significantly altered the nuclear, thermal or hydraulic performance of the plant.
- 6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.
- 6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

ATTACHMENT 5

St. Lucie Unit 1
Revised Technical Specification Pages

TABLE 3.3-1 (Continued)

TABLE NOTATION

- * With the protective system trip breakers in the closed position and the CEA drive system capable of CEA withdrawal.
- (a) Trip may be bypassed below 1% of RATED THERMAL POWER; bypass shall be automatically removed when Wide Range Logarithmic Neutron Flux power is $\geq 1\%$ of RATED THERMAL POWER.
 - (b) Trip may be manually bypassed below 685 psig; bypass shall be automatically removed at or above 685 psig.
 - (c) Trip may be bypassed below 15% of RATED THERMAL POWER; bypass shall be automatically removed when Power Range Neutron Flux power is $\geq 15\%$ of RATED THERMAL POWER.
 - (d) Trip may be bypassed below $10^{-4}\%$ and above 15% of RATED THERMAL POWER; bypass shall be automatically removed when Wide Range Logarithmic Neutron Flux power is $\geq 10^{-4}\%$ and Power Range Neutron Flux power $\leq 15\%$ of RATED THERMAL POWER.
 - (e) Deleted.
 - (f) There shall be at least two decades of overlap between the Wide Range Logarithmic Neutron Flux Monitoring Channels and the Power Range Neutron Flux Monitoring Channels.

ACTION STATEMENTS

- ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or be in HOT STANDBY within the next 6 hours and/or open the protective system trip breakers.
- ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. For the purposes of testing and maintenance, the inoperable channel may be bypassed for up to 48 hours from time of initial loss of OPERABILITY; however, the inoperable channel shall then be either restored to OPERABLE status or placed in the tripped condition.

TABLE 3.3-3
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
1. SAFETY INJECTION (SIAS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	8
b. Containment Pressure – High	4	2	3	1, 2, 3	9
c. Pressurizer Pressure – Low	4	2	3	1, 2, 3(a)	9
2. CONTAINMENT SPRAY (CSAS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	8
b. Containment Pressure – High-High	4	2(b)	3	1, 2, 3	10A, 10B
3. CONTAINMENT ISOLATION (CIS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	8
b. Containment Pressure – High	4	2	3	1, 2, 3	9
c. Containment Radiation – High	4	2	3	1, 2, 3, 4	9
d. SIAS	----- (See Functional Unit 1 above) -----				
4. MAIN STEAM LINE ISOLATION (MSIS)					
a. Manual (Trip Buttons)	2/steam generator	1/steam generator	2/operating steam generator	1, 2, 3, 4	8
b. Steam Generator Pressure – Low	4/steam generator	2/steam generator	3/steam generator	1, 2, 3(c)	9

TABLE 3.3-3 (Continued)
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
5. CONTAINMENT SUMP RECIRCULATION (RAS)					
a. Manual RAS (Trip Buttons)	2	1	2	1, 2, 3, 4	8
b. Refueling Water Tank - Low	4	2	3	1, 2, 3	13
6. LOSS OF POWER					
a. 4.16 kv Emergency Bus Under- voltage (Loss of Voltage)	2/Bus	2/Bus	1/Bus	1, 2, 3	12
b. 4.16 kv Emergency Bus Under- voltage (Degraded Voltage)	2/Bus	2/Bus	1/Bus	1, 2, 3	12
c. 480 V Emergency Bus Under- voltage (Degraded Voltage)	2/Bus	2/Bus	1/Bus	1, 2, 3	12
7. AUXILIARY FEEDWATER (AFAS)					
a. Manual (Trip Buttons)	4/SG	2/SG	4/SG	1, 2, 3	11
b. Automatic Actuation Logic	4/SG	2/SG	3/SG	1, 2, 3	11
c. SG Level (1A/1B) - Low	4/SG	2/SG	3/SG	1, 2, 3	14a, 14b, 15
8. AUXILIARY FEEDWATER ISOLATION					
a. SG 1A – SG 1B Differential Pressure	4/SG	2/SG	3/SG	1, 2, 3	14a, 14b, 15
b. Feedwater Header 1A – 1B Differential Pressure	4/SG	2/SG	3/SG	1, 2, 3	14a, 15

TABLE 3.3-3 (Continued)

TABLE NOTATION

- (a) Trip function may be bypassed in this MODE when pressurizer pressure is < 1725 psia; bypass shall be automatically removed when pressurizer pressure is ≥ 1725 psia.
- (b) An SIAS signal is first necessary to enable CSAS logic.
- (c) Trip function may be bypassed in this MODE below 685 psig; bypass shall be automatically removed at or above 685 psig.

ACTION STATEMENTS

- ACTION 8 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- ACTION 9 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. For the purposes of testing and maintenance, the inoperable channel may be bypassed for up to 48 hours from time of initial loss of OPERABILITY; however, the inoperable channel shall then be either restored to OPERABLE status or placed in the tripped condition.
 - b. Within one hour, all functional units receiving an input from the inoperable channel are also bypassed or tripped.
 - c. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 48 hours while performing tests and maintenance on that channel provided the other inoperable channel is placed in the tripped condition.

TABLE 3.3-3 (continued)

TABLE NOTATION

- ACTION 10A - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in the bypassed or tripped condition and the Minimum Channels OPERABLE requirement is demonstrated within 1 hour. If the inoperable channel can not be restored to OPERABLE status within 48 hours, then place the inoperable channel in the tripped condition.
 - b. Within 1 hour, all functional units receiving an input from the inoperable channel are also bypassed or tripped.
- ACTION 10B - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, operation may proceed provided one of the inoperable channels has been bypassed and the other inoperable channel has been placed in the tripped condition within 1 hour. Restore one of the inoperable channels to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
- ACTION 11 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channels to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- ACTION 12 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed until performance of the next required CHANNEL FUNCTIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

TABLE 3.3-3 (continued)

TABLE NOTATION

ACTION 13 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. If OPERABILITY cannot be restored within 48 hours or in accordance with the Risk Informed Completion Time Program be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 2 hours while performing tests and maintenance on that channel provided the other inoperable channel is placed in the tripped condition.

ACTION 14 - With the number of channels OPERABLE one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. If an inoperable SG level channel can not be restored to OPERABLE status within 48 hours, then AFAS-1 or AFAS-2 as applicable in the inoperable channel shall be placed in the bypassed condition. If an inoperable SG DP or FW Header DP channel can not be restored to OPERABLE status within 48 hours, then both AFAS-1 and AFAS-2 in the inoperable channel shall be placed in the bypassed condition. The channel shall be returned to OPERABLE status no later than during the next COLD SHUTDOWN.
- b. Within 1 hour, all functional units receiving an input from the inoperable channel are also bypassed or tripped.

ACTION 15 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, operation may proceed provided one of the inoperable channels has been bypassed and the other inoperable channel has been placed in the tripped condition within 1 hour. Restore one of the inoperable channels to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

REACTOR COOLANT SYSTEM

SAFETY VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

- 3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting of ≥ 2422.8 psig and ≤ 2560.3 psig.

APPLICABILITY: MODES 1, 2, 3, and 4 with all RCS cold leg temperatures $> 281^{\circ}\text{F}$.

ACTION:

- a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or in accordance with the Risk Informed Completion Time Program, or be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the next 6 hours.
- b. With two or more pressurizer code safety valves inoperable, be in HOT STANDBY within 6 hours and in HOT SHUTDOWN with all RCS cold leg temperatures $\leq 281^{\circ}\text{F}$ within the next 6 hours.

SURVEILLANCE REQUIREMENTS

- 4.4.3 Verify each pressurizer code safety valves is OPERABLE in accordance with the Inservice Testing Program. Following testing, as-left lift settings shall be within $\pm 1\%$ of 2500 psia.

REACTOR COOLANT SYSTEM

PORV BLOCK VALVES

LIMITING CONDITION FOR OPERATION

3.4.12 Each Power Operated Relief Valve (PORV) Block Valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With one or more block valve(s) inoperable, within 1 hour or in accordance with the Risk Informed Completion Time Program either restore the block valve(s) to OPERABLE status or close the block valve(s) and remove power from the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.12 Each block valve shall be demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program by operating the valve through one complete cycle of full travel.

3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

SAFETY INJECTION TANKS (SIT)

LIMITING CONDITION FOR OPERATION

3.5.1 Each reactor coolant system safety injection tank shall be OPERABLE with:

- a. The isolation valve open,
- b. Between 1090 and 1170 cubic feet of borated water,
- c. A minimum boron concentration of 1900 ppm, and
- d. A nitrogen cover-pressure of between 230 and 280 psig.

APPLICABILITY: MODES 1, 2 and 3 with pressurizer pressure \geq 1750 psia

ACTION:

- a. With one SIT inoperable due to boron concentration not within limits, or due to an inability to verify the required water volume or nitrogen cover-pressure, restore the inoperable SIT to OPERABLE status with 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With one SIT inoperable due to reasons other than those stated in ACTION-a, restore the inoperable SIT to OPERABLE status within 24 hours or in accordance with the Risk Informed Completion Time Program; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.5.1 Each safety injection tank shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by:
 1. Verifying that the borated water volume and nitrogen cover-pressure in the tanks are within their limits, and
 2. Verifying that each safety injection tank isolation valve is open.

EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS - OPERATING

LIMITING CONDITION FOR OPERATION

- 3.5.2 Two independent ECCS subsystems shall be OPERABLE with each subsystem comprised of:
- One OPERABLE high-pressure safety injection (HPSI) pump,
 - One OPERABLE low-pressure safety injection pump,
 - An independent OPERABLE flow path capable of taking suction from the refueling water tank on a Safety Injection Actuation Signal and automatically transferring suction to the containment sump on a Recirculation Actuation Signal, and

NOTE

One ECCS subsystem charging pump shall satisfy the flow path requirements of Specification 3.1.2.2.a or 3.1.2.2.d. The second ECCS subsystem charging pump shall satisfy the flow path requirements of Specification 3.1.2.2.b or 3.1.2.2.e.

- One OPERABLE charging pump*.

APPLICABILITY: MODES 1, 2 and 3 with pressurizer pressure \geq 1750 psia.

ACTION:

- With one ECCS subsystem inoperable only because its associated LPSI train is inoperable, restore the inoperable subsystem to OPERABLE status within 7 days or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
 - With one ECCS subsystem inoperable for reasons other than condition a.1., restore the inoperable subsystem to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

CONTAINMENT SYSTEMS

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

- 3.6.1.3 Each containment air lock shall be OPERABLE with:
- Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and
 - An overall air lock leakage rate in accordance with the Containment Leakage Rate Testing Program.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

NOTE

If the inner air lock door is inoperable, passage through the OPERABLE outer air lock door is permitted to effect repairs to the inoperable inner air lock door. No more than one air lock door shall be open at any time.

- With one containment air lock door inoperable:
 - Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed.
 - Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be closed at least once per 31 days.
 - Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- With one or both containment air lock(s) inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed in the affected air lock(s) and restore the inoperable air lock to OPERABLE status within 24 hours or in accordance with the Risk Informed Completion Time Program or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

- 4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY AND COOLING SYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two containment spray trains and two containment cooling trains shall be OPERABLE.

APPLICABILITY: Containment Spray System: MODES 1, 2, and MODE 3 with Pressurizer Pressure \geq 1750 psia.

Containment Cooling System: MODES 1, 2, and 3.

ACTION:

1. Modes 1, 2, and 3 with Pressurizer Pressure \geq 1750 psia:
 - a. With one containment spray train inoperable, restore the inoperable spray train to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program; otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 54 hours.
 - b. With one containment cooling train inoperable, restore the inoperable cooling train to OPERABLE status within 7 days or in accordance with the Risk Informed Completion Time Program; otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours.
 - c. With one containment spray train and one containment cooling train inoperable, concurrently implement ACTIONS a. and b. The completion intervals for ACTION a. and ACTION b. shall be tracked separately for each train starting from the time each train was discovered inoperable.

NOTE

Action not applicable when second containment spray train intentionally made inoperable.

- d. With two containment spray trains inoperable, within 1 hour verify TS 3.7.7, "Control Room Emergency Ventilation System," is met, and restore at least one containment spray train to OPERABLE status within 24 hours; otherwise, be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours.
 - e. With two containment cooling trains inoperable, restore one cooling train to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program; otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours.
2. Mode 3 with Pressurizer Pressure $<$ 1750 psia:
 - a. With one containment cooling train inoperable, restore the inoperable cooling train to OPERABLE status within 72 hours; otherwise be in MODE 4 within the next 6 hours.
 - b. With two containment cooling trains inoperable, enter LCO 3.0.3 immediately.

CONTAINMENT SYSTEMS

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3.1 The containment isolation valves shall be OPERABLE:

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) inoperable, either:

- a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or in accordance with the Risk Informed Completion Time Program or
- b. Isolate each affected penetration within 4 hours or in accordance with the Risk Informed Completion Time Program by use of at least one deactivated automatic valve secured in the isolation position, or
- c. Isolate each affected penetration within 4 hours or in accordance with the Risk Informed Completion Time Program by use of at least one closed manual valve or blind flange; or
- d. Be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

4.6.3.1.1 The isolation valves shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of the cycling test, and verification of isolation time.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.7.1.2 At least three independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:
- Two motor driven feedwater pumps, and
 - One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- With one auxiliary feedwater pump inoperable, restore the auxiliary feedwater pump to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- With two auxiliary feedwater pumps inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

NOTE

LCO 3.0.3 and all other LCO Actions requiring MODE changes are suspended until one AFW pump is restored to OPERABLE status.

- With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status.
- LCO 3.0.4.b is not applicable.

SURVEILLANCE REQUIREMENTS

- 4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:
- In accordance with the Surveillance Frequency Control Program by:

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- MODE 1** - With one main steam line isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is either restored to OPERABLE status or closed within 4 hours or in accordance with the Risk Informed Completion Time Program; otherwise, be in MODE 2 within the next 6 hours.
- MODES 2 and 3** - With one or both main steam isolation valve(s) inoperable, subsequent operation in MODES 2 or 3 may continue provided:
1. The inoperable main steam isolation valves are closed within 8 hours, and
 2. The inoperable main steam isolation valves are verified closed once per 7 days.
- Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

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

PLANT SYSTEMS

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3.1 At least two independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

4.7.3.1 At least two component cooling water loops shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed or otherwise secured in position, is in its correct position.
- b. In accordance with the Surveillance Frequency Control Program during shutdown by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection Actuation Signal.

PLANT SYSTEMS

3/4.7.4 INTAKE COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.4.1 At least two independent intake cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one intake cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

4.7.4.1 At least two intake cooling water loops shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. In accordance with the Surveillance Frequency Control Program during shutdown by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection Actuation signal.

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

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

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Two separate and independent diesel generator sets each with:
 1. Engine-mounted fuel tanks containing a minimum of 152 gallons of fuel,
 2. A separate fuel storage system containing a minimum of 19,000 gallons of fuel, and
 3. A separate fuel transfer pump.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With one offsite circuit of 3.8.1.1.a inoperable, except as provided in Action f. below, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

NOTE

If the absence of any common-cause failure cannot be confirmed, this test shall be completed regardless of when the inoperable EDG is restored to OPERABILITY.

- b. With one diesel generator of 3.8.1.1.b inoperable, demonstrate the OPERABILITY of the A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, unless it can be confirmed that the cause of the inoperable EDG does not exist on the remaining EDG; restore the diesel generator to OPERABLE status within 14 days or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. Additionally, within 4 hours from the discovery of concurrent inoperability of required redundant feature(s) (including the steam driven auxiliary feed pump in MODE 1, 2, and 3), declare required feature(s) supported by the inoperable EDG inoperable if its redundant required feature(s) is inoperable.

ELECTRICAL POWER SYSTEMS

ACTION (continued)

NOTE

If the absence of any common-cause failure cannot be confirmed, this test shall be completed regardless of when the inoperable EDG is restored to OPERABILITY.

- c. With one offsite A.C. circuit and one diesel generator inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours unless it can be confirmed that the cause of the inoperable EDG does not exist on the remaining EDG. Restore at least one of the inoperable sources to OPERABLE status within 12 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Restore the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with the provisions of Section 3.8.1.1 ACTION Statement a or b, as appropriate, with the time requirement of that ACTION Statement based on the time of the initial loss of the remaining inoperable A.C. power source. Additionally, within 4 hours from the discovery of concurrent inoperability of required redundant feature(s) (including the steam driven auxiliary feed pump in MODE 1, 2, and 3), declare required feature(s) supported by the inoperable EDG inoperable if its redundant required feature(s) is inoperable.
- d. With two of the required offsite A.C. circuits inoperable, restore one of the inoperable offsite sources to OPERABLE status within 24 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours. Following restoration of one offsite source, follow ACTION Statement a. with the time requirement of that ACTION Statement based on the time of the initial loss of the remaining inoperable offsite A.C. circuit.

ELECTRICAL POWER SYSTEMS

ACTION (continued)

- e. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; restore one of the inoperable diesel generators to OPERABLE status within 2 hours or be in the at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Following restoration of one diesel generator unit, follow ACTION Statement b. with the time requirement of that ACTION Statement based on the time of initial loss of the remaining inoperable diesel generator.
- f. With one Unit 1 startup transformer (1A or 1B) inoperable and with a Unit 2 startup transformer (2A or 2B) connected to the same A or B offsite power circuit and administratively available to both units, then should Unit 2 require the use of the startup transformer administratively available to both units, Unit 1 shall demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the inoperable startup transformer to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- g. LCO 3.0.4.b is not applicable to diesel generators.

SURVEILLANCE REQUIREMENTS

- 4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:
 - a. Determined OPERABLE in accordance with the Surveillance Frequency Control Program by verifying correct breaker alignments, indicated power availability; and
 - b. Demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program by transferring (manually and automatically) unit power supply from the auxiliary transformer to the startup transformer.
- 4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:
 - a. In accordance with the Surveillance Frequency Control Program by:
 - 1. Verifying fuel level in the engine-mounted fuel tank,
 - 2. Verifying the fuel level in the fuel storage tank,
 - 3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the engine-mounted tank,

ELECTRICAL POWER SYSTEMS

3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

A.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 The following A.C. electrical busses shall be OPERABLE and energized from sources of power other than the diesel generator sets:

4160	volt Emergency Bus	1A3
4160	volt Emergency Bus	1B3
480	volt Emergency Bus	1A2
480	volt Emergency Bus	1B2
480	volt Emergency MCC Busses	1A5, 1A6, 1A7
480	volt Emergency MCC Busses	1B5, 1B6, 1B7
120	volt A.C. Instrument Bus	1MA
120	volt A.C. Instrument Bus	1MB
120	volt A.C. Instrument Bus	1MC
120	volt A.C. Instrument Bus	1MD

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With less than the above complement of A.C. busses OPERABLE, restore the inoperable bus to OPERABLE status within 8 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.1 The specified A.C. busses shall be determined OPERABLE and energized from A.C. sources other than the diesel generators in accordance with the Surveillance Frequency Control Program by verifying indicated power availability.

ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

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

- a. 125-volt D.C. bus No. 1A, 125-volt Battery bank No. 1A and a full capacity charger.
- b. 125-volt D.C. bus No. 1B, 125-volt Battery bank No. 1B and a full capacity charger.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With one of the required battery banks or busses inoperable, restore the inoperable battery bank or bus to OPERABLE status within 2 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- b. With one of the required full capacity chargers inoperable, demonstrate the OPERABILITY of its associated battery banks by performing Surveillance Requirement 4.8.2.3.2.a.1 within 1 hour, and at least once per 8 hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized in accordance with the Surveillance Frequency Control Program by verifying indicated power availability.

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

- a. In accordance with the Surveillance Frequency Control Program by verifying that:
 1. The parameters in Table 4.8-2 meet the Category A limits, and
 2. The total battery terminal voltage is greater than or equal to 129-volts on float charge.

ADMINISTRATIVE CONTROLS (continued)

o. Surveillance Frequency Control Program

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

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

p. Snubber Testing Program

This program conforms to the examination, testing and service life monitoring for dynamic restraints (snubbers) in accordance with 10 CFR 50.55a inservice inspection (ISI) requirements for supports. The program shall be in accordance with the following:

1. This program shall meet 10 CFR 50.55a(g) ISI requirements for supports.
2. The program shall meet the requirements for ISI of supports set forth in subsequent editions of the Code of Record and addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure (BPV) Code and the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) that are incorporated by reference in 10 CFR 50.55a(b) subject to the conditions listed in 10 CFR 50.55a(b) and subject to Commission approval.
3. The program shall, as required by 10 CFR 50.55a(b)(3)(v), meet Subsection ISTA, "General Requirements" and Subsection ISTD, "Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants".
4. The 120-month program updates shall be made in accordance with 10 CFR 50.55a(g)(4), 10 CFR 50.55a(g)(3)(v) and 10 CFR 50.55a(b) (including 10 CFR 50.55a(b)(3)(v)) subject to the conditions listed therein.

q. 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, "Risk-Informed Technical Specifications Initiative 4b: Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0-A, November 2006. The program shall include the following:

- a. The RICT may not exceed 30 days;
- b. A RICT may only be utilized in MODES 1 and 2;

ADMINISTRATIVE CONTROLS (continued)

- c. When a RICT is being used, any plant configuration change within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT.
 - 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
 - 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
 - 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- d. Use of a RICT is not permitted for 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.

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

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

STARTUP REPORT

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

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

ATTACHMENT 6

St. Lucie Unit 2
Revised Technical Specification Pages

REACTIVITY CONTROL SYSTEMS

FLOW PATHS – OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.2 At least two of the following three boron injection flow paths shall be OPERABLE:

- a. One flow path from the boric acid makeup tank(s) with the tank meeting Specification 3.1.2.8 part a) or b), via a boric acid makeup pump through a charging pump to the Reactor Coolant System.
- b. One flow path from the boric acid makeup tank(s) with the tank meeting Specification 3.1.2.8 part a) or b), via a gravity feed valve through a charging pump to the Reactor Coolant System.
- c. The flow path from the refueling water tank via a charging pump to the Reactor Coolant System.

OR

At least two of the following three boron injection flow paths shall be OPERABLE:

- d. One flow path from each boric acid makeup tank with the combined tank contents meeting Specification 3.1.2.8 c), via both boric acid makeup pumps through a charging pump to the Reactor Coolant System.
- e. One flow path from each boric acid makeup tank with the combined tank contents meeting Specification 3.1.2.8 c), via both gravity feed valves through a charging pump to the Reactor Coolant System.
- f. The flow path from the refueling water tank, via a charging pump to the Reactor Coolant System.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one of the above required boron injection flow paths to the Reactor Coolant System OPERABLE, restore at least two boron injection flow paths to the Reactor Coolant System to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to its COLR limit at 200 °F within the next 6 hours; restore at least two flow paths to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.

TABLE 3.3-1 (Continued)

TABLE NOTATION

- * With the protective system trip breakers in the closed position, the CEA drive system capable of CEA withdrawal, and fuel in the reactor vessel.
- (a) Trip may be manually bypassed below 0.5% of RATED THERMAL POWER in conjunction with (d) below; bypass shall be automatically removed when Wide Range Logarithmic Neutron Flux power is greater than or equal to 0.5% of RATED THERMAL POWER.
 - (b) Trip may be manually bypassed below 705 psig; bypass shall be automatically removed at or above 705 psig.
 - (c) Trip may be bypassed below 15% of RATED THERMAL POWER; bypass shall be automatically removed when Power Range Neutron Flux power is greater than or equal to 15% of RATED THERMAL POWER.
 - (d) Trip may be bypassed during testing pursuant to Special Test Exception 3.10.3.
 - (e) Trip may be bypassed below $10^{-4}\%$ and above 15% of RATED THERMAL POWER; bypass shall be automatically removed when Wide Range Logarithmic Neutron Flux power is $\geq 10^{-4}\%$ and Power Range Neutron Flux power $\leq 15\%$ of RATED THERMAL POWER.
 - (f) Each channel shall be comprised of two trip breakers; actual trip logic shall be one-out-of-two taken twice.
 - (g) There shall be at least two decades of overlap between the Wide Range Logarithmic Neutron Flux Monitoring Channels and the Power Range Neutron Flux Monitoring Channels.

ACTION STATEMENTS

- ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and/or open the protective system trip breakers.

TABLE 3.3-3

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
1. SAFETY INJECTION (SIAS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	12
b. Containment Pressure – High	4	2	3	1, 2, 3	13, 14
c. Pressurizer Pressure – Low	4	2	3	1, 2, 3(a)	13, 14
d. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	12
2. CONTAINMENT SPRAY (CSAS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	12
b. Containment Pressure – High-High	4	2	3	1(b), 2(b), 3(b)	18A, 18B
c. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	12
3. CONTAINMENT ISOLATION (CIAS)					
a. Manual CIAS (Trip Buttons)	2	1	2	1, 2, 3, 4	12
b. Safety Injection (SIAS)	See Functional Unit 1 for all Safety Injection Initiating Functions and Requirements				
c. Containment Pressure – High	4	2	3	1, 2, 3	13, 14
d. Containment Radiation – High	4	2	3	1, 2, 3	13, 14
e. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	12

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
4. MAIN STEAM LINE ISOLATION (MSIS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3	16
b. Steam Generator Pressure – Low	4/steam generator	2/steam generator	3/steam generator	1, 2, 3(c)	13, 14
c. Containment Pressure – High	4	2	3	1, 2, 3	13, 14
d. Automatic Actuation Logic	2	1	2	1, 2, 3	12
5. CONTAINMENT SUMP RECIRCULATION (RAS)					
a. Manual RAS (Trip Buttons)	2	1	2	1, 2, 3, 4	12
b. Refueling Water Tank - Low	4	2	3	1, 2, 3	19
c. Automatic Actuation Logic	2	1	2	1, 2, 3	12

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
6. LOSS OF POWER (LOV)					
a. (1) 4.16 kV Emergency Bus Undervoltage (Loss of Voltage)	2/Bus	2/Bus	1/Bus	1, 2, 3	17
(2) 480 V Emergency Bus Undervoltage (Loss of Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3	17
b. (1) 4.16 kV Emergency Bus Undervoltage (Degraded Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3	17
(2) 480 V Emergency Bus Undervoltage (Degraded Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3	17
7. AUXILIARY FEEDWATER (AFAS)					
a. Manual (Trip Buttons)	4/SG	2/SG	4/SG	1, 2, 3	15
b. Automatic Actuation Logic	4/SG	2/SG	3/SG	1, 2, 3	15
c. SG Level (2A/2B) – Low	4/SG	2/SG	3/SG	1, 2, 3	20a, 20b, 21
8. AUXILIARY FEEDWATER ISOLATION					
a. SG 2A – SG 2B Differential Pressure	4/SG	2/SG	3/SG	1, 2, 3	20a, 20b, 21
b. Feedwater Header 2A – 2B Differential Pressure	4/SG	2/SG	3/SG	1, 2, 3	20a, 21

TABLE 3.3-3 (Continued)

TABLE NOTATION

- (a) Trip function may be bypassed in this MODE when pressurizer pressure is less than 1836 psia; bypass shall be automatically removed when pressurizer pressure is greater than or equal to 1836 psia.
- (b) An SIAS signal is first necessary to enable CSAS logic.
- (c) Trip function may be bypassed in this MODE below 700 psia; bypass shall be automatically removed at or above 700 psia.

ACTION OF STATEMENTS

ACTION 12 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 13 - With the number of channels OPERABLE one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may continue provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour. The channel shall be returned to OPERABLE status no later than during the next COLD SHUTDOWN.

With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below.

Process Measurement Circuit	Functional Unit Bypassed
1. Containment Pressure -	Containment Pressure – High (SIAS, CIAS, CSAS) Containment Pressure – High (RPS)
2. Steam Generator Pressure -	Steam Generator Pressure – Low (MSIS) AFAS-1 and AFAS-2 (AFAS) Thermal Margin/Low Pressure (RPS) Steam Generator Pressure – Low (RPS)
3. Steam Generator Level -	Steam Generator Level – Low (RPS) If SG-2A, then AFAS-1 (AFAS) If SG-2B, then AFAS-2 (AFAS)
4. Pressurizer Pressure -	Pressurizer Pressure – High (RPS) Pressurizer Pressure – Low (SIAS) Thermal Margin/Low Pressure (RPS)

TABLE 3.3-3 (Continued)

TABLE NOTATION

ACTION 14 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, STARTUP and/or POWER OPERATION may continue provided the following conditions are satisfied:

- a. Verify that one of the inoperable channels has been bypassed and place the other inoperable channel in the tripped condition within 1 hour.
- b. All functional units affected by the bypassed/tripped channel shall also be placed in the bypassed/tripped condition as listed below.

Process Measurement Circuit	Functional Unit Bypassed/Tripped
1. Containment Pressure -	Containment Pressure – High (SIAS, CIAS, CSAS) Containment Pressure – High (RPS)
2. Steam Generator Pressure -	Steam Generator Pressure – Low (MSIS) AFAS-1 and AFAS-2 (AFAS) Thermal Margin/Low Pressure (RPS) Steam Generator Pressure – Low (RPS)
3. Steam Generator Level -	Steam Generator Level – Low (RPS) If SG-2A, then AFAS-1 (AFAS) If SG-2B, then AFAS-2 (AFAS)
4. Pressurizer Pressure -	Pressurizer Pressure – High (RPS) Pressurizer Pressure – Low (SIAS) Thermal Margin/Low Pressure (RPS)

ACTION 15 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channels to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

ACTION 16 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the ACTION required by Specification 3.7.1.5.

ACTION 17 - With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or place the inoperable channel in the tripped condition and verify that the Minimum Channels OPERABLE requirement is demonstrated within 1 hour; one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

TABLE 3.3-3 (Continued)

TABLE NOTATION

- ACTION 18A - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in either the bypassed or tripped condition and the Minimum Channels OPERABLE requirement is demonstrated within 1 hour. If the inoperable channel can not be restored to OPERABLE status within 48 hours, then place the inoperable channel in the tripped condition.
 - b. With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed in ACTION 13.
- ACTION 18B - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, operation may proceed provided one of the inoperable channels has been bypassed and the other inoperable channel has been placed in the tripped condition within 1 hour. Restore one of the inoperable channels to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
- ACTION 19 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:
- a. Within 1 hour the inoperable channel is placed in either the bypassed or tripped condition. If OPERABILITY cannot be restored within 48 hours, or in accordance with the Risk Informed Completion Time Program be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
 - b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

TABLE 3.3-3 (Continued)

TABLE NOTATION

- ACTION 20 - With the number of channels OPERABLE one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. If an inoperable SG level channel can not be restored to OPERABLE status within 48 hours, then AFAS-1 or AFAS-2 as applicable in the inoperable channel shall be placed in the bypassed condition. If an inoperable SG DP or FW Header DP channel can not be restored to OPERABLE status within 48 hours, then both AFAS-1 and AFAS-2 in the inoperable channel shall be placed in the bypassed condition. The channel shall be returned to OPERABLE status no later than during the next COLD SHUTDOWN.
 - b. With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed in ACTION 13.
- ACTION 21 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE, operation may proceed provided one of the inoperable channels has been bypassed and the other inoperable channel placed in the tripped condition within 1 hour. Restore one of the inoperable channels to OPERABLE status within 48 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
5. CONTAINMENT SUMP RECIRCULATION (RAS)		
a. Manual RAS (Trip Buttons)	Not Applicable	Not Applicable
b. Refueling Water Tank – Low	5.67 feet above tank bottom	4.62 feet to 6.24 feet above tank bottom
c. Automatic Actuation Logic	Not Applicable	Not Applicable
6. LOSS OF POWER		
a. (1) 4.16 kV Emergency Bus Undervoltage (Loss of Voltage)	≥ 3120 volts	≥ 3120 volts
(2) 480 V Emergency Bus Undervoltage (Loss of Voltage)	≥ 360 volts	≥ 360 volts
b. (1) 4.16 kV Emergency Bus Undervoltage (Degraded Voltage)	≥ 3848 volts with < 10-second time delay	≥ 3848 volts with < 10-second time delay
(2) 480 V Emergency Bus Undervoltage (Degraded Voltage)	≥ 432 volts	≥ 432 volts
7. AUXILIARY FEEDWATER (AFAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Automatic Actuation Logic	Not Applicable	Not Applicable
c. SG 2A & 2B Level Low	$\geq 19.0\%$	$\geq 18.0\%$
8. AUXILIARY FEEDWATER ISOLATION		
a. Steam Generator ΔP – High	≤ 275 psid	89.2 to 281 psid
b. Feedwater Header ΔP – High	≤ 150.0 psid	56.0 to 157.5 psid

TABLE 4.3-2

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. SAFETY INJECTION (SIAS)				
a. Manual (Trip Buttons)	N.A.	N.A.	SFCP	1, 2, 3, 4
b. Containment Pressure – High	SFCP	SFCP	SFCP	1, 2, 3
c. Pressurizer Pressure – Low	SFCP	SFCP	SFCP	1, 2, 3
d. Automatic Actuation Logic	N.A.	N.A.	SFCP(1), SFCP(3)	1, 2, 3, 4
2. CONTAINMENT SPRAY (CSAS)				
a. Manual (Trip Buttons)	N.A.	N.A.	SFCP	1, 2, 3, 4
b. Containment Pressure – High-High	SFCP	SFCP	SFCP	1, 2, 3
c. Automatic Actuation Logic	N.A.	N.A.	SFCP(1), SFCP(3)	1, 2, 3, 4
3. CONTAINMENT ISOLATION (CIAS)				
a. Manual CIAS (Trip Buttons)	N.A.	N.A.	SFCP	1, 2, 3, 4
b. Safety Injection SIAS	N.A.	N.A.	SFCP	1, 2, 3, 4
c. Containment Pressure – High	SFCP	SFCP	SFCP	1, 2, 3
d. Containment Radiation – High	SFCP	SFCP	SFCP	1, 2, 3
e. Automatic Actuation Logic	N.A.	N.A.	SFCP(1), SFCP(3)	1, 2, 3, 4
4. MAIN STEAM LINE ISOLATION				
a. Manual (Trip Buttons)	N.A.	N.A.	SFCP	1, 2, 3
b. Steam Generator Pressure – Low	SFCP	SFCP	SFCP	1, 2, 3
c. Containment Pressure – High	SFCP	SFCP	SFCP	1, 2, 3
d. Automatic Actuation Logic	N.A.	N.A.	SFCP(1), SFCP(3)	1, 2, 3, 4
5. CONTAINMENT SUMP RECIRCULATION (RAS)				
a. Manual RAS (Trip Buttons)	N.A.	N.A.	SFCP	N.A.
b. Refueling Water Tank – Low	SFCP	SFCP	SFCP	1, 2, 3
c. Automatic Actuation Logic	N.A.	N.A.	SFCP(1), SFCP(3)	1, 2, 3

TABLE 3.3-10
ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>REQUIRED NUMBER OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Containment Pressure	2	1
2. Reactor Coolant Outlet Temperature – T _{Hot} (Wide Range)	2	1
3. Reactor Coolant Inlet Temperature – T _{Cold} (Wide Range)	2	1
4. Reactor Coolant Pressure – Wide Range	2	1
5. Pressurizer Water Level	2	1
6. Steam Generator Pressure	2/steam generator	1/steam generator
7. Steam Generator Water Level – Narrow Range	1/steam generator	1/steam generator
8. Steam Generator Water Level – Wide Range	1/steam generator*	1/steam generator*
9. Refueling Water Tank Water Level	2	1
10. Auxiliary Feedwater Flow Rate (Each pump)	1/pump*	1/pump*
11. Reactor Cooling System Subcooling Margin Monitor	2	1
12. PORV Position/Flow Indicator	2/valve***	1/valve**
13. PORV Block Valve Position Indicator	1/valve**	1/valve**
14. Safety Valve Position/Flow Indicator	1/valve***	1/valve***
15. Containment Sump Water Level (Narrow Range)	1****	1****
16. Containment Water Level (Wide Range)	2	1
17. Incore Thermocouples	4/core quadrant	2/core quadrant
18. Reactor Vessel Level Monitoring System	2*****	1*****

* These corresponding instruments may be substituted for each other.

** Not required if the PORV block valve is shut and power is removed from the operator.

*** If not available, monitor the quench tank pressure, level and temperature, and each safety valve/PORV discharge piping temperature at least once every 12 hours.

**** The non-safety grade containment sump water level instrument may be substituted.

***** Definition of OPERABLE: A channel consists of eight (8) sensors in a probe of which four (4) sensors must be OPERABLE.

REACTOR COOLANT SYSTEM

OPERATING

LIMITING CONDITION FOR OPERATION

NOTE

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

- 3.4.2.2 All pressurizer code safety valves shall be OPERABLE with a lift setting of ≥ 2410.3 psig and ≤ 2560.3 psig.

APPLICABILITY: MODES 1, 2, 3, and 4 with all RCS cold leg temperatures $> 230^{\circ}\text{F}$.

ACTION:

- a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or in accordance with the Risk Informed Completion Time Program, or be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the next 6 hours.
- b. With two or more pressurizer code safety valves inoperable, be in HOT STANDBY within 6 hours and in HOT SHUTDOWN with all RCS cold leg temperatures at $\leq 230^{\circ}\text{F}$ within the next 6 hours.

SURVEILLANCE REQUIREMENTS

- 4.4.2.2 Verify each pressurizer code safety valve is OPERABLE in accordance with the Inservice Testing Program. Following testing, as-left lift settings shall be within $\pm 1\%$ of 2500 psia.

REACTOR COOLANT SYSTEM

3/4.4.4 PORV BLOCK VALVES

LIMITING CONDITION FOR OPERATION

- 3.4.4 Each Power Operated Relief Valve (PORV) Block valve shall be OPERABLE.
No more than one block valve shall be open at any one time.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one or more block valve(s) inoperable, within 1 hour or in accordance with the Risk Informed Completion Time Program either restore the block valve(s) to OPERABLE status or close the block valve(s) and remove power from the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With both block valves open, close one block valve within 1 hour, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

- 4.4.4 Each block valve shall be demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program by operating the valve through one complete cycle of full travel unless the block valve is closed with power removed in order to meet the requirements of Action a. or b. above.

3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3/4.5.1 SAFETY INJECTION TANKS (SIT)

LIMITING CONDITION FOR OPERATION

- 3.5.1 Each Reactor Coolant System safety injection tank shall be OPERABLE with:
- The isolation valve open,
 - A contained borated water volume of between 1420 and 1556 cubic feet,
 - A boron concentration of between 1900 and 2200 ppm of boron, and
 - A nitrogen cover-pressure of between 500 and 650 psig.

NOTE

When in MODE 3 with pressurizer pressure is less than 1750 psia, at least three safety injection tanks shall be OPERABLE, each with a minimum pressure of 235 psig and a maximum pressure of 650 psig and a contained water volume of between 1250 and 1556 cubic feet with a boron concentration of between 1900 and 2200 ppm of boron. With all four safety injection tanks OPERABLE, each tank shall have a minimum pressure of 235 psig and a maximum pressure of 650 psig and a contained water volume of between 833 and 1556 cubic feet with a boron concentration of between 1900 and 2200 ppm of boron.

APPLICABILITY: MODES 1, 2 and 3 with pressurizer pressure \geq 1750 psia.

ACTION:

- With one SIT inoperable due to boron concentration not within limits, or due to an inability to verify the required water volume or nitrogen cover-pressure, restore the inoperable SIT to OPERABLE status with 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- With one SIT inoperable due to reasons other than those stated in ACTION-a, restore the inoperable SIT to OPERABLE status within 24 hours or in accordance with the Risk Informed Completion Time Program; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

- 4.5.1.1 Each safety injection tank shall be demonstrated OPERABLE:
- In accordance with the Surveillance Frequency Control Program by:
 - Verifying that the borated water volume and nitrogen cover-pressure in the tanks are within their limits, and
 - Verifying that each safety injection tank isolation valve is open.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS SUBSYSTEMS - OPERATING

LIMITING CONDITION FOR OPERATION

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

- a. One OPERABLE high pressure safety injection pump,
- b. One OPERABLE low pressure safety injection pump, and
- c. An independent OPERABLE flow path capable of taking suction from the refueling water tank on a Safety Injection Actuation Signal and automatically transferring suction to the containment sump on a Recirculation Actuation Signal, and

NOTE

One ECCS subsystem charging pump shall satisfy the flow path requirements of Specification 3.1.2.2.a or 3.1.2.2.d. The second ECCS subsystem charging pump shall satisfy the flow path requirements of Specification 3.1.2.2.b or 3.1.2.2.e.

- d. One OPERABLE charging pump.

APPLICABILITY: MODES 1, 2, and 3 with pressurizer pressure \geq 1750 psia.

ACTION:

- a.
 1. With one ECCS subsystem inoperable only because its associated LPSI train is inoperable, restore the inoperable subsystem to OPERABLE status within 7 days or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
 2. With one ECCS subsystem inoperable for reasons other than condition a.1., restore the inoperable subsystem to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

CONTAINMENT SYSTEMS

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE with:

- a. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and
- b. An overall air lock leakage rate in accordance with the Containment Leakage Rate Testing Program.

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

ACTION:

NOTE

If the inner air lock door is inoperable, passage through the OPERABLE outer air lock door is permitted to effect repairs to the inoperable inner air lock door. No more than one airlock door shall be open at any time.

- a. With one containment air lock door inoperable:
 1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed.
 2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days.
 3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- b. With one or both containment air lock(s) inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed in the affected air lock(s) and restore the inoperable air lock to OPERABLE status within 24 hours or in accordance with the Risk Informed Completion Time Program; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.6.1.7 Each containment purge supply and exhaust isolation valve shall be OPERABLE and:
- a. Each 48-inch containment purge supply and exhaust isolation valve shall be sealed closed.
 - b. The 8-inch containment purge supply and exhaust isolation valves may be open for purging and/or venting as required for safety related purposes such as:
 1. Maintaining containment pressure within the limits of Specification 3.6.1.4.
 2. Reducing containment atmosphere airborne radioactivity and/or improving air quality to an acceptable level for containment access.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With a 48-inch containment purge supply and/or exhaust isolation valve(s) open or not sealed closed, close and/or seal close the open valve(s) or isolate the penetration(s) within 4 hours or in accordance with the Risk Informed Completion Time Program; otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With an 8-inch containment purge supply and/or exhaust isolation valve(s) open for reasons other than those stated in Specification 3.6.1.7.b, close the open 8-inch valve(s) or isolate the penetration(s) within 4 hours or in accordance with the Risk Informed Completion Time Program; otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate exceeding the limits of Surveillance Requirements 4.6.1.7.3 and/or 4.6.1.7.4, within 24 hours or in accordance with the Risk Informed Completion Time Program either restore the inoperable valve(s) to OPERABLE status or isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve with resilient seals or blind flange, verify the affected penetration flowpath is isolated, and perform Surveillance Requirement 4.6.1.7.3 or 4.6.1.7.4 for resilient seated valves closed to isolate the penetration flowpath, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
 1. Closed and de-activated automatic valve(s) with resilient seals used to isolate the penetration flowpath(s) shall be tested in accordance with either Surveillance Requirement 4.6.1.7.3 for 48-inch valves at least once per 6 months or Surveillance Requirement 4.6.1.7.4 for 8-inch valves at least once per 92 days.

NOTE

Verification of isolation devices by administrative means is acceptable when they are located in high radiation areas or they are locked, sealed, or otherwise secured by administrative means.

2. Verify the affected penetration flowpath is isolated once per 31 days following isolation for isolation devices outside containment and prior to entering MODE 4 from MODE 5 for isolation devices inside containment if not performed within the previous 92 days.

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY AND COOLING SYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two containment spray trains and two containment cooling trains shall be OPERABLE.

APPLICABILITY: Containment Spray System: MODES 1, 2, and MODE 3 with Pressurizer Pressure \geq 1750 psia.

Containment Cooling System: MODES 1, 2, and 3.

ACTION:

1. Modes 1, 2, and 3 with Pressurizer Pressure \geq 1750 psia:
 - a. With one containment spray train inoperable, restore the inoperable spray train to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program; otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 54 hours.
 - b. With one containment cooling train inoperable, restore the inoperable cooling train to OPERABLE status within 7 days or in accordance with the Risk Informed Completion Time Program; otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours.
 - c. With one containment spray train and one containment cooling train inoperable, concurrently implement ACTIONS a. and b. The completion intervals for ACTION a. and ACTION b. shall be tracked separately for each train starting from the time each train was discovered inoperable.

NOTE

Action not applicable when second containment spray train intentionally made inoperable.

- d. With two containment spray trains inoperable, within 1 hour verify TS 3.7.7, "CREACS," is met, and restore at least one containment spray train to OPERABLE status within 24 hours; otherwise, be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours.
 - e. With two containment cooling trains inoperable, restore one cooling train to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program; otherwise be in MODE 3 within the next 6 hours and in MODE 4 within the following 6 hours.
 - f. With any combination of three or more trains inoperable, enter LCO 3.0.3 immediately.
2. Mode 3 with Pressurizer Pressure < 1750 psia:
 - a. With one containment cooling train inoperable, restore the inoperable cooling train to OPERABLE status within 72 hours; otherwise be in MODE 4 within the next 6 hours.
 - b. With two containment cooling trains inoperable, enter LCO 3.0.3 immediately.

CONTAINMENT SYSTEMS

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 The containment isolation valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of containment isolation valve(s) inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

- a. Restore the inoperable valve(s) to OPERABLE status within 4 hours or in accordance with the Risk Informed Completion Time Program, or
- b. Isolate each affected penetration within 4 hours or in accordance with the Risk Informed Completion Time Program by use of at least one deactivated automatic valve secured in the isolation position, or
- c. Isolate each affected penetration within 4 hours or in accordance with the Risk Informed Completion Time Program by use of at least one closed manual valve or blind flange; or
- d. Be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

4.6.3.1 The containment isolation valves shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test and verification of isolation time.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.7.1.2 At least three independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:
- Two feedwater pumps, each capable of being powered from separate OPERABLE emergency busses, and
 - One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- With one auxiliary feedwater pump inoperable, restore the auxiliary feedwater pump to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- With two auxiliary feedwater pumps inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

NOTE

LCO 3.0.3 and all other LCO Actions requiring MODE changes are suspended until one AFW pump is restored to OPERABLE status.

- With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status.
- LCO 3.0.4.b is not applicable.

SURVEILLANCE REQUIREMENTS

- 4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:
- In accordance with the Surveillance Frequency Control Program by:
 - Verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

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

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

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

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

SURVEILLANCE REQUIREMENTS

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

PLANT SYSTEMS

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

NOTE

When CCW pump 2C is being used to satisfy the requirements of this specification, the alignment of the discharge valves shall be verified to be consistent with the appropriate power supply at least once per 24 hours. Upon receipt of annunciation for improper alignment of the pump 2C motor power in relation to any of its motor-operated discharge valves positions, restore proper system alignment within 2 hours.

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

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

ACTION:

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

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

- a. In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power-operated or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. In accordance with the Surveillance Frequency Control Program during shutdown by verifying that each automatic valve servicing safety-related equipment actuates to its correct position on an SIAS test signal.

PLANT SYSTEMS

3/4.7.4 INTAKE COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

NOTE

When ICW pump 2C is being used to satisfy the requirements of this specification, the alignment of the discharge valves must be verified to be consistent with the appropriate power supply at least once per 24 hours.

3.7.4 At least two independent intake cooling water loops shall be OPERABLE.

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

ACTION:

With only one intake cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

SURVEILLANCE REQUIREMENTS

- 4.7.4 At least two intake cooling water loops shall be demonstrated OPERABLE:
- a. In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed or otherwise secured in position, is in its correct position.
 - b. In accordance with the Surveillance Frequency Control Program during shutdown, by verifying that each automatic valve servicing safety-related equipment actuates to its correct position on a SIAS test signal.

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

- 3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:
- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
 - b. Two separate and independent diesel generators, each with:
 1. Two separate engine-mounted fuel tanks containing a minimum volume of 200 gallons of fuel each,
 2. A separate fuel storage system containing a minimum volume of 42,500 gallons of fuel, and
 3. A separate fuel transfer pump.

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

ACTION:

- a. With one offsite circuit of 3.8.1.1.a inoperable, except as provided in Action f. below, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

NOTE

If the absence of any common-cause failure cannot be confirmed, this test shall be completed regardless of when the inoperable EDG is restored to OPERABILITY.

- b. With one diesel generator of 3.8.1.1.b inoperable, demonstrate the OPERABILITY of the A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2a.4 within 8 hours, unless it can be confirmed that the cause of the inoperable EDG does not exist on the remaining EDG; restore the diesel generator to OPERABLE status within 14 days or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Additionally, within 4 hours from the discovery of concurrent inoperability of required redundant feature(s) (including the steam driven auxiliary feed pump in MODE 1, 2, and 3), declare required feature(s) supported by the inoperable EDG inoperable if its redundant required feature(s) is inoperable.

ELECTRICAL POWER SYSTEMS

ACTION: (Continued)

NOTE

If the absence of any common-cause failure cannot be confirmed, this test shall be completed regardless of when the inoperable EDG is restored to OPERABILITY.

- c. With one offsite A.C. circuit and one diesel generator inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2a.4 within 8 hours, unless it can be confirmed that the cause of the inoperable EDG does not exist on the remaining EDG. Restore at least one of the inoperable sources to OPERABLE status within 12 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Restore the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with the provisions of Section 3.8.1.1 ACTION Statement a or b, as appropriate, with the time requirement of that ACTION Statement based on the time of the initial loss of the remaining inoperable A.C. power source. Additionally, within 4 hours from the discovery of concurrent inoperability of required redundant feature(s) (including the steam driven auxiliary feed pump in MODE 1, 2, and 3), declare required feature(s) supported by the inoperable EDG inoperable if its redundant required feature(s) is inoperable.

ELECTRICAL POWER SYSTEMS

ACTION: (Continued)

- d. With two of the required offsite A.C. circuits inoperable, restore one of the inoperable offsite sources to OPERABLE status within 24 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours. Following restoration of one offsite source, follow ACTION Statement a. with the time requirement of that ACTION Statement based on the time of the initial loss of the remaining inoperable offsite A.C. circuit.
- e. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; restore one of the inoperable diesel generators to OPERABLE status within 2 hours or be in the at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN. Following restoration of one diesel generator unit, follow ACTION Statement b. with the time requirement of that ACTION Statement based on the time of initial loss of the remaining inoperable diesel generator.
- f. With one Unit 2 startup transformer (2A or 2B) inoperable and with a Unit 1 startup transformer (1A or 1B) connected to the same A or B offsite power circuit and administratively available to both units, then should Unit 1 require the use of the startup transformer administratively available to both units, Unit 2 shall demonstrate the operability of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter. Restore the inoperable startup transformer to OPERABLE status within 72 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- g. LCO 3.0.4.b is not applicable to diesel generators.

SURVEILLANCE REQUIREMENTS

- 4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:
 - a. Determined OPERABLE in accordance with the Surveillance Frequency Control Program by verifying correct breaker alignments, indicated power availability; and
 - b. Demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program by transferring (manually and automatically) unit power supply from the normal circuit to the alternate circuit.
- 4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:
 - a. In accordance with the Surveillance Frequency Control Program by:

ELECTRICAL POWER SYSTEMS

3/4.8.2 D.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

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

- a. 125-volt Battery bank No. 2A and a full capacity charger.
- b. 125-volt Battery bank No. 2B and a full capacity charger.

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

ACTION:

- a. With one of the required battery banks inoperable, restore the inoperable battery bank to OPERABLE status within 2 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- b. With one of the required full capacity chargers inoperable, demonstrate the OPERABILITY of its associated battery banks by performing Surveillance Requirement 4.8.2.1a.1 within 1 hour, and at least once per 8 hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable.

SURVEILLANCE REQUIREMENTS

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

- a. In accordance with the Surveillance Frequency Control Program by verifying that:
 1. The parameters in Table 4.8-2 meet the Category A limits, and
 2. The total battery terminal voltage is greater than or equal to 129-volts on float charge.

ELECTRICAL POWER SYSTEMS

ACTION:

- a. With one of the required trains of A.C. Emergency busses not fully energized, re-energize the train within 8 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one A.C. Instrument Bus either not energized from its associated inverter, or with the inverter not connected to its associated D.C. Bus: (1) re-energize the A.C. Instrument Bus within 2 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours and (2) re-energize the A.C. Instrument Bus from its associated inverter connected to its associated D.C. Bus within 24 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.
- c. With one D.C. Bus not energized from its associated Battery Bank, re-energize the D.C. Bus from its associated Battery Bank within 2 hours or in accordance with the Risk Informed Completion Time Program, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

- 4.8.3.1 The specified busses shall be determined energized in the required manner in accordance with the Surveillance Frequency Control Program by verifying correct breaker alignment and indicated voltage on the busses.

ADMINISTRATIVE CONTROLS

q. Surveillance Frequency Control Program

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

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

r. Risk Informed Completion Time Program

This program provides controls to calculate a Risk Informed Completion Time (RICT) and must be implemented in accordance with NEI 06-09, "Risk-Informed Technical Specifications Initiative 4b: Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0-A, November 2006. The program shall include the following:

- a. The RICT may not exceed 30 days;
- b. A RICT may only be utilized in MODES 1 and 2;
- c. When a RICT is being used, any plant configuration change within the scope of the Risk Informed Completion Time Program must be considered for the effect on the RICT.
 1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.
 2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.
 3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.
- d. Use of a RICT is not permitted for 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.

ADMINISTRATIVE CONTROLS

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

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

STARTUP REPORT

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

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

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

ATTACHMENT 7

St. Lucie Unit 1
Markup of Technical Specifications Bases

INSERT 1

Alternatively, a Completion Time can be determined in accordance with the Risk Informed Completion Time Program.

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BASES FOR SECTION 3/4.5

3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

BASES

3/4.5.1 SAFETY INJECTION TANKS

The OPERABILITY of each of the RCS safety injection tanks ensures that a sufficient volume of borated water will be immediately forced into the reactor core through each of the cold legs in the event the RCS pressure falls below the pressure of the safety injection tanks. This initial surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures.

The limits on safety injection tank volume, boron concentration and pressure ensure that the assumptions used for safety injection tank injection in the accident analysis are met.

The limit of 72 hours for operation with an SIT that is inoperable due to boron concentration not within limits, or due to the inability to verify liquid volume or cover-pressure, considers that the volume of the SIT is still available for injection in the event of a LOCA. If one SIT is inoperable for other reasons, the SIT may be unable to perform its safety function and, based on probability risk assessment, operation in this condition is limited to 24 hours.

↑
INSERT 1

SECTION NO.: 3/4.5	TITLE: TECHNICAL SPECIFICATIONS BASES ATTACHMENT 7 OF ADM-25.04 EMERGENCY CORE COOLING SYSTEMS (ECCS) ST. LUCIE UNIT 1	PAGE: 4 of 8
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3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS) (continued)

BASES (continued)

3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS

The OPERABILITY of two separate and independent ECCS subsystems ensures that sufficient emergency core cooling capability will be available in the event of a LOCA assuming the loss of one subsystem through any single failure consideration. Either subsystem operating in conjunction with the safety injection tanks is capable of supplying sufficient core cooling to limit the peak cladding temperatures within acceptable limits for all postulated break sizes ranging from the double ended break of the largest RCS cold leg pipe downward. In addition, each ECCS subsystem provides long term core cooling capability in the recirculation mode during the accident recovery period. Managing of gas voids is important to ECCS OPERABILITY.

TS 3.5.2.c and 3.5.3.a require that ECCS subsystem(s) have an independent OPERABLE flow path capable of automatically transferring suction to the containment sump on a Recirculation Actuation Signal. The containment sump is defined as the area of containment below the minimum flood level in the vicinity of the containment sump strainers. Therefore, the LCOs are satisfied when an independent OPERABLE flow path to the containment sump strainer is available.

TS 3.5.2.d requires that an ECCS subsystem(s) have OPERABLE charging pump and associated flow path from the BAMT(s). Reference to TS 3.1.2.2 requires that the Train A charging pump flowpath is from the BAMT(s) through the boric acid makeup pump(s). The Train B charging pump flowpath is from the BAMT(s) through the gravity feed valve(s).

INSERT 1

TS 3.5.2, ACTION a.1. provides an allowed outage/action completion time (AOT) of up to 7 days from initial discovery of failure to meet the LCO provided the affected ECCS subsystem is inoperable only because its associated LPSI train is inoperable. ~~This 7 day AOT is based on the findings of a deterministic and probabilistic safety analysis and is referred to as a "risk informed" AOT extension. Entry into this ACTION requires that a risk assessment be performed in accordance with the Configuration Risk Management Program (CRMP) which is described in the ER-AA-100-2002, that implements the Maintenance Rule pursuant to 10 CFR 50.65.~~

SECTION NO.: 3/4.6	TITLE: TECHNICAL SPECIFICATIONS BASES ATTACHMENT 8 OF ADM-25.04	PAGE: 7 of 17
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<p>3/4.6 CONTAINMENT SYSTEMS (continued)</p> <p><u>BASES</u> (continued)</p> <p>3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS</p> <p>3/4.6.2.1 CONTAINMENT SPRAY AND COOLING SYSTEMS</p> <p>The OPERABILITY of the containment spray and cooling systems ensures that depressurization and cooling capability will be available to limit post-accident pressure and temperature in the containment to acceptable values. During a Design Basis Accident (DBA), at least one containment cooling train and one containment spray train are capable of maintaining the peak pressure and temperature within design limits. One containment spray train has the capability, in conjunction with the Spray Additive System, to remove iodine from the containment atmosphere and maintain concentrations below those assumed in the safety analyses. To ensure that these conditions can be met considering single-failure criteria, two spray trains and two cooling trains must be OPERABLE. Managing of gas voids is important to containment spray system OPERABILITY.</p> <p>The 72 hour action interval specified in ACTION 1.a and ACTION 1.e, and the 7 day action interval specified in ACTION 1.b take into account the redundant heat removal capability and the iodine removal capability of the remaining operable systems, and the low probability of a DBA occurring during this period. It is possible to alternate between Actions 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 for the Action Time. Alternating between Actions in order to continue operation indefinitely while not meeting the LCO is not allowed. If the system(s) cannot be restored to OPERABLE status within the specified completion time, alternate actions are designed to bring the unit to a mode for which the LCO does not apply. The extended interval (54 hours) specified in ACTION 1.a to be in MODE 4 includes 48 hours of additional time for restoration of the inoperable CS train, and takes into consideration the reduced driving force for a release of radioactive material from the RCS when in MODE 3. With two required containment spray trains inoperable, at least one of the required containment spray trains must be restored to OPERABLE status within 24 hours. Both trains of containment cooling must be OPERABLE or Action e is also entered. The Action is modified by a Note stating it is not applicable if the second containment spray train is intentionally declared inoperable. The Action does not apply to voluntary removal of redundant system or components from service. The Action is only applicable if one train is inoperable for any reason and the second train is discovered to be inoperable, or if both trains are discovered to be inoperable at the same time. In addition, LCO 3.7.7, "Control Room Emergency Ventilation System," must be verified to be met within 1 hour. The components in this degraded condition are capable of providing greater than 100% of the heat removal needs after an accident.</p>		

INSERT 1

SECTION NO.: 3/4.8	TITLE: TECHNICAL SPECIFICATIONS BASES ATTACHMENT 10 OF ADM-25.04 ELECTRICAL POWER SYSTEMS ST. LUCIE UNIT 1	PAGE: 4 of 8
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3/4.8 ELECTRICAL POWER SYSTEMS (continued)

BASES (continued)

INSERT 1

TS 3.8.1.1, ACTION "b" provides an allowed outage/action completion time (AOT) of up to 14 days to restore a single inoperable diesel generator to operable status. ~~This AOT is based on the findings of a deterministic and probabilistic safety analysis and is referred to as a "risk informed" AOT. Entry into this action requires that a risk assessment be performed in accordance with the Configuration Risk Management Program (CRMP), which is described in the Administrative Procedure that implements the Maintenance Rule pursuant to 10 CFR 50.65.~~

All EDG inoperabilities must be investigated for common-cause failures regardless of how long the EDG inoperability persists. When one diesel generator is inoperable, required ACTIONS 3.8.1.1.b and 3.8.1.1.c provide an allowance to avoid unnecessary testing of EDGs. If it can be determined that the cause of the inoperable EDG does not exist on the remaining OPERABLE EDG, then SR 4.8.1.1.2.a.4 does not have to be performed. Eight (8) hours is reasonable to confirm that the OPERABLE EDG is not affected by the same problem as the inoperable EDG. If it cannot otherwise be determined that the cause of the initial inoperable EDG does not exist on the remaining EDG, then satisfactory performance of SR 4.8.1.1.2.a.4 suffices to provide assurance of continued OPERABILITY of that EDG. If the cause of the initial inoperability exists on the remaining OPERABLE EDG, that EDG would also be declared inoperable upon discovery, and ACTION 3.8.1.1.e would be entered. Once the failure is repaired (on either EDG), the common-cause failure no longer exists.

Action g prohibits the application of LCO 3.0.4.b to an inoperable diesel generator. There is an increased risk associated with entering a MODE or other specified condition in the Applicability with an inoperable diesel generator and the provisions of LCO 3.0.4.b, which allow entry into a MODE or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, should not be applied in this circumstance.

Ambient conditions are the normal standby conditions for the diesel engines. Any normally running warmup systems should be in service and operating, and manufacturer's recommendations for engine oil and water temperatures and other parameters should be followed.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

ATTACHMENT 8

St. Lucie Unit 2
Markup of Technical Specifications Bases

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Alternatively, a Completion Time can be determined in accordance with the Risk Informed Completion Time Program.

SECTION NO.: 3/4.5	TITLE: TECHNICAL SPECIFICATIONS BASES ATTACHMENT 7 OF ADM-25.04 EMERGENCY CORE COOLING SYSTEMS (ECCS) ST. LUCIE UNIT 2	PAGE: 3 of 8
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BASES FOR SECTION 3/4.5

3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

BASES

3/4.5.1 SAFETY INJECTION TANKS

The OPERABILITY of each of the Reactor Coolant System (RCS) safety injection tanks ensures that a sufficient volume of borated water will be immediately forced into the reactor core through each of the cold legs in the event the RCS pressure falls below the pressure of the safety injection tanks. This initial surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures.

The limits on safety injection tank volume, boron concentration, and pressure ensure that the assumptions used for safety injection tank injection in the safety analysis are met.

The safety injection tank power-operated isolation valves are considered to be "operating bypasses" in the context of IEEE Std. 279-1971, which requires that bypasses of a protective function be removed automatically whenever permissive conditions are not met. In addition, as these safety injection tank isolation valves fail to meet single failure criteria, removal of power to the valves is required.

The limit of 72 hours for operation with an SIT that is inoperable due to boron concentration not within limits, or due to the inability to verify liquid volume or cover-pressure, considers that the volume of the SIT is still available for injection in the event of a LOCA. If one SIT is inoperable for other reasons, the SIT may be unable to perform its safety function and, based on probability risk assessment, operation in this condition is limited to 24 hours.

↖ INSERT 1

The practice of calibrating and testing the SIT isolation valve interlock function below 515 psia (the current plant practice is to set and test the interlock function at 500 psia) meets the requirements of Technical Specification Surveillance 4.5.1.1.d.1. The staff accepted that testing the SIT isolation interlock at a more conservative setpoint demonstrates operability at and above the setpoint (NRC letter from William C. Gleaves to J.A. Stall dated November 2, 1999, subject "St. Lucie Unit 2 – Amendment Request Regarding Safety Injection Tank and Shutdown Cooling System Isolation Interlock Surveillances (TAC No. MA5619)."

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3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS) (continued)

BASES (continued)

3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS

The OPERABILITY of two separate and independent ECCS subsystems ensures that sufficient emergency core cooling capability will be available in the event of a LOCA assuming the loss of one subsystem through any single failure consideration. Either subsystem operating in conjunction with the safety injection tanks is capable of supplying sufficient core cooling to limit the peak cladding temperatures within acceptable limits for all postulated break sizes ranging from the double-ended break of the largest RCS hot leg pipe downward. In addition, each ECCS subsystem provides long-term core cooling capability in the recirculation mode during the accident recovery period. Managing of gas voids is important to shutdown cooling system OPERABILITY.

TS 3.5.2.c and 3.5.3 require that ECCS subsystem(s) have an independent OPERABLE flow path capable of automatically transferring suction to the containment on a Recirculation Actuation Signal. The containment sump is defined as the area of containment below the minimum flood level in the vicinity of the containment sump strainers. Therefore, the LCOs are satisfied when an independent OPERABLE flow path to the containment sump strainer is available.

TS 3.5.2.d requires that an ECCS subsystem(s) have an OPERABLE charging pump and associated flow path from the BAMT(s). Reference to TS 3.1.2.2 requires that the one charging pump flow path is from the BAMT(s) through the boric acid makeup pump(s). The second charging pump flowpath is from the BAMT(s) through the gravity feed valves.

INSERT 1

TS 3.5.2, ACTION a.1. provides an allowed outage/action completion time (AOT) of up to 7 days from initial discovery of failure to meet the LCO provided the affected ECCS subsystem is inoperable only because its associated LPSI train is inoperable. ~~This 7 day AOT is based on the findings of a deterministic and probabilistic safety analysis and is referred to as a "risk informed" AOT extension. Entry into this ACTION requires that a risk assessment be performed in accordance with the Configuration Risk Management Program (CRMP) which is described in ER-AA-100-2002, that implements the Maintenance Rule pursuant to 10 CFR 50.65.~~

In Mode 3 with RCS pressure < 1750 psia and in Mode 4, one OPERABLE ECCS subsystem is acceptable without single failure consideration on the basis of the stable reactivity condition of the reactor and the limited core cooling requirements.

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3/4.6 CONTAINMENT SYSTEMS (continued)

BASES (continued)

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY AND COOLING SYSTEMS

The OPERABILITY of the containment spray and cooling systems ensures that depressurization and cooling capability will be available to limit post-accident pressure and temperature in the containment to acceptable values. During a Design Basis Accident (DBA), at least one containment cooling train and one containment spray train are capable of maintaining the peak pressure and temperature within design limits. One containment spray train has the capability, in conjunction with the Iodine Removal System, to remove iodine from the containment atmosphere and maintain concentrations below those assumed in the safety analyses. To ensure that these conditions can be met considering single-failure criteria, two spray trains and two cooling trains must be OPERABLE. Managing of gas voids is important to shutdown cooling system OPERABILITY.

INSERT 1

The 72 hour action interval specified in ACTION 1.a and ACTION 1.e, and the 7 day action interval specified in ACTION 1.b take into account the redundant heat removal capability and the iodine removal capability of the remaining operable systems, and the low probability of a DBA occurring during this period. It is possible to alternate between Actions 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 for the Action Time. Alternating between Actions in order to continue operation indefinitely while not meeting the LCO is not allowed. If the system(s) cannot be restored to OPERABLE status within the specified completion time, alternate actions are designed to bring the unit to a mode for which the LCO does not apply. The extended interval (54 hours) specified in ACTION 1.a to be in MODE 4 includes 48 hours of additional time for restoration of the inoperable CS train, and takes into consideration the reduced driving force for a release of radioactive material from the RCS when in MODE 3. With two required containment spray trains inoperable, at least one of the required containment spray trains must be restored to OPERABLE status within 24 hours. Both trains of containment cooling must be OPERABLE or Action e is also entered. The Action is modified by a Note stating it is not applicable if the second containment spray train is intentionally declared inoperable. The Action does not apply to voluntary removal of redundant systems or components from service. The Action is only applicable if one train is inoperable for any reason and the second train is discovered to be inoperable, or if both trains are discovered to be inoperable at the same time. In addition, LCO 3.7.7, "CREACS," must be verified to be met within 1 hour. The components in this degraded condition are capable of providing a greater than 100% of the heat removal needs after an accident. The Allowed Outage time is based on Reference 1 which demonstrated that the 24-hour Allowed Outage.

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3/4.8 ELECTRICAL POWER SYSTEMS (continued)

BASES (continued)

3/4.8.1, 3/4.8.2 and 3/4.8.3 A.C. SOURCES, D.C. SOURCES and ONSITE POWER DISTRIBUTION SYSTEMS (continued)

The four hour completion time upon discovery that an opposite train required feature is inoperable is to provide assurance that a loss of offsite power, during the period that a EDG is inoperable, does not result in a complete loss of safety function of critical redundant required features. The four hour completion time allows the operator time to evaluate and repair any discovered inoperabilities. This completion time also allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." The four hour completion time only begins on discovery that both an inoperable EDG exists and a required feature on the other train is inoperable.

INSERT 1

TS 3.8.1.1, ACTION "b" provides an allowed outage/action completion time (AOT) of up to 14 days to restore a single inoperable diesel generator to operable status. ~~This AOT is based on the findings of a deterministic and probabilistic safety analysis and is referred to as a "risk informed" AOT. Entry into this action requires that a risk assessment be performed in accordance with the Configuration Risk Management Program (CRMP), which is described in the Administrative Procedure that implements the Maintenance Rule pursuant to 10 CFR 50.65.~~

All EDG inoperabilities must be investigated for common-cause failures regardless of how long the EDG inoperability persists. When one diesel generator is inoperable, required ACTIONS 3.8.1.1.b and 3.8.1.1.c provide an allowance to avoid unnecessary testing of EDGs. If it can be determined that the cause of the inoperable EDG does not exist on the remaining OPERABLE EDG, then SR 4.8.1.1.2.a.4 does not have to be performed. Eight (8) hours is reasonable to confirm that the OPERABLE EDG is not affected by the same problem as the inoperable EDG. If it cannot otherwise be determined that the cause of the initial inoperable EDG does not exist on the remaining EDG, then satisfactory performance of SR 4.8.1.1.2.a.4 suffices to provide assurance of continued OPERABILITY of that EDG. If the cause of the initial inoperability exists on the remaining OPERABLE EDG, that EDG would also be declared inoperable upon discovery, and ACTION 3.8.1.1.e would be entered. Once the failure is repaired (on either EDG), the common-cause failure no longer exists.