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Exelon SM
Nuclear

10 CFR 50.90

RS-06-141

October 18, 2006

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

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject: Application for Technical Specification Change TSTF-423, Risk Informed Modification to Selected Required Action End States for BWR Plants, Using the Consolidated Line Item Improvement Process

Reference: TSTF-423, Revision 0, "Technical Specifications End States, NEDC-32988-A"

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (EGC) is requesting a change to the Technical Specifications (TS) of Facility Operating License Nos. NPF-11 and NPF-18 for LaSalle County Station (LSCS), Units 1 and 2. The proposed amendment would modify TS to risk-inform requirements regarding selected Required Action End States as provided in the referenced document.

Attachment 1 provides a description of the proposed change, the requested confirmation of applicability, and plant-specific verifications. Attachment 2 provides the existing TS pages marked up to show the proposed change. Attachment 3 provides the existing TS Bases pages marked up to show the proposed change. The TS Bases pages are provided for information only and do not require NRC approval. Attachment 4 provides a summary of the regulatory commitments made in this submittal.

Changes to TS are generally consistent with the changes outlined in the referenced document; minor deviations are discussed in Attachment 1. While the LSCS Units 1 and 2 TS are based on both NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," and NUREG-1434," Standard Technical Specifications General Electric Plants, BWR/6," they are not identical to either. Therefore, an adaptation of the referenced document was required.

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EGC requests approval of the proposed license amendment by October 31st, 2007, with implementation within 120 days of issuance.

This amendment request has been reviewed by the LSCS Plant Operations Review Committee and approved by the Nuclear Safety Review Board in accordance with the requirements of the EGC Quality Assurance Program.

In accordance with 10 CFR 50.91, "Notice for public comment," EGC is notifying the State of Illinois of this application for amendment by transmitting a copy of this letter and its attachments to the designated State Official.

If you have any questions concerning this letter, please contact Mr. Timothy A. Byam at (630) 657-2804.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 18th day of October 2006.

Respectfully,

Darin M. Benyak
Manager – Licensing
Exelon Generation Company, LLC

Attachment 1: Description of Proposed Changes, Technical Analysis, and Regulatory Analysis
Attachment 2: Mark-up of Proposed Technical Specification Page Changes
Attachment 3: Mark-up of Technical Specification Bases Page Changes
Attachment 4: List of Regulatory Commitments

cc: Administrator, Region III, USNRC
USNRC Senior Resident Inspector, LaSalle

ATTACHMENT 1
Description of Proposed Changes, Technical Analysis, and Regulatory Analysis

1.0 DESCRIPTION

The proposed amendment would modify Technical Specifications (TS) to risk-informed requirements regarding selected Required Action End States.

The changes are generally consistent with the Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) TSTF-423, Revision 0, "Technical Specifications End States, NEDC-32988-A." The availability of this TS improvement was published in the *Federal Register* on March 23, 2006 as part of the Consolidated Line Item Improvement Process (CLIIP).

2.0 ASSESSMENT

2.1 Applicability of Topical Report, TSTF-423, and Published Safety Evaluation

Exelon Generation Company, LLC (EGC) has reviewed the General Electric (GE) topical report (i.e., Reference 1), TSTF-423 (i.e., Reference 2), and the NRC model Safety Evaluation (i.e., Reference 3) as part of the CLIIP. EGC has concluded that the information in the GE topical report and TSTF-423, as well as the safety evaluation prepared by the NRC, are applicable to LaSalle County Station (LSCS), Units 1 and 2 and provide justification for the incorporation of the changes to the LSCS Units 1 and 2 TS.

2.2 Optional Changes and Variations

EGC is not proposing any variations or deviations from the GE topical report, TS changes described in the TSTF-423, Revision 0, or the NRC's model safety evaluation dated March 23, 2006.

The proposed TS changes are generally consistent with TSTF-423, Revision 0. Minor differences between the proposed changes and those contained in TSTF-423, Revision 0 include the following.

Changes were made to several paragraphs and Section numbers since the TSTF is based on NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," and NUREG-1434, "Standard Technical Specifications General Electric Plants, BWR/6." While the LSCS Units 1 and 2 are based on NUREG-1433 and NUREG-1434, they are not identical to either. Therefore, an adaptation of TSTF-423, Revision 0 was required.

The TS changes in TSTF-423, Revision 0 included changes to the following Standard TS (STS) sections, which are not applicable to the LSCS Units 1 and 2 TS due to deviance from applicability of technical justification (as described in Reference 1) or lack of TS in LSCS TS. Therefore they are not part of the submittal.

3.4.3 (BWR/4) / 3.4.4 (BWR/6)	Safety/Relief Valves (SRVs)
3.6.1.6 (BWR/4 and 6)	Low-Low Set (LLS) Valves
3.6.1.7 (BWR/4)	Reactor Building-to-Suppression Chamber Vacuum Breakers
3.6.1.7 (BWR/6)	Residual Heat Removal (RHR) Containment Spray System
3.6.1.8 (BWR/6)	Penetration Valve Leakage Control System (PVLSC)
3.6.1.9 (BWR/4 and 6)	Main Steam Isolation Valve (MSIV) Leakage Control System (LCS)
3.6.5.6 (BWR/6)	Drywell Vacuum Relief System
3.7.1 (BWR/6)	Standby Service Water (SSW) System and Ultimate Heat Sink (UHS)
3.7.2 (BWR/4)	Plant Service Water (PSW) System and Ultimate Heat Sink (UHS)
3.7.4 (BWR/4)	Main Control Room Environmental Control (MCREC) System
3.7.5 (BWR/4)	Control Room Air Conditioning (AC) System
3.8.7 (BWR/4 and 6)	Inverters (Operating)

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

Exelon Generation Company, LLC (EGC) has reviewed the proposed No Significant Hazards Consideration Determination (NSHCD) published in the *Federal Register* as part of the Consolidated Line Item Improvement Process (CLIIP). EGC has concluded that the proposed NSHCD presented in the *Federal Register* notice is applicable to LaSalle County Station (LSCS) Units 1 and 2 and is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a), "Notice for public comment."

3.2 Verification and Commitments

As discussed in the notice of availability published in the *Federal Register* on March 23, 2006 for this TS improvement, plant-specific verifications were performed as follows.

EGC commits to the regulatory commitments in Attachment 4. In addition, EGC has proposed TS Bases consistent with the GE topical report and TSTF-423, which provide guidance and details on how to implement the new requirements. Implementation of TSTF-423 requires that risk be managed and assessed. EGC's configuration risk management program is adequate to satisfy this requirement. The risk assessment need not be quantified, but may be a qualitative assessment of the vulnerability of systems and components when one or more systems are not able to perform their associated function. Furthermore, EGC has a Bases Control Program consistent with Section 5.5 of the Standard Technical Specifications (STS).

4.0 ENVIRONMENTAL EVALUATION

The amendment affects requirements with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR 20, "Standards for Protection Against Radiation." The NRC has determined that the amendment adopting TSTF-423, Revision 0, involves no significant increases in amounts of effluents that may be released offsite, no significant changes in the types of effluents that may be released offsite, and no significant increases in the individual or cumulative occupational radiation exposure. The NRC has previously issued a proposed finding that TSTF-423, Revision 0, involves no significant hazards considerations and there has been no public comment on said finding in the *Federal Register,* Notice 70 FR 74037, December 14, 2005. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9), "Criterion for categorical exclusion." Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

5.0 IMPACT ON PREVIOUS SUBMITTALS

The amendment seeks to execute changes on TS that currently have pending amendments. The following TS pages have the associated amendments pending.

TSTF-360, DC System/Battery AOT	3.8.4 -1 through 3.8.4 -6	Submitted 12/9/04
CSCS one time only AOT extension	3.8.1 -4, 3.8.1 -6 through 3.8.1 -19	Submitted 4/13/05

6.0 REFERENCES

1. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required Action End States for BWR Plants," December 2002.
2. TSTF-423, Revision 0, "Technical Specifications End States, NEDC-32988-A."
3. Federal Register, Vol. 71, No. 56, p. 14726, "Notice of Availability of Model Application Concerning Technical Specifications for Boiling Water Reactor Plants to Risk-Inform Requirements Regarding Selected Required Action End States Using the Consolidated Line Item Improvement Process, and NRC Model Safety Evaluation," March 23, 2006.

ATTACHMENT 2
Mark-up of Proposed Technical Specification Page Changes

Revised Technical Specification Pages

3.3.8.2 -2
3.5.1 -2
3.5.1 -3
3.6.1.1 -1
3.6.1.6 -1
3.6.1.6 -2
3.6.2.3 -1
3.6.2.4 -1
3.6.4.1 -1
3.6.4.3 -1
3.6.4.3 -2
3.7.1 -2
3.7.4 -1
3.7.4 -2
3.7.5 -1
3.7.5 -2
3.7.6 -1
3.8.1 -6
3.8.4 -1
3.8.4 -2
3.8.7 -2
3.8.7 -3

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, or 3.	C.1	Be in MODE 3.	12 hours
	~~AND~~		
	~~C.2~~	~~Be in MODE 4.~~	~~36 hours~~
D. Required Action and associated Completion Time of Condition A or B not met in MODE 4 or 5 with RHR SDC isolation valves open.	D.1	Initiate action to restore one electric power monitoring assembly to OPERABLE status for inservice power supply(s) supplying required instrumentation.	Immediately
	OR		
	D.2	Initiate action to isolate the RHR SDC System.	Immediately
E. Required Action and associated Completion Time of Condition A or B not met in MODE 5 with any control rod withdrawn from a core cell containing one or more fuel assemblies.	E.1	Initiate action to fully insert all insertable control rods in core cells containing one or more fuel assemblies.	Immediately

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. High Pressure Core Spray (HPCS) System inoperable.	B.1 Verify by administrative means RCIC System is OPERABLE when RCIC is required to be OPERABLE. AND B.2 Restore HPCS System to OPERABLE status.	Immediately 14 days
C. Two low pressure ECCS injection/spray subsystems inoperable.	C.1 Restore one low pressure ECCS injection/spray subsystem to OPERABLE status.	72 hours
D. ADS accumulator backup compressed gas system bottle pressure < 500 psig.	D.1 Restore ADS accumulator backup compressed gas system bottle pressure ≥ 500 psig. OR D.2 Declare associated ADS valves inoperable.	72 hours 72 hours
E. Required Action and associated Completion Time of Condition A, B, or C not met.	E.1 Be in MODE 3. ~~AND~~ ~~E.2 Be in MODE 4.~~	12 hours ~~36 hours~~

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. One required ADS valve inoperable.	F.1 Restore required ADS valve to OPERABLE status.	14 days
~~G.~~ H ~~Required Action and associated Completion Time of Condition F not met.~~ ~~OR~~ Two or more required ADS valves inoperable.	H ~~G.~~1 Be in MODE 3. AND H ~~G.~~2 Reduce reactor steam dome pressure to ≤ 150 psig.	12 hours 36 hours
~~H.~~ I HPCS and one or more low pressure ECCS injection/spray subsystems inoperable. OR Three or more ECCS injection/spray subsystems inoperable. OR One or more ECCS injection/spray subsystems and one or more required ADS valves inoperable.	~~H.~~ I.1 Enter LCO 3.0.3.	Immediately
G. Required Action and associated Completion Time of Condition F not met.	G.1 Be in MODE 3.	12 hours

3.6 CONTAINMENT SYSTEMS

3.6.1.1 Primary Containment

LCO 3.6.1.1 Primary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Primary containment inoperable.	A.1 Restore primary containment to OPERABLE status.	1 hour
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. ~~AND~~ ~~B.2 Be in MODE 4.~~	12 hours ~~36 hours~~

3.6 CONTAINMENT SYSTEMS

3.6.1.6 Suppression Chamber-to-Drywell Vacuum Breakers

LCO 3.6.1.6 Each suppression chamber-to-drywell vacuum breaker shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One suppression chamber-to-drywell vacuum breaker inoperable for opening.	A.1 Restore the vacuum breaker to OPERABLE status.	72 hours
~~B.~~ C. One suppression chamber-to-drywell vacuum breaker not closed.	~~B~~.1 C Close both manual isolation valves in the affected line. AND ~~B~~.2 C Restore the vacuum breaker to OPERABLE status.	4 hours 72 hours
D ~~C~~. Required Action and associated Completion Time of Condition ~~A or~~ C ~~B~~ not met.	D ~~C~~.1 Be in MODE 3. AND D ~~C~~.2 Be in MODE 4.	12 hours 36 hours

(continued)

B.	Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3.	12 hours

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
~~D~~. [E] Two or more suppression chamber-to-drywell vacuum breakers inoperable.	~~D~~.1 [E] Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.6.1	----------NOTES---------- 1. Not required to be met for vacuum breakers that are open during Surveillances. 2. Not required to be met for vacuum breakers open when performing their intended function. ---------- Verify each vacuum breaker is closed.	14 days
SR 3.6.1.6.2	Perform a functional test of each vacuum breaker.	92 days AND Within 12 hours after any discharge of steam to the suppression chamber from the safety/relief valves

(continued)

3.6 CONTAINMENT SYSTEMS

3.6.2.3 Residual Heat Removal (RHR) Suppression Pool Cooling

LCO 3.6.2.3 Two RHR suppression pool cooling subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RHR suppression pool cooling subsystem inoperable.	A.1 Restore RHR suppression pool cooling subsystem to OPERABLE status.	7 days
~~B.~~ C Two RHR suppression pool cooling subsystems inoperable.	~~B.~~ C.1 Restore one RHR suppression pool cooling subsystem to OPERABLE status.	8 hours
~~C.~~ D Required Action and associated Completion Time not met. of Condition C	D ~~C.~~ .1 Be in MODE 3. AND D ~~C.~~ .2 Be in MODE 4.	12 hours 36 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3.	12 hours

3.6 CONTAINMENT SYSTEMS

3.6.2.4 Residual Heat Removal (RHR) Suppression Pool Spray

LCO 3.6.2.4 Two RHR suppression pool spray subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RHR suppression pool spray subsystem inoperable.	A.1 Restore RHR suppression pool spray subsystem to OPERABLE status.	7 days
B. Two RHR suppression pool spray subsystems inoperable.	B.1 Restore one RHR suppression pool spray subsystem to OPERABLE status.	8 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. ~~AND~~ ~~C.2 Be in MODE 4.~~	12 hours ~~36 hours~~

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the secondary containment,
During CORE ALTERATIONS,
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Secondary containment inoperable in MODE 1, 2, or 3.	A.1	Restore secondary containment to OPERABLE status.	4 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1	Be in MODE 3.	12 hours
	~~AND~~		
	~~B.2~~	~~Be in MODE 4.~~	~~36 hours~~

(continued)

3.6 CONTAINMENT SYSTEMS

3.6.4.3 Standby Gas Treatment (SGT) System

LCO 3.6.4.3 Two SGT subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the secondary containment,
During CORE ALTERATIONS,
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SGT subsystem inoperable.	A.1 Restore SGT subsystem to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, or 3.	B.1 Be in MODE 3. ~~AND~~ ~~B.2 Be in MODE 4.~~	12 hours ~~36 hours~~
C. Required Action and associated Completion Time of Condition A not met during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	----------NOTE---------- LCO 3.0.3 is not applicable. ---------- C.1 Place OPERABLE SGT subsystem in operation. OR	Immediately

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.1 Suspend movement of irradiated fuel assemblies in the secondary containment. AND	Immediately
	C.2.2 Suspend CORE ALTERATIONS. AND	Immediately
	C.2.3 Initiate action to suspend OPDRVs.	Immediately
D. Two SGT subsystems inoperable in MODE 1, 2, or 3.	D.1 ~~Enter LCO 3.0.3.~~ Be in MODE 3.	~~Immediately~~ 12 hours
E. Two SGT subsystems inoperable during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	E.1 --------NOTE-------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the secondary containment. AND	Immediately

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. --------NOTE-------- Only applicable to Unit 2 during replacement of the Division 1 CSCS isolation valves during Unit 1 Refueling 11 while Unit 1 is in Mode 4,5, or defueled. ---------- One RHRSW subsystem inoperable.	B.1 --------NOTE--------- Enter applicable Conditions and Required Actions of LCO 3.4.9, "Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown," for RHR shutdown cooling subsystem made inoperable by RHRSW System. ---------- Restore RHRSW subsystem to OPERABLE status.	10 days
~~C.~~ D Both RHRSW subsystems inoperable.	~~C.~~ D.1 --------NOTE--------- Enter applicable Conditions and Required Actions of LCO 3.4.9 for RHR shutdown cooling subsystems made inoperable by RHRSW System. ---------- Restore one RHRSW subsystem to OPERABLE status.	8 hours
~~D.~~ E Required Action and associated Completion Time not met. of Condition D	E ~~D.~~.1 Be in MODE 3. AND E ~~D.~~.2 Be in MODE 4.	12 hours 36 hours
C. Required Action and associated Completion Time of Conditions A or B not met.	C.1 Be in MODE 3.	12 hours

3.7 PLANT SYSTEMS

3.7.4 Control Room Area Filtration (CRAF) System

LCO 3.7.4 Two CRAF subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the secondary containment,
During CORE ALTERATIONS,
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CRAF subsystem inoperable.	A.1 Restore CRAF subsystem to OPERABLE status.	7 days
B. Required Action and Associated Completion Time of Condition A not met in MODE 1, 2, or 3.	B.1 Be in MODE 3. ~~AND~~ ~~B.2 Be in MODE 4.~~	12 hours ~~36 hours~~

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition A not met during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	----------NOTE---------- LCO 3.0.3 is not applicable. ----------	
	C.1 Place OPERABLE CRAF subsystem in pressurization mode.	Immediately
	OR	
	C.2.1 Suspend movement of irradiated fuel assemblies in the secondary containment.	Immediately
	AND	
	C.2.2 Suspend CORE ALTERATIONS.	Immediately
	AND	
	C.2.3 Initiate action to suspend OPDRVs.	Immediately
D. Two CRAF subsystems inoperable in MODE 1, 2, or 3.	D.1 ~~Enter LCO 3.0.3.~~ Be in MODE 3.	~~Immediately~~ 12 hours

(continued)

3.7 PLANT SYSTEMS

3.7.5 Control Room Area Ventilation Air Conditioning (AC) System

LCO 3.7.5 Two control room area ventilation AC subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the secondary containment,
During CORE ALTERATIONS,
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One control room area ventilation AC subsystem inoperable.	A.1 Restore control room area ventilation AC subsystem to OPERABLE status.	30 days
B. Required Action and Associated Completion Time of Condition A not met in MODE 1, 2, or 3.	B.1 Be in MODE 3. ~~AND~~ ~~B.2 Be in MODE 4.~~	12 hours ~~36 hours~~

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition A not met during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	----------NOTE---------- LCO 3.0.3 is not applicable. ----------	
	C.1 Place OPERABLE control room area ventilation AC subsystem in operation.	Immediately
	OR	
	C.2.1 Suspend movement of irradiated fuel assemblies in the secondary containment.	Immediately
	AND	
	C.2.2 Suspend CORE ALTERATIONS.	Immediately
	AND	
	C.2.3 Initiate action to suspend OPDRVs.	Immediately
D. Two control room area ventilation AC subsystems inoperable in MODE 1, 2, or 3.	D.1 ~~Enter LCO 3.0.3.~~ Be in MODE 3.	~~Immediately~~ 12 hours

(continued)

3.7 PLANT SYSTEMS

3.7.6 Main Condenser Offgas

LCO 3.7.6 The gross gamma activity rate of the noble gases measured prior to the holdup line shall be ≤ 340,000 μCi/second after decay of 30 minutes.

APPLICABILITY: MODE 1,
MODES 2 and 3 with any main steam line not isolated and steam jet air ejector (SJAE) in operation.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Gross gamma activity rate of the noble gases not within limit.	A.1 Restore gross gamma activity rate of the noble gases to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Isolate all main steam lines. OR B.2 Isolate SJAE. OR B.3~~.1~~ Be in MODE 3. ~~AND~~ ~~B.3.2 Be in MODE 4.~~	12 hours 12 hours 12 hours ~~36 hours~~

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Two required Division 1, 2, or 3 DGs inoperable. OR Division 2 DG and the required opposite unit Division 2 DG inoperable.	F.1 Restore one required DG to OPERABLE status.	2 hours OR 72 hours if Division 3 DG is inoperable
G. Required Action and associated Completion Time of Condition A, B, C, D, E, or F not met.	G.1 Be in MODE 3. ~~AND~~ ~~G.2 Be in MODE 4.~~	12 hours ~~36 hours~~
H. Three or more required AC sources inoperable.	H.1 Enter LCO 3.0.3.	Immediately

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources—Operating

LCO 3.8.4 The Division 1 125 VDC and 250 VDC, Division 2 125 VDC, Division 3 125 VDC, and the opposite unit Division 2 125 VDC electrical power subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Division 1 or 2 125 VDC electrical power subsystem inoperable.	A.1 Restore Division 1 and 2 125 VDC electrical power subsystems to OPERABLE status.	2 hours
~~B.~~ C. Division 3 DC electrical power subsystem inoperable.	~~B.~~ C.1 Declare High Pressure Core Spray System inoperable.	Immediately
~~C.~~ D. Division 1 250 VDC electrical power subsystem inoperable.	~~C.~~ D.1 Declare associated supported features inoperable.	Immediately
~~D.~~ E. Opposite unit Division 2 DC electrical power subsystem inoperable.	~~D.~~ E.1 Restore opposite unit Division 2 DC electrical power subsystem to OPERABLE status.	7 days
B. Required Action and associated Completion Time for Condition A not met.	B.1 Be in MODE 3.	12 hours

(continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
~~E.~~ F Required Action and associated Completion Time not met. for Condition C, D, or E	F ~~E.~~1 Be in MODE 3.	12 hours
	AND	
	F ~~E.~~2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

---------- NOTES ----------

1. SR 3.8.4.1 through SR 3.8.4.8 are applicable only to the given unit's DC electrical power sources.

2. SR 3.8.4.9 is applicable only to the opposite unit DC electrical power source.

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage on float charge is: a. ≥ 128 V for the 125 V batteries; and b. ≥ 256 V for the 250 V battery.	7 days
SR 3.8.4.2	Verify no visible corrosion at battery terminals and connectors. OR Verify battery connection resistance is ≤ 1.5E-4 ohm for inter-cell connections, and ≤ 1.5E-4 ohm for terminal connections.	92 days

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One or both Division 1 and 2 125 V DC electrical power distribution subsystems inoperable.	B.1 Restore Division 1 and 2 125 V DC electrical power distribution subsystem(s) to OPERABLE status.	2 hours AND 16 hours from discovery of failure to meet LCO 3.8.7.a
~~C.~~ D. One or more required opposite unit Division 2 AC or DC electrical power distribution subsystems inoperable.	----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.8.1 when Condition C results in the inoperability of a required offsite circuit. ---------- ~~C.~~ D.1 Restore required opposite unit Division 2 AC and DC electrical power distribution subsystem(s).	 7 days
~~D.~~ E. Required Action and associated Completion Time of Condition ~~A,~~ D ~~B, or C~~ not met.	E ~~D.~~ 1 Be in MODE 3. AND E ~~D.~~ 2 Be in MODE 4.	12 hours 36 hours

(continued)

C. Required Action and associated Completion Time of Condition A or B not met.	C.1 Be in MODE 3.	12 hours

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
~~E~~. F One or both Division 3 AC or DC electrical power distribution subsystems inoperable.	~~E~~.1 F Declare associated supported features inoperable.	Immediately
~~F~~. G Division 1 250 V DC electrical power subsystem inoperable.	~~F~~.1 G Declare associated supported features inoperable.	Immediately
~~G~~. H Two or more electrical power distribution subsystems inoperable that, in combination, result in a loss of function.	~~G~~.1 H Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE			FREQUENCY
SR	3.8.7.1	Verify correct breaker alignments and voltage to required AC and DC electrical power distribution subsystems.	7 days

ATTACHMENT 3
Mark-up of Technical Specification Bases Page Changes
(For Information Only)

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BASES

ACTIONS

A.1 (continued)

Alternatively, if it is not desired to remove the power supply(s) from service (e.g., as in the case where removing the power supply(s) from service would result in a scram or isolation), Condition C, D, E, or F as applicable, must be entered and its Required Actions taken.

B.1

If both power monitoring assemblies for an inservice power supply (MG set or alternate) are inoperable, or both power monitoring assemblies in each inservice power supply are inoperable, the system protective function is lost. In this condition, 1 hour is allowed to restore one assembly to OPERABLE status for each inservice power supply. If one inoperable assembly for each inservice power supply cannot be restored to OPERABLE status, the associated power supplies must be removed from service within 1 hour (Required Action B.1). An alternate power supply with OPERABLE assemblies may then be used to power one RPS bus. The 1 hour Completion Time is sufficient for the plant operations personnel to take corrective actions and is acceptable because it minimizes risk while allowing time for restoration or removal from service of the electric power monitoring assemblies.

Alternately, if it is not desired to remove the power supply(s) from service (e.g., as in the case where removing the power supply(s) from service would result in a scram or isolation), Condition C, D, E, or F as applicable, must be entered and its Required Actions taken.

C.1 ~~and C.2~~

the plant must be brought to a MODE in which overall plant risk is minimized.

If any Required Action and associated Completion Time of Condition A or B are not met in MODE 1, 2, or 3, ~~a plant shutdown must be performed. This places the plant in a condition where minimal equipment, powered through the inoperable RPS electric power monitoring assembly(s), is required and ensures that the safety function of the RPS bus loads (e.g., scram of control rods) is not required.~~ The

(continued)

BASES

ACTIONS

C.1 ~~and C.2~~ (continued)

Insert 1

plant shutdown is accomplished by placing the plant in MODE 3 within 12 hours ~~and in MODE 4 within 36 hours.~~ The allowed Completion Time~~s~~ ~~are~~ is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

D.1 and D.2

If any Required Action and associated Completion Time of Condition A or B are not met in MODE 4 or 5 with RHR SDC isolation valves open, action must be immediately initiated to either restore one electric power monitoring assembly to OPERABLE status for the inservice power source supplying the required instrumentation powered from the RPS bus (Required Action D.1) or to isolate the RHR SDC System (Required Action D.2). Required Action D.1 is provided because the RHR SDC System may be needed to provide core cooling. All actions must continue until the applicable Required Actions are completed.

E.1

If any Required Action and associated Completion Time of Condition A or B are not met in MODE 5 with any control rod withdrawn from a core cell containing one or more fuel assemblies, the operator must immediately initiate action to fully insert all insertable control rods in core cells containing one or more fuel assemblies (Required Action E.1). This Required Action results in the least reactive condition for the reactor core and ensures that the safety function of the RPS (e.g., scram of control rods) is not required.

F.1.1, F.1.2, F.2.1, and F.2.2

If any Required Action and associated Completion Time of Condition A or B are not met during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs, the ability to isolate the

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.8.2.1 (continued)

allow for scheduling and proper performance of the Surveillance. The 184 day Frequency and the Note in the Surveillance are based on guidance provided in Generic Letter 91-09 (Ref. 2).

3

SR 3.3.8.2.2

CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. This test verifies that the channel responds to the measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

The Frequency is based upon the assumption of an 24 month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

SR 3.3.8.2.3

Performance of a system functional test demonstrates that, with a required system actuation (simulated or actual) signal, the logic of the system will automatically trip open the associated power monitoring assembly circuit breaker. The system functional test shall include actuation of the protective relays, tripping logic, and output circuit breakers. Only one signal per power monitoring assembly is required to be tested. This Surveillance overlaps with the CHANNEL CALIBRATION to provide complete testing of the safety function. The system functional test of the Class 1E circuit breakers is included as part of this test to provide complete testing of the safety function. If the breakers are incapable of operating, the associated electric power monitoring assembly would be inoperable.

The 24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.8.2.3 (continued)

Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the 24 month Frequency.

REFERENCES

1. UFSAR, Section 8.3.1.1.3.

Insert 2 →

~~2.~~ 3 NRC Generic Letter 91-09, "Modification of Surveillance Interval for the Electric Protective Assemblies in Power Supplies for the Reactor Protection System."

BASES

ACTIONS
(continued)

D.1 and D.2

With the ADS accumulator backup compressed gas system bottle pressure less than the specified limit, bottle pressure must be restored within 72 hours, or the associated ADS valves must be declared inoperable. In this condition, the remaining Drywell Pneumatic System and ADS accumulators are sufficient to ensure ADS valve operation. However, overall ECCS reliability is reduced in this condition because with insufficient bottle bank pressure, the capability of ADS valves to operate for long periods of time following an accident (without the Drywell Pneumatic System) is reduced. Each ADS valve is equipped with an individual accumulator of sufficient capacity to operate the valves in the event of a loss of air supply. The 72 hour Completion Time is based on a reliability study, as provided in Reference 12.

E.1 ~~and E.2~~

Insert 1

overall plant risk is minimized.

If any Required Action and associated Completion Time of Condition A, B, or C are not met, the plant must be brought to a MODE in which the ~~LCO does not apply.~~ To achieve this status, the plant must be brought to at least MODE 3 within 12 hours ~~and to MODE 4 within 36 hours.~~ The allowed Completion Time~~s are~~ is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

F.1

The LCO requires six ADS valves to be OPERABLE to provide the ADS function. Reference 11 contains the results of an evaluation of the effect of one required ADS valve being out of service. Per this evaluation, operation of only five ADS valves will provide the required depressurization. However, overall reliability of the ADS is reduced because a single failure in the OPERABLE ADS valves could result in a reduction in depressurization capability. Therefore, operation is only allowed for a limited time. The 14 day Completion Time is based on a reliability study (Ref. 12) and has been found to be acceptable through operating experience.

(continued)

BASES

ACTIONS
(continued)

G.1 ~~and G.2~~

If any Required Action and associated Completion Time of Condition F is not met ~~or if two or more required ADS valves are inoperable,~~ the plant must be brought to a ~~condition~~ in which ~~the LCO does not apply.~~ To achieve this status, the plant must be brought to at least MODE 3 within 12 hours ~~and reactor steam dome pressure reduced to ≤ 150 psig within 36 hours.~~ The allowed Completion Times ~~are~~ reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

MODE

overall plant risk is minimized.

Insert 1

is

Insert 2

I ~~H.1~~

I When multiple ECCS subsystems are inoperable, as stated in Condition H, the plant is in a condition outside of the design basis. Therefore, LCO 3.0.3 must be entered immediately.

SURVEILLANCE REQUIREMENTS

SR 3.5.1.1

The flow path piping has the potential to develop voids and pockets of entrained air. Maintaining the pump discharge lines of the HPCS System, LPCS System, and LPCI subsystems full of water ensures that the systems will perform properly, injecting their full capacity into the RCS upon demand. This will also prevent a water hammer following an ECCS initiation signal. One acceptable method of ensuring the lines are full is to vent at the high points. The 31 day Frequency is based on operating experience, on the procedural controls governing system operation, and on the gradual nature of void buildup in the ECCS piping.

SR 3.5.1.2

Verifying the correct alignment for manual, power operated, and automatic valves in the ECCS flow paths provides assurance that the proper flow paths will exist for ECCS operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position since these valves were verified to be in the correct position prior to locking, sealing, or securing. A valve that receives an

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.1.2 (continued)

initiation signal is allowed to be in a nonaccident position provided the valve will automatically reposition in the proper stroke time. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves potentially capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

The 31 day Frequency of this SR was derived from the Inservice Testing Program requirements for performing valve testing at least once every 92 days. The Frequency of 31 days is further justified because the valves are operated under procedural control and because improper valve alignment would only affect a single subsystem. This Frequency has been shown to be acceptable through operating experience.

SR 3.5.1.3

Verification every 31 days that ADS accumulator supply header pressure is ≥ 150 psig assures adequate pneumatic pressure for reliable ADS operation. The accumulator on each ADS valve provides pneumatic pressure for valve actuation. The ADS valve accumulators are sized to provide two cycles of the ADS valves upon loss of the nitrogen supply (Ref. ~~13~~ V). The ECCS safety analysis assumes only one actuation to achieve the depressurization required for operation of the low pressure ECCS. The accumulator supply header pressure verification may be accomplished by monitoring control room alarms. The 31 day Frequency takes into consideration alarms for low pneumatic pressure.

14

SR 3.5.1.4

Verification every 31 days that ADS accumulator backup compressed gas system bottle pressure is ≥ 500 psig assures availability of an adequate backup pneumatic supply to the ADS accumulators following a loss of the drywell pneumatic supply. The 31 day frequency is adequate because each ADS bottle bank is monitored by a low pressure alarm. Also, unless the normal drywell pneumatic supply is lost, the only expected losses from the bottles are due to leakage, which is minimal.

(continued)

BASES

REFERENCES
(continued)

12. Memorandum from R.L. Baer (NRC) to V. Stello, Jr. (NRC), "Recommended Interim Revisions to LCO's for ECCS Components," December 1, 1975.

Insert 3

14 ~~13~~. UFSAR, Section 7.3.1.2.

BASES

LCO (continued)

design limits. Compliance with this LCO will ensure a primary containment configuration, including equipment hatches, that is structurally sound and that will limit leakage to those leakage rates assumed in the safety analysis. Individual leakage rates specified for the primary containment air locks are addressed in LCO 3.6.1.2.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause a release of radioactive material to primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, primary containment is not required to be OPERABLE in MODES 4 and 5 to prevent leakage of radioactive material from primary containment.

ACTIONS

A.1

In the event that primary containment is inoperable, primary containment must be restored to OPERABLE status within 1 hour. The 1 hour Completion Time provides a period of time to correct the problem that is commensurate with the importance of maintaining primary containment OPERABILITY during MODES 1, 2, and 3. This time period also ensures that the probability of an accident (requiring primary containment OPERABILITY) occurring during periods where primary containment is inoperable is minimal.

B.1 ~~and B.2~~

overall plant risk is minimized.

Insert 1

is

If primary containment cannot be restored to OPERABLE status within the associated Completion Time, the plant must be brought to a MODE in which ~~the LCO does not apply~~. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours ~~and to MODE 4 within 36 hours~~. The allowed Completion Times ~~are~~ reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.6.1.1.1

Maintaining the primary containment OPERABLE requires compliance with the visual examinations and leakage rate test requirements of the Primary Containment Leakage Rate Testing Program. Failure to meet air lock leakage testing limit (SR 3.6.1.2.1), or main steam isolation valve leakage limit (SR 3.6.1.3.10) does not necessarily result in a failure of this SR. The impact of the failure to meet these SRs must be evaluated against the Type A, B, and C acceptance criteria of the Primary Containment Leakage Rate Testing Program.

As left leakage prior to the first startup after performing a required Primary Containment Leakage Rate Testing Program leakage test is required to be $< 0.6\ L_a$ for combined Type B and C leakage, and $\leq 0.75\ L_a$ for overall Type A leakage. At all other times between required leakage rate tests, the acceptance criteria is based on an overall Type A leakage limit of $\leq 1.0\ L_a$. At $\leq 1.0\ L_a$ the offsite dose consequences are bounded by the assumptions of the safety analysis. The Frequency is required by the Primary Containment Leakage Rate Testing Program.

SR 3.6.1.1.2

The structural integrity of the primary containment is ensured by the successful completion of the Inservice Inspection Program for Post Tensioning Tendons and by associated visual inspections of the steel liner and penetrations for evidence of deterioration or breach of integrity. This ensures that the structural integrity of the primary containment will be maintained in accordance with the provisions of the Inservice Inspection Program for Post Tensioning Tendons. Testing and Frequency are consistent with the recommendations of 10 CFR 50.55a (Ref. ~~5~~ 6), except that the Unit 1 and 2 primary containments shall be treated as twin containments even though the Initial Structural Integrity tests were not within two years of each other.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.1.4 (continued)

developed considering it is prudent that this Surveillance be performed during a unit outage.

The SR is modified by a Note stating that performance of SR 3.6.1.1.3 satisfies this Surveillance Requirement. This is acceptable since drywell to suppression chamber vacuum relief valve leakage is included in the measurement of the drywell to suppression chamber bypass leakage required by SR 3.6.1.1.3.

SR 3.6.1.1.5

Maintaining the pressure suppression function of the primary containment requires limiting the leakage form the drywell to the suppression chamber. Thus, if an event were to occur that pressurizes the drywell, the steam would be directed through the downcomers into the suppression pool. This SR determines the total drywell to suppresssion chamber vacuum relief valve bypass leakage to ensure that the leakage paths that would bypass the suppression pool are within allowable limits.

Satisfactory performance of this SR can be achieved by summing the individual drywell to suppression chamber vacuum relief valve bypass leakage form SR 3.6.1.1.4 and verifying that the measured bypass leakage is $\leq$ 3.0% of the acceptable

$A/\sqrt{K}$ design value of 0.030 ft^2. The acceptable bypass leakage of this Surveillance is performed every 24 months. The 24 month Frequency was developed considering it si prudent that this Surveillance be performed during a unit outage.

The SR is modified by a Note stating that performance of SR 3.6.1.1.3 satisfies this Surveillance Requirement. This is acceptable since drywell to suppression chamber vacuum relief valve leakage is included in the measurement of the drywell to suppression chamber bypass leakage required by SR 3.6.1.1.3.

REFERENCES

1. UFSAR, Section 6.2.
2. UFSAR, Section 15.6.5.
3. 10 CFR 50, Appendix J, Option B.
4. UFSAR, Section 6.2.6.1.
5. 10 CFR 50.55a.

Insert 2

6

BASES

ACTIONS A.1 (continued)

with one of the four vacuum breakers inoperable, 72 hours is allowed to restore the inoperable vacuum breaker to OPERABLE status so that plant conditions are consistent with those assumed for the design basis analysis. The 72 hour Completion Time is considered acceptable due to the low probability of an event in which the remaining vacuum breaker capability would not be adequate.

Insert 1

C ~~B.1 and B.2~~

With one vacuum breaker not closed, communication between the drywell and suppression chamber airspace exists, and, as a result, there is the potential for primary containment overpressurization due to this bypass leakage if a LOCA were to occur. Therefore, both manual isolation valves in the affected vacuum breaker line must be closed. A short time is allowed to close the manual valves due to the low probability of an event that would pressurize primary containment. The required 4 hour Completion Time is considered adequate to perform this activity. With both manual isolation valves closed, the vacuum breaker is not capable of performing the vacuum relief function. While the remaining three OPERABLE vacuum breakers are capable of providing the vacuum relief function, the overall reliability is reduced because a single failure in one of the remaining vacuum breakers could result in an excessive suppression chamber-to-drywell differential pressure during a DBA. Therefore, under this condition, 72 hours is allowed to restore the inoperable vacuum breaker to OPERABLE status so that the plant conditions are consistent with those assumed for the design basis analysis. The 72 hour Completion Time is considered acceptable due to the low probability of an event in which the remaining vacuum breaker capability would not be adequate.

D ~~C.1 and C.2~~

Insert 2

~~If any Required Action and associated Completion cannot be met~~, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are

(continued)

BASES

ACTIONS

D ~~C.1 and C.2~~ D (continued)

reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

E ~~B.1~~

With two or more vacuum breakers inoperable, an excessive suppression chamber-to-drywell differential pressure could occur during a DBA. Therefore, an immediate plant shutdown in accordance with LCO 3.0.3 is required.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.6.1

Each vacuum breaker is verified closed to ensure that this potential large bypass leakage path is not present. This Surveillance is performed by observing the vacuum breaker position indication or by verifying that a differential pressure of 0.25 psid between the suppression chamber and drywell is maintained for 1 hour without makeup. The 14 day Frequency is based on engineering judgment, is considered adequate in view of other indications of vacuum breaker status available to operations personnel, and has been shown to be acceptable through operating experience.

Two Notes are added to this SR. The first Note allows suppression chamber-to-drywell vacuum breakers opened in conjunction with the performance of a Surveillance to not be considered as failing this SR. These periods of opening vacuum breakers are controlled by plant procedures and do not represent inoperable vacuum breakers. The second Note is included to clarify that vacuum breakers open due to an actual differential pressure are not considered as failing this SR.

SR 3.6.1.6.2

Each vacuum breaker must be manually cycled to ensure that it opens adequately to perform its design function and returns to the fully closed position. This ensures that the safety analysis assumptions are valid. The 92 day Frequency of this SR was developed, based on Inservice Testing Program

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.6.2 (continued)

requirements to perform valve testing at least once every 92 days. In addition, this functional test is required within 12 hours after a discharge of steam to the suppression chamber from the safety/relief valves.

SR 3.6.1.6.3

Verification of the vacuum breaker opening setpoint of ≤ 0.5 psid from the closed position is necessary to ensure that the safety analysis assumption regarding vacuum breaker full open differential pressure of 1.0 psid is valid. The 24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. The 24 month Frequency has been shown to be acceptable, based on operating experience, and is further justified because of other surveillances performed at shorter Frequencies that convey the proper functioning status of each vacuum breaker.

REFERENCES

1. UFSAR, Section 6.2.1.

2. FSAR, Response to NRC Question 021.4.

Insert 3 →

BASES

APPLICABLE SAFETY ANALYSES (continued)

suppression pool temperature is calculated to remain below the design limit.

The RHR Suppression Pool Cooling System satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

LCO

During a DBA, a minimum of one RHR suppression pool cooling subsystem is required to maintain the primary containment peak pressure and temperature below the design limits (Ref. 1). To ensure that these requirements are met, two RHR suppression pool cooling subsystems must be OPERABLE. Therefore, in the event of an accident, at least one subsystem is OPERABLE, assuming the worst case single active failure. An RHR suppression pool cooling subsystem is OPERABLE when the pump, a heat exchanger, and associated piping, valves, instrumentation, and controls are OPERABLE.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause both a release of radioactive material to primary containment and a heatup and pressurization of primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations in these MODES. Therefore, the RHR Suppression Pool Cooling System is not required to be OPERABLE in MODE 4 or 5.

ACTIONS

A.1

With one RHR suppression pool cooling subsystem inoperable, the inoperable subsystem must be restored to OPERABLE status within 7 days. In this condition, the remaining RHR suppression pool cooling subsystem is adequate to perform the primary containment cooling function. However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could result in reduced primary containment cooling capability. The 7 day Completion Time is acceptable in light of the redundant RHR suppression pool cooling capabilities afforded by the OPERABLE subsystem and the low probability of a DBA occurring during this period.

Insert 1 →

(continued)

BASES

ACTIONS (continued)

C ~~B.1~~

With two RHR suppression pool cooling subsystems inoperable, one subsystem must be restored to OPERABLE status within 8 hours. In this condition, there is a substantial loss of the primary containment pressure and temperature mitigation function. The 8 hour Completion Time is based on this loss of function and is considered acceptable due to the low probability of a DBA and the potential avoidance of a plant shutdown transient that could result in the need for the RHR suppression pool cooling subsystems to operate.

of Condition C

D ~~C.1 and C.2~~

If any Required Action and associated Completion Time cannot be met, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.2.3.1

Verifying the correct alignment for manual and power operated valves in the RHR suppression pool cooling mode flow path provides assurance that the proper flow path exists for system operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position since these valves were verified to be in the correct position prior to being locked, sealed, or secured. A valve is also allowed to be in the nonaccident position, provided it can be aligned to the accident position within the time assumed in the accident analysis. This is acceptable, since the RHR suppression pool cooling mode is manually initiated. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.2.3.1 (continued)

The Frequency of 31 days is justified because the valves are operated under procedural control, improper valve position would affect only a single subsystem, the probability of an event requiring initiation of the system is low, and the system is a manually initiated system. This Frequency has been shown to be acceptable, based on operating experience.

SR 3.6.2.3.2

Verifying each required RHR pump develops a flow rate ≥ 7200 gpm, while operating in the suppression pool cooling mode with flow through the associated heat exchanger, ensures that peak suppression pool temperature can be maintained below the design limits during a DBA (Ref. 1). The flow verification is also a normal test of centrifugal pump performance required by ASME Section XI (Ref. ~~2~~). This test confirms one point on the pump design curve, and the results are indicative of overall performance. Such inservice tests confirm component OPERABILITY and detect incipient failures by indicating abnormal performance. The Frequency of this SR is in accordance with the Inservice Testing Program.

REFERENCES

1. UFSAR, Section 6.2.

Insert 2

3 ~~2~~. ASME, Boiler and Pressure Vessel Code, Section XI.

BASES

ACTIONS (continued)

B.1

With both RHR suppression pool spray subsystems inoperable, at least one subsystem must be restored to OPERABLE status within 8 hours. In this condition, there is a substantial loss of the primary containment bypass leakage mitigation function. The 8 hour Completion Time is based on this loss of function and is considered acceptable due to the low probability of a DBA and because alternative methods to reduce pressure in the primary containment are available.

C.1 ~~and C.2~~

overall plant risk is minimized.

If any Required Action and associated Completion Time cannot be met, the plant must be brought to a MODE in which the ~~LCO does not apply~~. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours ~~and MODE 4 within 36 hours.~~ The allowed Completion Times ~~are~~ is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 1

SURVEILLANCE REQUIREMENTS

SR 3.6.2.4.1

Verifying the correct alignment for manual and power operated valves in the RHR suppression pool spray mode flow path provides assurance that the proper flow paths will exist for system operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position since these valves were verified to be in the correct position prior to locking, sealing, or securing. A valve is also allowed to be in the nonaccident position provided it can be aligned to the accident position within the time assumed in the accident analysis. This is acceptable since the RHR suppression pool spray mode is manually initiated. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

The Frequency of 31 days is justified because the valves are operated under procedural control, improper valve position would affect only a single subsystem, the probability of an

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.2.4.1 (continued)

event requiring initiation of the system is low, and the subsystem is a manually initiated system. This Frequency has been shown to be acceptable based on operating experience.

SR 3.6.2.4.2

Verifying each required RHR pump develops a flow rate ≥ 450 gpm through the spray sparger while operating in the suppression pool spray mode helps ensure that the primary containment pressure can be maintained below the design limits during a DBA (Ref. 1). The normal test of centrifugal pump performance required by Section XI of the ASME Code (Ref. ~~2~~ 3) is covered by the requirements of LCO 3.6.2.3, "RHR Suppression Pool Cooling." The Frequency of this SR is in accordance with the Inservice Testing Program.

REFERENCES

1. UFSAR, Section 6.2.1.1.3.
2. ASME, Boiler and Pressure Vessel Code, Section XI.

BASES (continued)

ACTIONS

A.1

If secondary containment is inoperable, it must be restored to OPERABLE status within 4 hours. The 4 hour Completion Time provides a period of time to correct the problem that is commensurate with the importance of maintaining secondary containment during MODES 1, 2, and 3. This time period also ensures that the probability of an accident (requiring secondary containment OPERABILITY) occurring during periods where secondary containment is inoperable is minimal.

B.1 ~~and B.2~~

overall plant risk is minimized.

If the secondary containment cannot be restored to OPERABLE status within the required Completion Time, the plant must be brought to a MODE in which ~~the LCO does not apply~~. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours ~~and to MODE 4 within 36 hours~~. The allowed Completion Times ~~are~~ reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

is

Insert 1

C.1, C.2, and C.3

Movement of irradiated fuel assemblies in the secondary containment, CORE ALTERATIONS, and OPDRVs can be postulated to cause fission product release to the secondary containment. In such cases, the secondary containment is the only barrier to release of fission products to the environment. CORE ALTERATIONS and movement of irradiated fuel assemblies must be immediately suspended if the secondary containment is inoperable.

Suspension of these activities shall not preclude completing an action that involves moving a component to a safe position. Also, action must be immediately initiated to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until OPDRVs are suspended.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.3 and SR 3.6.4.1.4 (continued)

steady state conditions. The primary purpose of the SRs is to ensure secondary containment boundary integrity. The secondary purpose of these SRs is to ensure that the SGT subsystem being tested functions as designed. There is a separate LCO with Surveillance Requirements that serves the primary purpose of ensuring OPERABILITY of the SGT System. These SRs need not be performed with each SGT subsystem. The SGT subsystem used for these Surveillances is staggered to ensure that in addition to the requirements of LCO 3.6.4.3, either SGT subsystem will perform this test. The inoperability of the SGT System does not necessarily constitute a failure of these Surveillances relative to secondary containment OPERABILITY. Operating experience has shown the secondary containment boundary usually passes these Surveillances when performed at the 24 month Frequency. Therefore the Frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. UFSAR, Section 15.6.5.

2. UFSAR, Section 15.7.4.

Insert 2 →

BASES

APPLICABILITY (continued)

other situations under which significant releases of radioactive material can be postulated, such as during operations with a potential for draining the reactor vessel (OPDRVs), during CORE ALTERATIONS, or during movement of irradiated fuel assemblies in the secondary containment.

ACTIONS

A.1

With one SGT subsystem inoperable, the inoperable subsystem must be restored to OPERABLE status within 7 days. In this condition, the remaining OPERABLE SGT subsystem is adequate to perform the required radioactivity release control function. However, the overall system reliability is reduced because a single failure in the OPERABLE subsystem could result in the radioactivity release control function not being adequately performed. The 7 day Completion Time is based on consideration of such factors as the availability of the OPERABLE redundant SGT subsystem and the low probability of a DBA occurring during this period.

B.1 ~~and B.2~~

overall plant risk is minimized.

If the SGT subsystem cannot be restored to OPERABLE status within the required Completion Time in MODE 1, 2, or 3, the plant must be brought to a MODE in which the ~~LCO does not apply~~. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours ~~and to MODE 4 within 36 hours~~. The allowed Completion Time~~s~~ ~~are~~ reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 1

is

C.1, C.2.1, C.2.2, and C.2.3

During movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs, when Required Action A.1 cannot be completed within the required Completion Time, the OPERABLE SGT subsystem should be immediately placed in operation. This Required Action ensures that the remaining subsystem is OPERABLE, that no failures that could prevent automatic actuation will occur, and that any other failure would be readily detected.

(continued)

BASES

ACTIONS

C.1, C.2.1, C.2.2, and C.2.3 (continued)

An alternative to Required Action C.1 is to immediately suspend activities that represent a potential for releasing radioactive material to the secondary containment, thus placing the unit in a condition that minimizes risk. If applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, action must be immediately initiated to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Action must continue until OPDRVs are suspended.

The Required Actions of Condition C have been modified by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown.

D.1

If both SGT subsystems are inoperable in MODE 1, 2, or 3, the SGT system may not be capable of supporting the required radioactivity release control function. ~~Therefore, actions are required to enter LCO 3.0.3 immediately.~~

Insert 2 →

E.1, E.2, and E.3

When two SGT subsystems are inoperable, if applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies in the secondary containment must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, action must be immediately initiated to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Action must continue until OPDRVs are suspended.

(continued)

BASES

ACTIONS

E.1, E.2, and E.3 (continued)

Required Action E.1 has been modified by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown.

SURVEILLANCE REQUIREMENTS

SR 3.6.4.3.1

Operating (from the control room) each SGT subsystem for ≥ 10 continuous hours ensures that both subsystems are OPERABLE and that all associated controls are functioning properly. It also ensures that blockage, fan or motor failure, or excessive vibration can be detected for corrective action. Operation with the heaters on for ≥ 10 continuous hours every 31 days eliminates moisture on the adsorbers and HEPA filters. The 31 day Frequency was developed in consideration of the known reliability of fan motors and controls and the redundancy available in the system.

SR 3.6.4.3.2

This SR verifies that the required SGT filter testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The SGT System filter tests are in accordance with ANSI/ASME N510-1989 (Ref. ~~5~~ 6). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specified test frequencies and additional information are discussed in detail in the VFTP.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.4.3.3

This SR requires verification that each SGT subsystem starts upon receipt of an actual or simulated initiation signal. The LOGIC SYSTEM FUNCTIONAL TEST in LCO 3.3.6.2, "Secondary Containment Isolation Instrumentation," overlaps this SR to provide complete testing of the safety function. While this Surveillance can be performed with the reactor at power, operating experience has shown these components usually pass the Surveillance when performed at the 24 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 41.
2. UFSAR, Section 6.5.1.
3. UFSAR, Section 15.6.5.
4. UFSAR, Section 15.7.4
Insert 3 →
6 ~~5.~~ ANSI/ASME N510-1989.

BASES

ACTIONS

B.1 (continued)

Completion Time is based upon a risk-informed assessment that concluded that the associated risk with the unit in the specified configuration is acceptable (Ref. 5).

The Required Action is modified by a Note indicating that the applicable Conditions of LCO 3.4.9, be entered and Required Actions taken if the inoperable RHRSW subsystem results in inoperable RHR shutdown cooling. This is an exception to LCO 3.0.6 and ensures the proper actions are taken for these components.

Insert 1

D ~~C.1~~

With both RHRSW subsystems inoperable (e.g., both subsystems with inoperable pump(s) or flow paths, or one subsystem with an inoperable pump and one subsystem with an inoperable flow path), the RHRSW System is not capable of performing its intended function. At least one subsystem must be restored to OPERABLE status within 8 hours. The 8 hour Completion Time for restoring one RHRSW subsystem to OPERABLE status, is based on the Completion Times provided for the RHR suppression pool cooling and spray functions.

The Required Action is modified by a Note indicating that the applicable Conditions of LCO 3.4.9, be entered and Required Actions taken if the inoperable RHRSW subsystem results in inoperable RHR shutdown cooling. This is an exception to LCO 3.0.6 and ensures the proper actions are taken for these components.

E

E ~~D.1 and D.2~~

D is

If any Required Action and associated Completion Time of Condition ~~A, B, or C are~~ not met, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Time~~s are~~ is reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.7.1.1

Verifying the correct alignment for each manual, power operated, and automatic valve in each RHRSW subsystem flow path provides assurance that the proper flow paths will exist for RHRSW operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves are verified to be in the correct position prior to locking, sealing, or securing. A valve is also allowed to be in the nonaccident position, and yet considered in the correct position, provided it can be realigned to its accident position. This is acceptable because the RHRSW System is a manually initiated system.

This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

REFERENCES

1. UFSAR, Section 9.2.1.
2. UFSAR, Chapter 6.
3. UFSAR, Chapter 15.
4. UFSAR, Section 6.2.2.3.1.
5. Risk Management Document SA-1354, Rev. 0, "LaSalle Division 1 and 2 CSCS Valve Replacement Project - Temporary Extension of Technical Specification Completion Times", December 02, 2004.

Insert 2 →

BASES

APPLICABILITY (continued)

b. During CORE ALTERATIONS; and

c. During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

A.1

With one CRAF subsystem inoperable, the inoperable CRAF subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE CRAF subsystem is adequate to perform control room radiation protection. However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could result in loss of CRAF System function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and that the remaining subsystem can provide the required capabilities.

B.1 ~~and B.2~~

In MODE 1, 2, or 3, if the inoperable CRAF subsystem cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE that minimizes risk. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours ~~and in MODE 4 within 36 hours.~~ The allowed Completion Times ~~are~~ is reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

overall plant

Insert 1

C.1, C.2.1, C.2.2, and C.2.3

LCO 3.0.3 is not applicable while in MODE 4 or 5. However, since irradiated fuel assembly movement can occur in MODE 1, 2, or 3, the Required Actions of Condition C are modified by a Note indicating that LCO 3.0.3 does not apply. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Entering LCO 3.0.3 while in MODE 1, 2, or 3 would require the unit to be shutdown, but would not require immediate suspension of movement of irradiated fuel assemblies. The

(continued)

BASES

ACTIONS

C.1, C.2.1, C.2.2, and C.2.3 (continued)

Note to the ACTIONS, "LCO 3.0.3 is not applicable," ensures that the actions for immediate suspension of irradiated fuel assembly movement are not postponed due to entry into LCO 3.0.3.

During movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs, if the inoperable CRAF subsystem cannot be restored to OPERABLE status within the required Completion Time, the OPERABLE CRAF subsystem may be placed in the pressurization mode. This action ensures that the remaining subsystem is OPERABLE, that no failures that would prevent automatic actuation will occur, and that any active failure will be readily detected.

An alternative to Required Action C.1 is to immediately suspend activities that present a potential for releasing radioactivity that might require isolation of the control room area. This places the unit in a condition that minimizes risk.

If applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies in the secondary containment must be suspended ~~immed~~iately. Suspension of these activities shall not preclude completion of movement of a ~~co~~mponent to a safe position. ~~Also, if applicable,~~ action must ~~be init~~iated immediately to ~~suspend OPDRVs to min~~imize ~~the probabilit~~y of a vessel draindown and subsequent potential for fission product release. Action must continue until the OPDRVs are suspended.

D.1

If both CRAF subsystems are inoperable in MODE 1, 2, or 3, the CRAF System may not be capable of performing the intended function ~~and the unit is in a condition outside of the accident analyses. Therefore, LCO 3.0.3 must be entered immediately.~~

Insert 2 →

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.4.1 (continued)

≥ 10 continuous hours during system operation dries out any moisture accumulated in the charcoal from humidity in the ambient air. Furthermore, the 31 day Frequency is based on the known reliability of the equipment and the two subsystem redundancy available.

SR 3.7.4.2

This SR verifies that flow can be manually realigned through the CRAF System recirculation filters and maintained for ≥ 10 hours. Standby systems should be checked periodically to ensure that they function. Monthly operation dries out any moisture accumulated in the charcoal from humidity in the ambient air. Furthermore, the 31 day Frequency is based on the known reliability of the equipment and two subsystem redundancy available.

SR 3.7.4.3

This SR verifies that the required CRAF testing is performed in accordance with Specification 5.5.8, "Ventilation Filter Testing Program (VFTP)." The CRAF filter tests are in accordance with ANSI/ASME N510-1989 (Ref. ~~5~~ 7). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP.

SR 3.7.4.4

This SR verifies that each CRAF subsystem automatically switches to the pressurization mode of operation on an actual or simulated air intake radiation monitors initiation signal. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.7.1.4 overlaps this SR to provide complete testing of the safety function. Operating experience has shown that these components normally pass the SR when performed at the 24 month Frequency. Therefore, the Frequency was found to be acceptable from a reliability standpoint.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.4.5

This SR verifies the integrity of the control room area and the assumed inleakage rates of potentially contaminated air. The control room area positive pressure, with respect to potentially contaminated adjacent areas, is periodically tested to verify proper function of the CRAF System. During the pressurization mode of operation, the CRAF System is designed to slightly pressurize the control room area to ≥ 0.125 inches water gauge positive pressure with respect to adjacent areas to prevent unfiltered inleakage. The CRAF System is designed to maintain this positive pressure at a flow rate of ≤ 4000 cfm to the control room area in the pressurization mode. This test also requires manual initiation of flow through the control room and AEER recirculation filters line when the CRAF System is in the pressurization mode of operation. The Frequency of 24 months is consistent with industry practice and other filtration system SRs.

REFERENCES

1. UFSAR, Section 6.4.
2. UFSAR, Section 6.5.1.
3. UFSAR, Section 9.4.1.
4. UFSAR, Chapter 6.
5. UFSAR, Chapter 15.
7 ~~6~~. ANSI/ASME N510-1989.

Insert 3

BASES

ACTIONS

A.1 (continued)

on the low probability of an event occurring requiring operation of the CRAF System in the pressurization mode and the consideration that the remaining subsystem can provide the required protection.

B.1 ~~and B.2~~

In MODE 1, 2, or 3, if the inoperable control room area ventilation AC subsystem cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE that minimizes risk. To achieve this status the unit must be placed in at least MODE 3 within 12 hours ~~and in MODE 4 within 36 hours~~. The allowed Completion Time~~s~~ ~~are~~ reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

overall plant

is

Insert 1

C.1, C.2.1, C.2.2, and C.2.3

LCO 3.0.3 is not applicable while in MODE 4 or 5. However, since irradiated fuel assembly movement can occur in MODE 1, 2, or 3, the Required Actions of Condition C are modified by a Note indicating that LCO 3.0.3 does not apply. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Entering LCO 3.0.3 while in MODE 1, 2, or 3 would require the unit to be shutdown, but would not require immediate suspension of movement of irradiated fuel assemblies. The Note to the ACTIONS, "LCO 3.0.3 is not applicable," ensures that the actions for immediate suspension of irradiated fuel assembly movement are not postponed due to entry into LCO 3.0.3.

During movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs, if Required Action A.1 cannot be completed within the required Completion Time, the OPERABLE control room AC subsystem may be placed immediately in operation.

(continued)

BASES

ACTIONS

C.1, C.2.1, C.2.2, and C.2.3 (continued)

This action ensures that the remaining subsystem is OPERABLE, that no failures that would prevent actuation will occur, and that any active failure will be readily detected.

An alternative to Required Action C.1 is to immediately suspend activities that present a potential for releasing radioactivity that might require isolation of the control room. This places the unit in a condition that minimizes risk.

If applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies in the secondary containment must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, action must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Action must continue until the OPDRVs are suspended.

D.1

If both control room area ventilation AC subsystems are inoperable in MODE 1, 2, or 3, the Control Room Area Ventilation AC System may not be capable of performing the intended function. ~~Therefore, LCO 3.0.3 must be entered immediately.~~

Insert 2 →

E.1, E.2, and E.3

The Required Actions of Condition E.1 are modified by a Note indicating that LCO 3.0.3 does not apply. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

During movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.5.2

Verifying proper breaker alignment and power available to the control room area ventilation AC subsystems provides assurance of the availability of the system function. The 7 day Frequency is appropriate in view of other administrative controls that assure system availability.

REFERENCES

1. UFSAR, Section 6.4.
2. UFSAR, Section 9.4.1.
3. UFSAR, Section 9.4.1.1.1.1.

Insert 3 →

BASES (continued)

APPLICABILITY

The LCO is applicable when steam is being exhausted to the main condenser and the resulting noncondensibles are being processed via the Main Condenser Offgas System. This occurs during MODE 1, and during MODES 2 and 3 with any main steam line not isolated and the SJAE in operation. In MODES 4 and 5, main steam is not being exhausted to the main condenser and the requirements are not applicable.

ACTIONS

A.1

If the offgas radioactivity rate limit is exceeded, 72 hours is allowed to restore the gross gamma activity rate to within the limit. The 72 hour Completion Time is reasonable, based on engineering judgment considering the time required to complete the Required Action, the large margins associated with permissible dose and exposure limits, and the low probability of a Main Condenser Offgas System rupture occurring.

and

B.1, B.2, ~~and B.3.1, and B.3.2~~

If the gross gamma activity rate is not restored to within the limits within the associated Completion Time, all main steam lines or the SJAE must be isolated. This isolates the Main Condenser Offgas System from significant sources of radioactive steam. The main steam lines are considered isolated if at least one main steam isolation valve in each main steam line is closed, and at least one main steam line drain valve in each drain line is closed. The 12 hour Completion Time is reasonable, based on operating experience, to perform the actions from full power conditions in an orderly manner and without challenging unit systems.

An alternative to Required Actions B.1 and B.2 is to place the unit in a MODE in which the ~~LCO does not apply~~. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours ~~and in MODE 4 within 36 hours~~. The allowed Completion Times ~~are~~ reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

overall plant risk is minimized.

is

Insert 1

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.7.6.1

This SR, on a 31 day Frequency, requires an isotopic analysis of a representative offgas sample taken prior to the holdup line to ensure that the required limits are satisfied. The noble gases to be sampled are Xe-133, Xe-135, Xe-135m, Xe-138, Kr-85m, Kr-87, and Kr-88. If the measured rate of radioactivity increases significantly (by ≥ 50% after correcting for expected increases due to changes in THERMAL POWER), an isotopic analysis is also performed within 4 hours after the increase is noted (as indicated by the offgas pre-treatment noble gas activity monitor), to ensure that the increase is not indicative of a sustained increase in the radioactivity rate. The 31 day Frequency is adequate in view of other instrumentation that continuously monitor the offgas, and is acceptable based on operating experience.

This SR is modified by a Note indicating that the SR is not required to be performed until 31 days after any main steam line is not isolated and the SJAE is in operation. Only in this condition can radioactive fission gases be in the Main Condenser Offgas System at significant rates.

REFERENCES

1. UFSAR, Section 15.7.1.

2. 10 CFR 100.

Insert 2 →

BASES

ACTIONS

F.1 (continued)

In the event the required opposite unit Division 2 DG is inoperable in conjunction with a unit Division 2 DG inoperable, the opposite unit Division 2 subsystems (e.g., SGT subsystem) could be declared inoperable at the end of the 2 hour Completion Time (see Applicability Note 2) and this Condition could be exited with only one required unit DG remaining inoperable. However, with the given unit Division 2 DG remaining inoperable and the opposite unit Division 2 subsystems declared inoperable, redundant required feature failures exist, according to Required Action C.2.

G.1 ~~and G.2~~

overall plant risk is minimized.

If the inoperable AC electrical power sources cannot be restored to OPERABLE status within the associated Completion Time, the unit must be brought to a MODE in which the ~~LCO does not apply.~~ To achieve this status, the unit must be brought to MODE 3 within 12 hours ~~and to MODE 4 within 36 hours.~~ The allowed Completion Times ~~are~~ is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 1

H.1

Condition H corresponds to a level of degradation in which all redundancy in the AC electrical power supplies has been lost. At this severely degraded level, any further losses in the AC electrical power system will cause a loss of function. Therefore, no additional time is justified for continued operation. The unit is required by LCO 3.0.3 to commence a controlled shutdown.

SURVEILLANCE REQUIREMENTS

The AC sources are designed to permit inspection and testing of all important areas and features, especially those that have a standby function, in accordance with 10 CFR 50, GDC 18 (Ref. ~~8~~). Periodic component tests are supplemented by extensive functional tests during refueling

9

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

outages under simulated accident conditions. The SRs for demonstrating the OPERABILITY of the DGs are consistent with the recommendations of Regulatory Guide 1.9 (Ref. 3) and Regulatory Guide 1.137 (Ref. 9).

10

The Surveillances are modified by two Notes to clearly identify how the Surveillances apply to the given unit and opposite unit's Division 2 DGs. Note 1 states that SR 3.8.1.1 through SR 3.8.1.20 are applicable only to the given unit AC electrical power sources and Note 2 states that SR 3.8.1.21 is applicable to the opposite unit's Division 2 DG. These Notes are necessary since the opposite unit AC electrical power source is not required to meet all of the requirements of the given unit AC electrical power sources (e.g., the opposite unit DG is not required to start on the opposite unit's ECCS initiation signal to support OPERABILITY of the given unit).

Where the SRs discussed herein specify voltage and frequency tolerances, the following summary is applicable. The minimum steady state output voltage of 4010 V is greater than 90% of the nominal 4160 V output voltage. This value, which is conservative with respect to the value specified in ANSI C84.1 (Ref. 10), allows for voltage drop to the terminals of 4000 V motors whose minimum operating voltage is specified as 90%, or 3600 V. It also allows for voltage drops to motors and other equipment down through the 120 V level where minimum operating voltage is also usually specified as 90% of name plate rating. The specified maximum steady state output voltage of 4310 V is within the maximum operating voltage of 110% specified for 4000 V motors. It ensures that for a lightly loaded distribution system, the voltage at the terminals of 4000 V motors is no more than the maximum rated operating voltages. The specified minimum and maximum frequencies of the DG are 58.8 Hz and 61.2 Hz, respectively. These values are equal to ± 2% of the 60 Hz nominal frequency and are derived from the recommendations given in Regulatory Guide 1.9 (Ref. 3).

11

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.1.5 (continued)

fuel oil day tanks once every 31 days eliminates the necessary environment for bacterial survival. This is most effective means in controlling microbiological fouling. In addition, it eliminates the potential for water entrainment in the fuel oil during DG operation. Water may come from any of several sources, including condensation, rain water, contaminated fuel oil, and breakdown of the fuel oil by bacteria. Frequent checking for and removal of accumulated water minimizes fouling and provides data regarding the watertight integrity of the fuel oil system. The Surveillance Frequency is established by Regulatory Guide 1.137 (Ref. 10). This SR is for preventive maintenance. The presence of water does not necessarily represent a failure of this SR provided that accumulated water is removed during performance of this Surveillance.

11

SR 3.8.1.6

This Surveillance demonstrates that each required fuel oil transfer pump operates and automatically transfers fuel oil from its associated storage tank to its associated day tank. It is required to support the continuous operation of standby power sources. This Surveillance provides assurance that the fuel oil transfer pump is OPERABLE, the fuel oil piping system is intact, the fuel delivery piping is not obstructed, and the controls and control systems for automatic fuel transfer systems are OPERABLE.

The Frequency for this SR corresponds to the testing requirements for pumps as contained in the ASME Boiler and Pressure Vessel Code, Section XI (Ref. 11).

12

SR 3.8.1.8

Transfer of each Division 1 and 2 4.16 kV emergency bus power supply from the normal offsite circuit to the alternate offsite circuit demonstrates the OPERABILITY of the alternate circuit distribution network to power the Division 1 and 2 shutdown loads. The 24 month Frequency of the Surveillance is based on engineering judgment taking

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.1.16 (continued)

assessment shall, as a minimum, consider the potential outcomes and transients associated with a failed Surveillance, a successful Surveillance, and a perturbation of the offsite or onsite system when they are tied together or operated independently for the Surveillance; as well as the operator procedures available to cope with these outcomes. These shall be measured against the avoided risk of a plant shutdown and startup to determine that plant safety is maintained or enhanced when the Surveillance is performed in MODE 1 or 2. Risk insights or deterministic methods may be used for this assessment. Credit may be taken for unplanned events that satisfy this SR.

SR 3.8.1.17

Consistent with Regulatory Guide 1.9 (Ref. 3), paragraph C.2.2.13, demonstration of the parallel test mode override ensures that the DG availability under accident conditions is not compromised as the result of testing. Interlocks to the LOCA sensing circuits cause the Divisions 1 and 2 DGs to automatically reset to ready-to-load operation if an ECCS initiation signal is received during operation in the test mode. Ready-to-load operation is defined as the DG running at rated speed and voltage with the DG output breaker open. These provisions for automatic switchover are required by IEEE-308 (Ref. ~~12~~ 13), paragraph 6.2.6(2).

The Division 3 DG overcurrent trip of the SAT feeder breaker to the respective Division 3 emergency bus demonstrates the ability of the Division 3 DG to remain connected to the emergency bus and supplying the necessary loads.

The 24 month Frequency takes into consideration plant conditions required to perform the Surveillance, and is intended to be consistent with expected fuel cycle lengths.

This SR has been modified by a Note. The reason for the Note is that performing the Surveillance would remove a required offsite circuit from service, perturb the electrical distribution system, and challenge safety systems. This restriction from normally performing the

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.1.21 (continued)

required by the given unit Specification. SR 3.8.1.12, SR 3.8.1.13, SR 3.8.1.17, SR 3.8.1.18, and SR 3.8.1.19 are excepted since these SRs test the opposite unit's ECCS initiation signal, which is not required for the AC electrical power sources to be OPERABLE on a given unit.

The Frequency required by the applicable opposite unit SR also governs performance of that SR for the given unit.

As noted, if the opposite unit is in MODE 4 or 5, or moving irradiated fuel assemblies in secondary containment, SR 3.8.1.3, SR 3.8.1.9 through SR 3.8.1.11, and SR 3.8.1.14 through SR 3.8.1.16 are not required to be performed. This ensures that a given unit SR will not require an opposite unit SR to be performed, when the opposite unit Technical Specifications exempts performance of an opposite unit SR (however, as stated in the opposite unit SR 3.8.2.1 Note 1, while performance of an SR is exempted, the SR must still be met).

REFERENCES

1. 10 CFR 50, Appendix A, GDC 17.
2. UFSAR, Chapter 8.
3. Regulatory Guide 1.9.
4. UFSAR, Chapter 6.
5. UFSAR, Chapter 15.
6. Regulatory Guide 1.93.
7. Generic Letter 84-15, July 2, 1984.

Insert 2 →

9 ~~8~~. 10 CFR 50, Appendix A, GDC 18.
10 ~~9~~. Regulatory Guide 1.137.
11 ~~10~~. ANSI C84.1, 1982.
12 ~~11~~. ASME, Boiler and Pressure Vessel Code, Section XI.
13 ~~12~~. IEEE Standard 308.

BASES

ACTIONS

A.1 (continued)

a subsequent worst case single failure could, however, result in the loss of minimum necessary DC electrical subsystems, continued power operation should not exceed 2 hours. The 2 hour Completion Time is based on Regulatory Guide 1.93 (Ref. 7) and reflects a reasonable time to assess unit status as a function of the inoperable DC electrical power subsystem and, if the DC electrical power subsystem is not restored to OPERABLE status, to prepare to effect an orderly and safe unit shutdown.

Insert 1 →

C ~~B.1~~

With the Division 3 DC electrical power subsystem inoperable, the HPCS System may be incapable of performing its intended function and must be immediately declared inoperable. This declaration also requires entry into applicable Conditions and Required Actions of LCO 3.5.1, "ECCS—Operating."

D ~~C.1~~

With the Division 1 250 VDC electrical power subsystem inoperable, the RCIC System and the RCIC DC powered PCIVs may be incapable of performing their intended functions and must be immediately declared inoperable. This declaration also requires entry into applicable Conditions and Required Actions of LCO 3.5.3, "RCIC System," and LCO 3.6.1.3, "PCIVs."

E ~~D.1~~

If the opposite unit Division 2 125 VDC electrical power subsystem is inoperable (e.g., inoperable battery, inoperable charger, or inoperable battery charger and associated battery), certain redundant Division 2 features (e.g., a standby gas treatment subsystem) will not function if a design basis event were to occur. Therefore, a 7 day Completion Time is provided to restore the opposite unit Division 2 125 VDC electrical power subsystem to

(continued)

BASES

ACTIONS

E ~~D~~.1 (continued)

OPERABLE status. The 7 day Completion Time takes into account the capacity and capability of the remaining DC electrical power subsystems, and is based on the shortest restoration time allowed for the systems affected by the inoperable DC electrical power subsystem in the respective system specifications.

F

F ~~E~~.1 and ~~E~~.2

If the DC electrical power subsystem cannot be restored to OPERABLE status within the associated Completion Time, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems. The Completion Time to bring the unit to MODE 4 is consistent with the time specified in Regulatory Guide 1.93 (Ref. 7).

SURVEILLANCE REQUIREMENTS

The Surveillances are modified by two Notes to clearly identify how the Surveillances apply to the given unit and opposite unit DC electrical power sources. Note 1 states that SR 3.8.4.1 through SR 3.8.4.8 are applicable only to the given unit DC electrical power sources and Note 2 states that SR 3.8.4.9 is applicable to the opposite unit DC electrical power sources. These Notes are necessary since opposite unit DC electrical power sources are not required to perform all of the requirements of the given unit DC electrical power sources (e.g., the opposite unit battery is not required to perform SR 3.8.4.6, SR 3.8.4.7, and 3.8.4.8 under certain conditions when not in MODE 1, 2, or 3).

SR 3.8.4.1

Verifying battery terminal voltage while on float charge helps to ensure the effectiveness of the charging system and the ability of the batteries to perform their intended function. Float charge is the condition in which the

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.4.1 (continued)

charger is supplying the continuous charge required to overcome the internal losses of a battery and maintain the battery in a fully charged state. The voltage requirements are based on the nominal design voltage of the battery and are conservative when compared with the initial voltages assumed in the battery sizing calculations. The 7 day Frequency is consistent with manufacturers recommendations and IEEE-450 (Ref. ~~8~~ 9).

SR 3.8.4.2

Visual inspection to detect corrosion of the battery cells and connections, or measurement of the resistance of each inter-cell and terminal connection, provides an indication of physical damage or abnormal deterioration that could potentially degrade battery performance.

The connection resistance limits established for this SR are within the values established by industry practice. The connection resistance limits of this SR are related to the resistance of individual bolted connections, and do not include the resistance of conductive components (e.g., cables or conductors located between cells, racks, or tiers).

The Surveillance Frequency for these inspections, which can detect conditions that can cause power losses due to resistance heating, is 92 days. This Frequency is considered acceptable based on operating experience related to detecting corrosion trends.

SR 3.8.4.3

Visual inspection of the battery cells, cell plates, and battery racks provides an indication of physical damage or abnormal deterioration that could potentially degrade battery performance.

The presence of physical damage or deterioration does not necessarily represent a failure of this SR, provided an evaluation determines that the physical damage or

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.8.4.6

Battery charger capability requirements are based on the design capacity of the chargers (Ref. 4). According to Regulatory Guide 1.32 (Ref. 9), the battery charger supply is required to be based on the largest combined demands of the various steady state loads and the charging capacity to restore the battery from the design minimum charge state to the fully charged state, irrespective of the status of the unit during these demand occurrences. The minimum required amperes and duration ensure that these requirements can be satisfied.

The Surveillance Frequency is acceptable, given the administrative controls existing to ensure adequate charger performance during these 24 month intervals. In addition, this Frequency is intended to be consistent with expected fuel cycle lengths.

SR 3.8.4.7

A battery service test is a special test of the battery's capability, as found, to satisfy the design requirements (battery duty cycle) of the DC electrical power system. The discharge rate and test length correspond to the design duty cycle requirements as specified in Reference 4.

The Surveillance Frequency of 24 months is acceptable, given unit conditions required to perform the test and the other requirements existing to ensure adequate battery performance during these 24 month intervals. In addition, this Frequency is intended to be consistent with expected fuel cycle lengths.

This SR is modified by two Notes. Note 1 allows the performance of a modified performance discharge test in lieu of a service test provided the modified performance discharge test completely envelops the service test. This substitution is acceptable because a modified performance discharge test represents a more severe test of battery capacity than SR 3.8.4.7. The reason for Note 2 is that performing the Surveillance would remove a required 125 VDC electrical power subsystem from service, perturb the

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.4.8 (continued)

continues to envelope the duty cycle of the service test.) Since the ampere-hours removed by a rated one minute discharge represents a very small portion of the battery capacity, the test rate can be changed to that for the performance test without compromising the results of the performance discharge test. The battery terminal voltage for the modified performance discharge test should remain above the minimum battery terminal voltage specified in the battery service test for the duration of time equal to that of the service test.

A modified performance discharge test is a test of the battery capacity and its ability to provide a high rate, short duration load (usually the highest rate of the duty cycle). This will often confirm the battery's ability to meet the critical period of the load duty cycle, in addition to determining its percentage of rated capacity. Initial conditions for the modified performance discharge test should be identical to those specified for a service test when the modified performance discharge test is performed in lieu of a service test. Either the battery performance discharge test or the modified performance discharge test is acceptable for satisfying SR 3.8.4.8; however, only the modified performance discharge test may be used to satisfy SR 3.8.4.8 while satisfying the requirements of SR 3.8.4.7 at the same time.

9 The acceptance criteria for this Surveillance is consistent with IEEE-450 (Ref. 8) and IEEE-485 (Ref. 11). These references recommend that the battery be replaced if its capacity is below 80% of the manufacturer's rating, since IEEE-485 (Ref. 11) recommends using an ageing factor of 125% in the battery sizing calculation. A capacity of 80% shows that the battery rate of deterioration is increasing, even if there is ample capacity to meet the load requirements.

The Surveillance Frequency for this test is normally 60 months. If the battery shows degradation, or if the battery has reached 85% of its expected life and capacity is < 100% of the manufacturers rating, the Surveillance Frequency is reduced to 12 months. However, if the battery shows no degradation but has reached 85% of its expected life, the Surveillance Frequency is only reduced to 24 months for batteries that retain capacity ≥ 100% of the

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.4.8 (continued)

manufacturers rating. Degradation is indicated, consistent with IEEE-450 (Ref. 8), when the battery capacity drops by more than 10% relative to its capacity on the previous performance test or when it is ≥ 10% below the manufacturers rating. The 12 month and 60 month Frequencies are consistent with the recommendations in IEEE-450 (Ref. 8). The 24 month Frequency is derived from the recommendations of IEEE-450 (Ref. 8).

This SR is modified by a Note. The reason for the Note is that performing the Surveillance would remove a required 125 VDC electrical power subsystem from service, perturb the electrical distribution system, and challenge safety systems. This restriction from normally performing the Surveillance in MODE 1 or 2 is further amplified to allow portions of the Surveillance to be performed for the purpose of reestablishing OPERABILITY (e.g., post work testing following corrective maintenance, corrective modification, deficient or incomplete surveillance testing, and other unanticipated OPERABILITY concerns) provided an assessment determines plant safety is maintained or enhanced. This assessment shall, as a minimum, consider the potential outcomes and transients associated with a failed partial Surveillance, a successful partial Surveillance, and a perturbation of the offsite or onsite system when they are tied together or operated independently for the partial Surveillance; as well as the operator procedures available to cope with these outcomes. These shall be measured against the avoided risk of a plant shutdown and startup to determine that plant safety is maintained or enhanced when portions of the Surveillance are performed in MODE 1 or 2. Risk insights or deterministic methods may be used for this assessment. Credit may be taken for unplanned events that satisfy this SR.

SR 3.8.4.9

With the exception of this Surveillance, all other Surveillances of this Specification (SR 3.8.4.1 through 3.8.4.8) are applied to the given unit DC sources. This Surveillance is provided to direct that appropriate Surveillances for the required opposite unit DC source are governed by the applicable opposite unit Technical

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.4.9 (continued)

Specifications. Performance of the applicable opposite unit Surveillances will satisfy the opposite unit requirements as well as satisfy the given unit Surveillance Requirement.

The Frequency required by the applicable opposite unit SR also governs performance of that SR for the given unit.

As noted, if the opposite unit is in MODE 4 or 5, or moving irradiated fuel assemblies in secondary containment, SR 3.8.4.6, SR 3.8.4.7, and SR 3.8.4.8 are not required to be performed. This ensures that a given unit SR will not require an opposite unit SR to be performed, when the opposite unit Technical Specifications exempts performance of an opposite unit SR (however, as stated in the opposite unit SR 3.8.5.1 Note 1, while performance of an SR is exempted, the SR must still be met).

REFERENCES

1. 10 CFR 50, Appendix A, GDC 17.

2. Regulatory Guide 1.6, March 10, 1971.

3. IEEE Standard 308, 1971.

4. UFSAR, Section 8.3.2.

5. UFSAR, Chapter 6.

6. UFSAR, Chapter 15.

7. Regulatory Guide 1.93, December 1974.

Insert 2

9 ~~8.~~ IEEE Standard 450, 1995.

10 ~~9.~~ Regulatory Guide 1.32, August 1972.

11 ~~10.~~ IEEE Standard 485, 1978.

BASES

ACTIONS

B.1 (continued)

The second Completion Time for Required Action B.1 establishes a limit on the maximum time allowed for any combination of required distribution subsystems to be inoperable during any single contiguous occurrence of failing to meet LCO 3.8.7.a. If Condition B is entered while, for instance, an AC electrical power distribution subsystem is inoperable and subsequently returned OPERABLE, LCO 3.8.7.a may already have been not met for up to 8 hours. This situation could lead to a total duration of 10 hours, since initial failure of LCO 3.8.7.a, to restore the DC electrical power distribution system. At this time, an AC electrical power distribution subsystem could again become inoperable, and DC electrical power distribution subsystem could be restored OPERABLE. This could continue indefinitely.

This Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." This allowance results in establishing the "time zero" at the time LCO 3.8.7.a was initially not met, instead of the time Condition B was entered. The 16 hour Completion Time is an acceptable limitation on this potential of failing to meet LCO 3.8.7.a indefinitely.

Insert 1 →

D ~~C.1~~

With one or more required opposite unit Division 2 AC or DC electrical power distribution subsystems inoperable and a loss of function has not yet occurred, certain redundant Division 2 features (e.g., a standby gas treatment subsystem) will not function if a design basis event were to occur. Therefore, a 7 day Completion Time is provided to restore the required opposite unit Division 2 AC and DC electrical power distribution subsystems to OPERABLE status. The 7 day Completion Time takes into account the capacity and capability of the remaining AC and DC electrical power distribution subsystems, and is based on the shortest restoration time allowed for the systems affected by the inoperable AC and DC electrical power distribution subsystems in the respective system specifications.

(continued)

BASES

ACTIONS

D ~~C.1~~ (continued)

The Required Action is modified by a Note indicating that the applicable Conditions of LCO 3.8.1 be entered and Required Actions taken if the inoperable opposite unit AC electrical power distribution subsystem results in an inoperable required offsite circuit. This is an exception to LCO 3.0.6 and ensures the proper actions are taken for these components.

E ~~D.1 and D.2~~ E

If the inoperable electrical power distribution system cannot be restored to OPERABLE status within the associated Completion Times, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

F ~~E.1~~

With the Division 3 electrical power distribution system inoperable (i.e., one or both Division 3 AC or DC electrical power distribution subsystems inoperable), the Division 3 powered systems are not capable of performing their intended functions. Immediately declaring the affected supported features, e.g., the High Pressure Core Spray System and its associated primary containment isolation valves, inoperable allows the ACTIONS of LCO 3.5.1, "ECCS–Operating," and LCO 3.6.1.3, "Primary Containment Isolation Valves (PCIVs)," to apply appropriate limitations on continued reactor operation.

G ~~F.1~~

With the Division 1 250 V DC subsystem inoperable, the RCIC System and the RCIC DC powered PCIVs may be incapable of performing their intended functions and must be immediately declared inoperable. This declaration also requires entry

(continued)

BASES

ACTIONS

G F.1 (continued)

into applicable Conditions and Required Actions of LCO 3.5.3, "Reactor Core Isolation Cooling (RCIC) System," and LCO 3.6.1.3, "Primary Containment Isolation Valves (PCIVs)."

H E.1

H Condition E corresponds to a level of degradation in the electrical power distribution system that causes a required safety function to be lost. When the inoperability of two or more inoperable electrical power distribution subsystems, in combination, result in the loss of a required function, the plant is in a condition outside the accident analysis. Therefore, no additional time is justified for continued operation. LCO 3.0.3 must be entered immediately to commence a controlled shutdown. The term "in combination" means that the loss of function must result from the inoperability of two or more AC and DC electrical power distribution subsystems; a loss of function solely due to a single AC or DC electrical power distribution subsystem inoperability even with another AC or DC electrical power distribution subsystem concurrently inoperable, does not require entry into Condition E. In addition, for this Action, Division 3 is considered redundant to Division 1 and 2 ECCS.

SURVEILLANCE REQUIREMENTS

SR 3.8.7.1

Meeting this Surveillance verifies that the AC and DC electrical power distribution systems are functioning properly, with the correct circuit breaker alignment. The correct breaker alignment ensures the appropriate separation and independence of the electrical divisions is maintained, and the appropriate voltage is available to each required bus. The verification of proper voltage availability on the buses ensures that the required voltage is readily available for motive as well as control functions for critical system loads connected to these buses. The 7 day Frequency takes into account the redundant capability of the AC and DC electrical power distribution subsystems, and other indications available in the control room that alert the operator to subsystem malfunctions.

(continued)

BASES (continued)

REFERENCES

1. UFSAR, Chapter 6.
2. UFSAR, Chapter 15.
3. Regulatory Guide 1.93, Revision 0, December 1974.

Insert 2

LaSalle County Station TSTF-423 LAR
Technical Specification Bases Page Inserts

LCO 3.3.8.2 Reactor Protection System (RPS) Electric Power Monitoring

Insert 1

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 2) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Insert 2

2. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.5.1 ECCS-Operating

Insert 1

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 13) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Insert 2

H.1 and H.2

If two or more ADS valves are inoperable, there is a reduction in the depressurization capability. The plant must be brought to a condition in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and reactor steam dome pressure reduced to ≤ 150 psig within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 3

13. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.6.1.1 Primary Containment

Insert 1

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 5), because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Insert 2

5. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.6.1.6 Suppression Chamber-to-Drywell Vacuum Breakers

Insert 1

B.1

If a required suppression chamber-to-drywell vacuum breaker is inoperable for opening and is not restored to OPERABLE status within the required Completion Time, the plant must be brought to a condition in which the overall plant risk is minimized. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours. Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 3) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state. The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 2

If the open suppression chamber-to-drywell vacuum breaker cannot be closed within the required Completion Time

Insert 3

3. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.6.2.3 Residual Heat Removal (RHR) Suppression Pool Cooling

Insert 1

B.1

If one RHR suppression pool cooling subsystem is inoperable and is not restored to OPERABLE status within the required Completion Time, the plant must be brought to a condition in which the overall plant risk is minimized. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours. Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 2) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state. The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 2

2. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.6.2.4 Residual Heat Removal (RHR) Suppression Pool Spray

Insert 1

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 2) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Insert 2

2. NEDC-32998-A, Revision 2, Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants, December 2002.

LCO 3.6.4.1 Secondary Containment

Insert 1

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 3), because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Insert 2

3. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.6.4.3 Standby Gas Treatment (SGT) System

Insert 1

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 5) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Insert 2

Therefore, the plant must be brought to a MODE in which the overall plant risk is minimized. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours. Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 5) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state. The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 3

5. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.7.1 Residual Heat Removal Service Water (RHRSW) System

Insert 1

C.1

If one RHRSW subsystem is inoperable and not restored within the provided Completion Time, the plant must be brought to a condition in which the overall plant risk is minimized. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours. Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 6) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state. The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 2

6. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.7.4 Control Room Area Filtration (CRAF) System

Insert 1

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 6) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Insert 2

Therefore, the plant must be brought to a MODE in which the overall plant risk is minimized. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours. Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 6) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state. The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions from full power conditions is an orderly manner and without challenging plant systems.

Insert 3

6. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.7.5 Control Room Area Ventilation AC System

Insert 1

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 4) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Insert 2

Therefore, the plant must be brought to a MODE in which the overall plant risk is minimized. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours. Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 4) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE

status will be short. However, voluntary entry into MODE 4 maybe be made as it is also an acceptable low-risk state. The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 3

4. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.7.6 Main Condenser Offgas

Insert 1

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 3) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Insert 2

3. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.8.1 AC Sources – Operating

Insert 1

Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 8) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state.

Insert 2

8. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.8.4 DC Sources – Operating

Insert 1

B.1

If a Division 1 or 2 DC electrical power subsystem is inoperable and not restored within the provided Completion Time, the plant must be brought to a condition in which the

overall plant risk is minimized. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours. Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 8) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state. The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 2

8. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

LCO 3.8.7 Distribution Systems – Operating

Insert 1

C.1

If one or both Division 1 and 2 AC or DC electrical power distribution subsystems are inoperable and not restored within the provided Completion Time, the plant must be brought to a condition in which the overall plant risk is minimized. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours. Remaining in the Applicability of the LCO is acceptable because the plant risk in MODE 3 is similar to or lower than the risk in MODE 4 (Ref. 4) and because the time spent in MODE 3 to perform the necessary repairs to restore the system to OPERABLE status will be short. However, voluntary entry into MODE 4 may be made as it is also an acceptable low-risk state. The allowed Completion Time is reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

Insert 2

4. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants", December 2002.

ATTACHMENT 4
List of Regulatory Commitments

The following table identifies those actions committed to by Exelon Generation Company, LLC (EGC) in this document. Any other statements in the submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	COMMITTED DATE	COMMITMENT TYPE	
		ONE-TIME ACTION (Yes/No)	PROGRAMMATIC (Yes/No)
EGC will follow the guidance established in Section 11 of NUMARC 93-01, "Industry Guidance for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Nuclear Management and Resource Council, Revision 3, July 2000.	Ongoing	No	Yes
EGC will follow the guidance established in TSTF-IG-05-02, Implementation Guidance for TSTF-423, Revision 0, "Technical Specifications End States, NEDC-32988-A," September 2005.	Implement with amendment	No	Yes