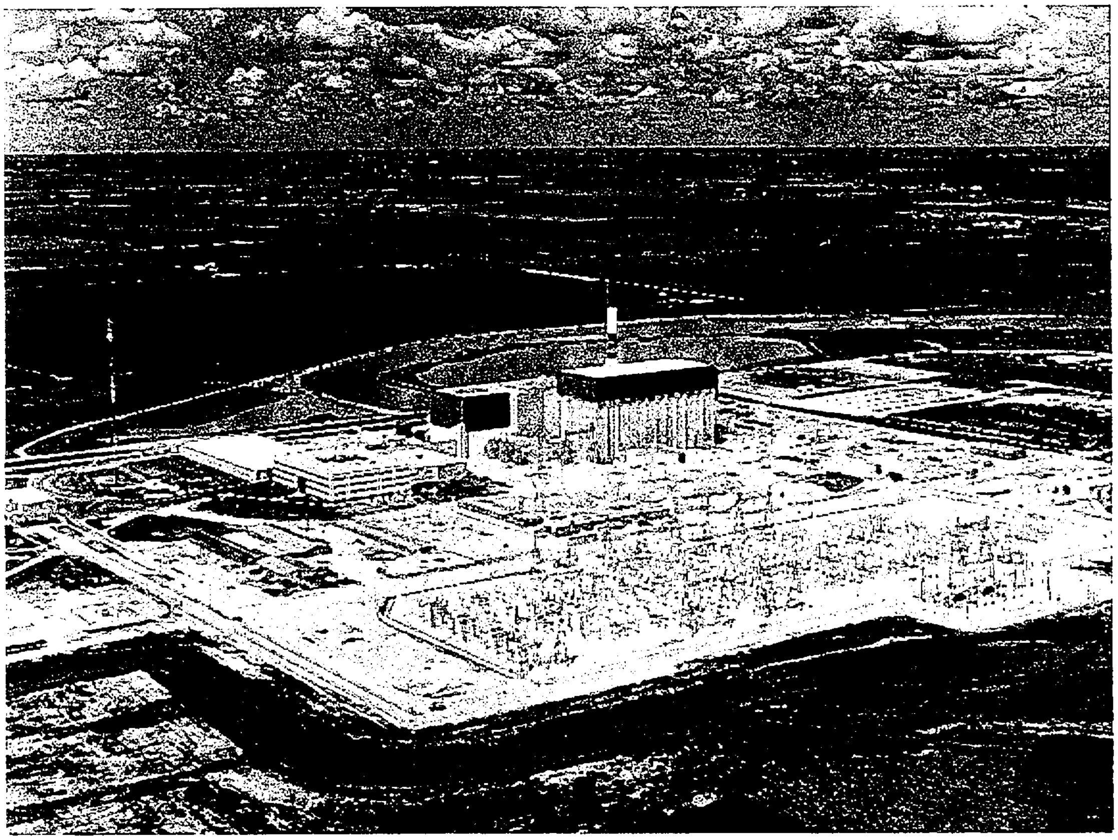
Improved Technical Specifications



LaSalle County Station

Volume 6:
Section 3.6; ITS, Bases, and CTS Markup/DOCs

ComEd

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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.1.1	Perform required visual examinations and leakage rate testing except for primary containment air lock testing, in accordance with the Primary Containment Leakage Rate Testing Program.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.1.2	Verify primary containment structural integrity in accordance with the Inservice Inspection Program for Post Tensioning Tendons.	In accordance with the Inservice Inspection Program for Post Tensioning Tendons
SR 3.6.1.1.3	Verify drywell-to-suppression chamber bypass leakage is less than or equal to the bypass leakage limit. However, during the first unit startup following bypass leakage testing performed in accordance with this SR, the acceptance criterion is $\leq$ 10% of the drywell-to-suppression chamber bypass leakage limit.	24 months

3.6 CONTAINMENT SYSTEMS

3.6.1.2 Primary Containment Air Lock

LCO 3.6.1.2 The primary containment air lock shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

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

1. Entry and exit is permissible to perform repairs of the air lock components.

2. Enter applicable Conditions and Required Actions of LCO 3.6.1.1, "Primary Containment," when air lock leakage results in exceeding overall containment leakage rate acceptance criteria.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One primary containment air lock door inoperable.	------------NOTES------------ 1. Required Actions A.1, A.2, and A.3 are not applicable if both doors in the air lock are inoperable and Condition C is entered. 2. Entry and exit is permissible for 7 days under administrative controls. ----------------------------	
		(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.1 Verify the OPERABLE door is closed. AND A.2 Lock the OPERABLE door closed. AND A.3 --------NOTE--------- Air lock doors in high radiation areas or areas with limited access due to inerting may be verified locked closed by administrative means. -------------------- Verify the OPERABLE door is locked closed.	1 hour 24 hours Once per 31 days
B. Primary containment air lock interlock mechanism inoperable.	------------NOTES------------ 1. Required Actions B.1, B.2, and B.3 are not applicable if both doors in the air lock are inoperable and Condition C is entered. 2. Entry into and exit from primary containment is permissible under the control of a dedicated individual. ----------------------------	(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. (continued)	B.1	Verify an OPERABLE door is closed.	1 hour
	AND		
	B.2	Lock an OPERABLE door closed.	24 hours
	AND		
	B.3	--------NOTE--------- Air lock doors in high radiation areas or areas with limited access due to inerting may be verified locked closed by administrative means. ---------------------	
		Verify an OPERABLE door is locked closed.	Once per 31 days
C. Primary containment air lock inoperable for reasons other than Condition A or B.	C.1	Initiate action to evaluate primary containment overall leakage rate per LCO 3.6.1.1, using current air lock test results.	Immediately
	AND		
	C.2	Verify a door is closed.	1 hour
	AND		
			(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. (continued)	C.3	Restore air lock to OPERABLE status.	24 hours
D. Required Action and associated Completion Time not met.	D.1	Be in MODE 3.	12 hours
	<u>AND</u>		
	D.2	Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.2.1	------------------NOTES------------------ 1. An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. 2. Results shall be evaluated against acceptance criteria applicable to SR 3.6.1.1.1. --- Perform required primary containment air lock leakage rate testing in accordance with the Primary Containment Leakage Rate Testing Program.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.2.2	Verify only one door in the primary containment air lock can be opened at a time.	24 months

3.6 CONTAINMENT SYSTEMS

3.6.1.3 Primary Containment Isolation Valves (PCIVs)

LCO 3.6.1.3 Each PCIV shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
When associated instrumentation is required to be OPERABLE per LCO 3.3.6.1, "Primary Containment Isolation Instrumentation."

ACTIONS

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

1. Penetration flow paths may be unisolated intermittently under administrative controls.
2. Separate Condition entry is allowed for each penetration flow path.
3. Enter applicable Conditions and Required Actions for systems made inoperable by PCIVs.
4. Enter applicable Conditions and Required Actions of LCO 3.6.1.1, "Primary Containment," when PCIV leakage results in exceeding overall containment leakage rate acceptance criteria.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. ---------NOTE--------- Only applicable to penetration flow paths with two or more PCIVs. ---------------------- One or more penetration flow paths with one PCIV inoperable except due to leakage not within limit.	A.1	Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.	4 hours except for main steam line <u>AND</u> 8 hours for main steam line
	<u>AND</u>		(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2 --------NOTES-------- 1. Isolation devices in high radiation areas may be verified by use of administrative means. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means. --------------------- Verify the affected penetration flow path is isolated.	Once per 31 days for isolation devices outside primary containment <u>AND</u> Prior to entering MODE 2 or 3 from MODE 4 if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days, for isolation devices inside primary containment

(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. ---------NOTE--------- Only applicable to penetration flow paths with two or more PCIVs. --------------------- One or more penetration flow paths with two or more PCIVs inoperable except due to leakage not within limit.	B.1	Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.	1 hour
C. ---------NOTE--------- Only applicable to penetration flow paths with only one PCIV. --------------------- One or more penetration flow paths with one PCIV inoperable except due to leakage not within limit.	C.1	Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.	4 hours except for excess flow check valves (EFCVs) and penetrations with a closed system AND 72 hours for EFCVs and penetrations with a closed system
	AND		(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. (continued)	C.2	-------NOTES-------- 1. Isolation devices in high radiation areas may be verified by use of administrative means. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by administrative means. --------------------- Verify the affected penetration flow path is isolated.	Once per 31 days
D. One or more flow paths with MSIV leakage rate or hydrostatically tested line leakage rate not within limit.	D.1	Restore leakage rate to within limit.	4 hours for hydrostatically tested line leakage not on a closed system <u>AND</u> 8 hours for MSIV leakage <u>AND</u> 72 hours for hydrostatically tested line leakage on a closed system

(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
E. Required Action and associated Completion Time of Condition A, B, C, or D not met in MODE 1, 2, or 3.	E.1	Be in MODE 3.	12 hours
	<u>AND</u>		
	E.2	Be in MODE 4.	36 hours
F. Required Action and associated Completion Time of Condition A, B, C, or D not met for PCIV(s) required to be OPERABLE during MODE 4 or 5.	F.1	Initiate action to suspend operations with a potential for draining the reactor vessel (OPDRVs).	Immediately
	<u>OR</u>		
	F.2	Initiate action to restore valve(s) to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.1	------------------NOTE------------------ Not required to be met when the 8 inch and 26 inch primary containment purge valves are open for inerting, de-inerting, pressure control, ALARA or air quality considerations for personnel entry, or Surveillances that require the valves to be open, provided the drywell purge valves and suppression chamber purge valves are not open simultaneously. --- Verify each 8 inch and 26 inch primary containment purge valve is closed.	31 days
SR 3.6.1.3.2	------------------NOTES------------------ 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for PCIVs that are open under administrative controls. --- Verify each primary containment isolation manual valve and blind flange that is located outside primary containment and not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed.	31 days

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.3	------------------NOTES------------------ 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for PCIVs that are open under administrative controls. --- Verify each primary containment isolation manual valve and blind flange that is located inside primary containment and not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed.	Prior to entering MODE 2 or 3 from MODE 4 if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days
SR 3.6.1.3.4	Verify continuity of the traversing incore probe (TIP) shear isolation valve explosive charge.	31 days
SR 3.6.1.3.5	Verify the isolation time of each power operated, automatic PCIV, except MSIVs, is within limits.	In accordance with the Inservice Testing Program

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.6	Verify the isolation time of each MSIV is ≥ 3 seconds and ≤ 5 seconds.	In accordance with the Inservice Testing Program
SR 3.6.1.3.7	Verify each automatic PCIV actuates to the isolation position on an actual or simulated isolation signal.	24 months
SR 3.6.1.3.8	Verify each EFCV actuates to the isolation position on an actual or simulated instrument line break signal.	24 months
SR 3.6.1.3.9	Remove and test the explosive squib from each shear isolation valve of the TIP System.	24 months on a STAGGERED TEST BASIS
SR 3.6.1.3.10	Verify leakage rate through any one main steam line is ≤ 100 scfh and through all four main steam lines is ≤ 400 scfh when tested at ≥ 25.0 psig.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.11	Verify combined leakage rate through hydrostatically tested lines that penetrate the primary containment is within limits.	In accordance with the Primary Containment Leakage Rate Testing Program

3.6 CONTAINMENT SYSTEMS

3.6.1.4 Drywell and Suppression Chamber Pressure

LCO 3.6.1.4 Drywell and suppression chamber pressure shall be ≥ -0.5 psig and ≤ +0.75 psig.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Drywell or suppression chamber pressure not within limits.	A.1	Restore drywell and suppression chamber pressure to within limits.	1 hour
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	12 hours
	<u>AND</u>		
	B.2	Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.4.1	Verify drywell and suppression chamber pressure is within limits.	12 hours

3.6 CONTAINMENT SYSTEMS

3.6.1.5 Drywell Air Temperature

LCO 3.6.1.5 Drywell average air temperature shall be ≤ 135°F.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Drywell average air temperature not within limit.	A.1	Restore drywell average air temperature to within limit.	8 hours
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	12 hours
	AND		
	B.2	Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.5.1	Verify drywell average air temperature is within limit.	24 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. One suppression chamber-to-drywell vacuum breaker not closed.	B.1 Close both manual isolation valves in the affected line. <u>AND</u> B.2 Restore the vacuum breaker to OPERABLE status.	4 hours 72 hours
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 Be in MODE 3. <u>AND</u> C.2 Be in MODE 4.	12 hours 36 hours

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Two or more suppression chamber-to-drywell vacuum breakers inoperable.	D.1 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)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.6.3	Verify the opening setpoint of each vacuum breaker is ≤ 0.5 psid.	24 months

3.6 CONTAINMENT SYSTEMS

3.6.2.1 Suppression Pool Average Temperature

LCO 3.6.2.1 Suppression pool average temperature shall be:

a. ≤ 105°F with THERMAL POWER > 1% RTP; and

b. ≤ 110°F with THERMAL POWER ≤ 1% RTP.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Suppression pool average temperature > 105°F but ≤ 110°F. AND THERMAL POWER > 1% RTP.	A.1 Suspend all testing that adds heat to the suppression pool. AND A.2 Verify suppression pool average temperature ≤ 110°F. AND A.3 Restore suppression pool average temperature to ≤ 105°F.	Immediately Once per hour 24 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Reduce THERMAL POWER to ≤ 1% RTP.	12 hours

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Suppression pool average temperature > 110°F but ≤ 120°F.	C.1 Place the reactor mode switch in the shutdown position.	Immediately
	<u>AND</u>	
	C.2 Verify suppression pool average temperature ≤ 120°F.	Once per 30 minutes
	<u>AND</u>	
	C.3 Be in MODE 4.	36 hours
D. Suppression pool average temperature > 120°F.	D.1 Depressurize the reactor vessel to < 200 psig.	12 hours
	<u>AND</u>	
	D.2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.1.1	Verify suppression pool average temperature is within the applicable limits.	24 hours <u>AND</u> 5 minutes when performing testing that adds heat to the suppression pool

3.6 CONTAINMENT SYSTEMS

3.6.2.2 Suppression Pool Water Level

LCO 3.6.2.2 Suppression pool water level shall be ≥ -4.5 inches and ≤ +3 inches.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Suppression pool water level not within limits.	A.1 Restore suppression pool water level to within limits.	2 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 4.	12 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.2.2.1 Verify suppression pool water level is within limits.	24 hours

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. Two RHR suppression pool cooling subsystems inoperable.	B.1 Restore one RHR suppression pool cooling 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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.3.1	Verify each RHR suppression pool cooling subsystem manual and power operated valve in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position or can be aligned to the correct position.	31 days
SR 3.6.2.3.2	Verify each required RHR pump develops a flow rate $\geq$ 7200 gpm through the associated heat exchanger while operating in the suppression pool cooling mode.	In accordance with the Inservice Testing Program

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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.4.1	Verify each RHR suppression pool spray subsystem manual and power operated valve in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position or can be aligned to the correct position.	31 days
SR 3.6.2.4.2	Verify each required RHR pump develops a flow rate $\geq$ 450 gpm through the spray sparger while operating in the suppression pool spray mode.	In accordance with the Inservice Testing Program

3.6 CONTAINMENT SYSTEMS

3.6.3.1 Primary Containment Hydrogen Recombiners

LCO 3.6.3.1 Two primary containment hydrogen recombiners shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One primary containment hydrogen recombiner inoperable.	A.1 --------NOTE--------- LCO 3.0.4 is not applicable. --------------------- Restore primary containment hydrogen recombiner to OPERABLE status.	30 days
B. Two primary containment hydrogen recombiners inoperable.	B.1 Verify by administrative means that the hydrogen control function is maintained.	1 hour <u>AND</u> Once per 12 hours thereafter
	<u>AND</u> B.2 Restore one primary containment hydrogen recombiner to OPERABLE status.	7 days

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.3.1.1	Perform a system functional test for each primary containment hydrogen recombiner.	24 months
SR 3.6.3.1.2	Perform a resistance to ground test for each heater phase.	24 months

3.6 CONTAINMENT SYSTEMS

3.6.3.2 Primary Containment Oxygen Concentration

LCO 3.6.3.2 The primary containment oxygen concentration shall be < 4.0 volume percent.

APPLICABILITY: MODE 1 during the time period:

a. From 24 hours after THERMAL POWER is > 15% RTP following startup, to

b. 24 hours prior to reducing THERMAL POWER to < 15% RTP prior to the next scheduled reactor shutdown.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Primary containment oxygen concentration not within limit.	A.1 Restore oxygen concentration to within limit.	24 hours
B. Required Action and associated Completion Time not met.	B.1 Reduce THERMAL POWER to ≤ 15% RTP.	8 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.3.2.1	Verify primary containment oxygen concentration is within limits.	7 days

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. AND B.2 Be in MODE 4.	12 hours 36 hours

(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. Secondary containment inoperable during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	C.1	--------NOTE--------- LCO 3.0.3 is not applicable. --------------------- Suspend movement of irradiated fuel assemblies in the secondary containment.	Immediately
	<u>AND</u>		
	C.2	Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u>		
	C.3	Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify secondary containment vacuum is ≥ 0.25 inch of vacuum water gauge.	24 hours
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed.	31 days
SR 3.6.4.1.3	Verify the secondary containment can be drawn down to ≥ 0.25 inch of vacuum water gauge in ≤ 300 seconds using one standby gas treatment (SGT) subsystem.	24 months on a STAGGERED TEST BASIS for each SGT subsystem
SR 3.6.4.1.4	Verify the secondary containment can be maintained ≥ 0.25 inch of vacuum water guage for 1 hour using one SGT subsystem at a flow rate ≤ 4400 cfm.	24 months on a STAGGERED TEST BASIS for each SGT subsystem

3.6 CONTAINMENT SYSTEMS

3.6.4.2 Secondary Containment Isolation Valves (SCIVs)

LCO 3.6.4.2 Each SCIV 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

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

1. Penetration flow paths may be unisolated intermittently under administrative controls.

2. Separate Condition entry is allowed for each penetration flow path.

3. Enter applicable Conditions and Required Actions for systems made inoperable by SCIVs.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more penetration flow paths with one SCIV inoperable.	A.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange. <u>AND</u>	8 hours (continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.2	--------NOTES-------- 1. Isolation devices in high radiation areas may be verified by use of administrative means. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative controls. --------------------- Verify the affected penetration flow path is isolated.	 Once per 31 days
B. ---------NOTE--------- Only applicable to penetration flow paths with two isolation valves. --------------------- One or more penetration flow paths with two SCIVs inoperable.	B.1	Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.	4 hours
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, or 3.	C.1 <u>AND</u> C.2	Be in MODE 3. Be in MODE 4.	12 hours 36 hours

(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. Required Action and associated Completion Time of Condition A or B not met during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	D.1	--------NOTE-------- LCO 3.0.3 is not applicable. -------------------- Suspend movement of irradiated fuel assemblies in the secondary containment.	Immediately
	<u>AND</u>		
	D.2	Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u>		
	D.3	Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.2.1	------------------NOTES------------------ 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for SCIVs that are open under administrative controls. --- Verify each secondary containment isolation manual valve and blind flange that is not locked, sealed or otherwise secured in position and is required to be closed during accident conditions is closed.	31 days
SR 3.6.4.2.2	Verify the isolation time of each power operated, automatic SCIV is within limits.	92 days
SR 3.6.4.2.3	Verify each automatic SCIV actuates to the isolation position on an actual or simulated automatic isolation signal.	24 months

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.	Immediately
	AND		
	C.2.2	Suspend CORE ALTERATIONS.	Immediately
	AND		
	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.	Immediately
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.	Immediately
	AND		
			(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. (continued)	E.2 Suspend CORE ALTERATIONS. AND E.3 Initiate action to suspend OPDRVs.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.3.1	Operate each SGT subsystem for $\geq$ 10 continuous hours with heaters operating.	31 days
SR 3.6.4.3.2	Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3	Verify each SGT subsystem actuates on an actual or simulated initiation signal.	24 months

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.1 Primary Containment

BASES

BACKGROUND

The function of the primary containment is to isolate and contain fission products released from the Reactor Primary System following a design basis Loss of Coolant Accident (LOCA) and to confine the postulated release of radioactive material to within limits. The primary containment consists of a steel lined, reinforced concrete vessel, which surrounds the Reactor Primary System and provides an essentially leak tight barrier against an uncontrolled release of radioactive material to the environment. Additionally, this structure provides shielding from the fission products that may be present in the primary containment atmosphere following accident conditions.

The isolation devices for the penetrations in the primary containment boundary are a part of the primary containment leak tight barrier. To maintain this leak tight barrier:

a. All penetrations required to be closed during accident conditions are either:

   1. capable of being closed by an OPERABLE automatic containment isolation system, or

   2. closed by manual valves, blind flanges, or de-activated automatic valves secured in their closed positions, except as provided in LCO 3.6.1.3, "Primary Containment Isolation Valves (PCIVs)";

b. Primary containment air locks are OPERABLE, except as provided in LCO 3.6.1.2, "Primary Containment Air Locks";

c. All equipment hatches are closed and sealed; and

d. The sealing mechanism associated with each primary containment penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

(continued)

BASES

BACKGROUND (continued)

This Specification ensures that the performance of the primary containment, in the event of a Design Basis Accident (DBA), meets the assumptions used in the safety analyses of References 1 and 2. SR 3.6.1.1.1 leakage rate requirements are in conformance with 10 CFR 50, Appendix J (Ref. 3), Option B, as modified by approved exemptions.

APPLICABLE SAFETY ANALYSES

The safety design basis for the primary containment is that it must withstand the pressures and temperatures of the limiting DBA without exceeding the design leakage rate.

The DBA that postulates the maximum release of radioactive material within primary containment is a LOCA. In the analysis of this accident, it is assumed that primary containment is OPERABLE such that release of fission products to the environment is controlled by the rate of primary containment leakage.

Analytical methods and assumptions involving the primary containment are presented in References 1 and 2. The safety analyses assume a nonmechanistic fission product release following a DBA, which forms the basis for determination of offsite doses. The fission product release is, in turn, based on an assumed leakage rate from the primary containment. OPERABILITY of the primary containment ensures that the leakage rate assumed in the safety analyses is not exceeded.

The maximum allowable leakage rate for the primary containment (L_a) is 0.635% by weight of the containment air per 24 hours at the design basis LOCA maximum peak containment pressure (P_a) of 39.6 psig (Ref. 4).

Primary containment satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

LCO

Primary containment OPERABILITY is maintained by limiting leakage to ≤ 1.0 L_a, except prior to the first startup after performing a required Primary Containment Leakage Rate Testing Program leakage test. At this time, the applicable leakage limits must be met. In addition, the leakage from the drywell to the suppression chamber must be limited to ensure the primary containment pressure does not exceed

(continued)

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

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. Thus, SR 3.0.2 (which allows Frequency extensions) does not apply.

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 Regulatory Guide 1.35 (Ref. 5), 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 (continued)

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.1.3

The analyses results in Reference 6 are based on a maximum drywell-to-suppression chamber bypass leakage. This Surveillance ensures that the actual bypass leakage is less than or equal to the acceptable $A/\sqrt{k}$ design value of 0.030 ft^2 assumed in the safety analysis. For example, with a typical loss factor of 3 or greater, the maximum allowable leakage area would be 0.052 ft^2, corresponding to a 3-in line size.

As left bypass leakage, prior to the first startup after performing a required bypass leakage test, is required to be $\leq$ 10% of the drywell-to-suppression chamber bypass leakage limit when tested with an initial differential pressure of 1.5 psi. At all other times between required leakage rate tests, the acceptance criteria is based on design $A/\sqrt{k}$. At the design $A/\sqrt{k}$ the containment temperature and pressurization response are bounded by the assumptions of the safety analysis. The leakage test is performed every 24 months, consistent with the difficulty of performing the test, risk of high radiation exposure, and the remote possibility of a component failure that is not identified by some other drywell or primary containment SR.

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. Regulatory Guide 1.35, Revision 3.
6. UFSAR, Section 6.2.1.1.5.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.2 Primary Containment Air Lock

BASES

BACKGROUND

A double-door primary containment air lock has been built into the primary containment to provide personnel access to the primary containment and to provide primary containment isolation during the process of personnel entry and exit. The air lock is designed to withstand the same loads, temperatures, and peak design internal and external pressures as the primary containment (Ref. 1). As part of the primary containment, the air lock limits the release of radioactive material to the environment during normal unit operation and through a range of transients and accidents up to and including postulated Design Basis Accidents (DBAs).

Each air lock door has been designed and tested to certify its ability to withstand pressure in excess of the maximum expected pressure following a DBA in primary containment. Each of the doors has double, compressible seals and local leak rate testing capability to ensure pressure integrity. To effect a leak tight seal, the air lock design uses pressure sealed doors (i.e., an increase in primary containment internal pressure results in an increased sealing on each door.).

The air lock is nominally a right circular cylinder, 10 ft in diameter, with doors at each end that are interlocked to prevent simultaneous opening. The air lock is provided with limit switches on both doors that provide remote indication of door position via an alarm in the control room that indicates when an air lock door is open. During periods when primary containment is not required to be OPERABLE, the air lock interlock mechanism may be disabled, allowing both doors of the air lock to remain open for extended periods when frequent primary containment entry is necessary. Under some conditions, as allowed by this LCO, the primary containment may be accessed through the air lock when the door interlock mechanism has failed, by manually performing the interlock function.

The primary containment air lock forms part of the primary containment pressure boundary. As such, air lock integrity and leak tightness are essential for maintaining primary

(continued)

BASES

BACKGROUND (continued)	containment leakage rate to within limits in the event of a DBA. Not maintaining air lock integrity or leak tightness may result in a leakage rate in excess of that assumed in the safety analysis.
APPLICABLE SAFETY ANALYSES	The DBA that postulates the maximum release of radioactive material within primary containment is a LOCA. In the analysis of this accident, it is assumed that primary containment is OPERABLE, such that release of fission products to the environment is controlled by the rate of primary containment leakage. The primary containment is designed with a maximum allowable leakage rate (L_a) of 0.635% by weight of the containment air mass per 24 hours at the Design Basis LOCA maximum peak containment pressure (P_a) of 39.6 psig (Ref. 2). This allowable leakage rate forms the basis for the acceptance criteria imposed on the SRs associated with the air lock. Primary containment air lock OPERABILITY is also required to minimize the amount of fission product gases that may escape primary containment through the air lock and contaminate and pressurize the secondary containment. Primary containment air lock satisfies Criterion 3 of the 10 CFR 50.36(c)(2)(ii).
LCO	As part of the primary containment pressure boundary, the air lock safety function is related to control of containment leakage following a DBA. Thus, the air lock structural integrity and leak tightness are essential to the successful mitigation of such an event. The primary containment air lock is required to be OPERABLE. For the air lock to be considered OPERABLE, the air lock interlock mechanism must be OPERABLE, the air lock must be in compliance with the Type B air lock leakage test, and both air lock doors must be OPERABLE. The interlock allows only one air lock door to be open at a time. This provision ensures that a gross breach of primary containment does not exist when primary containment is required to be OPERABLE. Closure of a single door in the air lock is sufficient to

(continued)

BASES

LCO (continued)	provide a leak tight barrier following postulated events. Nevertheless, both doors are kept closed when the air lock is not being used for normal entry into or exit from primary containment.
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, the primary containment air lock is not required to be OPERABLE in MODES 4 and 5 to prevent leakage of radioactive material from primary containment.
ACTIONS	The ACTIONS are modified by Note 1, which allows entry and exit to perform repairs of the affected air lock component. If the outer door is inoperable, then it may be easily accessed for most repairs. If the inner door is the one that is inoperable, however, then a short time exists when the primary containment boundary is not intact (during access through the OPERABLE door). The allowance to open the OPERABLE door, even if it means the primary containment boundary is temporarily not intact, is acceptable due to the low probability of an event that could pressurize the primary containment during the short time in which the OPERABLE door is expected to be open. The required administrative controls consist of stationing a dedicated individual to assure closure of the OPERABLE door except during the entry and exit and to assure the OPERABLE door is relocked after completion of the containment entry and exit. The ACTIONS are modified by a second Note, which ensures appropriate remedial actions are taken when necessary, if airlock leakage results in exceeding overall containment leakage rate acceptance criteria. Pursuant to LCO 3.0.6, ACTIONS are not required even if primary containment leakage is exceeding leakage L_a. Therefore, the Note is added to require ACTIONS for LCO 3.6.1.1, "Primary Containment," to be taken in this event.

(continued)

BASES

ACTIONS (continued)

A.1, A.2, and A.3

With one primary containment air lock door inoperable, the OPERABLE door must be verified closed (Required Action A.1). This ensures that a leak tight primary containment barrier is maintained by the use of an OPERABLE air lock door. This action must be completed within 1 hour. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1.1, which requires that primary containment be restored to OPERABLE status within 1 hour.

In addition, the air lock penetration must be isolated by locking closed the OPERABLE air lock door within the 24 hour Completion Time. The 24 hour Completion Time is considered reasonable for locking the OPERABLE air lock door, considering the OPERABLE door of the air lock is being maintained closed.

Required Action A.3 ensures that the air lock penetration has been isolated by the use of a locked closed OPERABLE air lock door. This ensures that an acceptable primary containment leakage boundary is maintained. The Completion Time of once per 31 days is based on engineering judgment and is considered adequate given the low likelihood of a locked door being mispositioned and other administrative controls. Required Action A.3 is modified by a Note that applies to air lock doors located in high radiation areas or areas with limited access due to inerting and allows these doors to be verified locked closed by use of administrative controls. Allowing verification by administrative controls is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of the door, once it has been verified to be in the proper position, is small.

The Required Actions have been modified by two Notes. Note 1 ensures that only the Required Actions and associated Completion Times of Condition C are required if both doors in the air lock are inoperable. With both doors in the air lock inoperable, an OPERABLE door is not available to be closed. Required Actions C.1 and C.2 are the appropriate remedial actions. The exception of Note 1 does not affect tracking the Completion Time from the initial entry into Condition A; only the requirement to comply with the

(continued)

BASES

ACTIONS

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

Required Actions. Note 2 allows use of the air lock for entry and exit for 7 days under administrative controls. This 7 day restriction begins when the air lock is discovered inoperable.

Primary containment entry may be required to perform Technical Specifications (TS) Surveillances and Required Actions, as well as other activities inside primary containment that are required by TS or activities that support TS-required equipment. This Note is not intended to preclude performing other activities (i.e., non-TS-related activities) if the primary containment was entered, using the inoperable air lock, to perform an allowed activity listed above. The required administrative controls consist of stationing a dedicated individual to assure closure of the OPERABLE door except during periods of entry and exit, and to assure the OPERABLE door is relocked after completion of the containment entry and exit This allowance is acceptable due to the low probability of an event that could pressurize the primary containment during the short time that the OPERABLE door is expected to be open.

B.1, B.2, and B.3

With the air lock interlock mechanism inoperable, the Required Actions and associated Completion Times are consistent with those specified in Condition A.

The Required Actions have been modified by two Notes. Note 1 ensures that only the Required Actions and associated Completion Times of Condition C are required if both doors in the air lock are inoperable. With both doors in the air lock inoperable, an OPERABLE door is not available to be closed. Required Actions C.1 and C.2 are the appropriate remedial actions. Note 2 allows entry into and exit from the primary containment under the control of a dedicated individual stationed at the air lock to ensure that only one door is opened at a time (i.e., the individual performs the function of the interlock).

Required Action B.3 is modified by a Note that applies to air lock doors located in high radiation areas or areas with limited access due to inerting and allows these doors to be

(continued)

BASES

ACTIONS

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

verified locked closed by use of administrative controls. Allowing verification by administrative controls is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of the door, once it has been verified to be in the proper position, is small.

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

With the air lock inoperable for reasons other than those described in Condition A or B, Required Action C.1 requires action to be immediately initiated to evaluate containment overall leakage rates using current air lock leakage test results. An evaluation is acceptable since it is overly conservative to immediately declare the primary containment inoperable if both doors in the air lock have failed a seal test or if the overall air lock leakage is not within limits. In many instances (e.g., only one seal per door has failed) primary containment remains OPERABLE, yet only 1 hour (according to LCO 3.6.1.1) would be provided to restore the air lock door to OPERABLE status prior to requiring a plant shutdown. In addition, even with both doors failing the seal test, the overall containment leakage rate can still be within limits.

Required Action C.2 requires that one door in the primary containment air locks must be verified closed. This Required Action must be completed within the 1 hour Completion Time. This specified time period is consistent with the ACTIONS of LCO 3.6.1.1, which require that primary containment be restored to OPERABLE status within 1 hour.

Additionally, the air lock must be restored to OPERABLE status within 24 hours (Required Action C.3). The 24 hour Completion Time is reasonable for restoring the inoperable air lock to OPERABLE status considering that at least one door is maintained closed in the air lock.

(continued)

BASES

ACTIONS (continued)

D.1 and D.2

If the inoperable primary containment air lock 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.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.2.1

Maintaining the primary containment air lock OPERABLE requires compliance with the leakage rate test requirements of the Primary Containment Leakage Rate Testing Program. This SR reflects the leakage rate testing requirements with regard to air lock leakage (Type B leakage tests). The acceptance criteria were established as a small fraction of the total allowable primary containment leakage. The periodic testing requirements verify that the air lock leakage does not exceed the allowed fraction of the overall primary containment leakage rate. The Frequency is required by the Primary Containment Leakage Rate Testing Program.

The SR has been modified by two Notes. Note 1 states that an inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. This is considered reasonable since either air lock door is capable of providing a fission product barrier in the event of a DBA. Note 2 has been added to this SR, requiring the results to be evaluated against the acceptance criteria which is applicable to SR 3.6.1.1.1. This ensures that air lock leakage is properly accounted for in determining the combined Types B and C primary containment leakage rate.

SR 3.6.1.2.2

The air lock interlock mechanism is designed to prevent simultaneous opening of both doors in the air lock. Since both the inner and outer doors of the air lock are designed to withstand the maximum expected post accident primary

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.2.2 (continued)

containment pressure (Ref. 2), closure of either door will support primary containment OPERABILITY. Thus, the interlock feature supports primary containment OPERABILITY while the air lock is being used for personnel transit in and out of the containment. Periodic testing of this interlock demonstrates that the interlock will function as designed and that simultaneous inner and outer door opening will not inadvertently occur. Due to the purely mechanical nature of this interlock, and given that the interlock mechanism is not normally challenged when the primary containment air lock door is used for entry and exit (procedures require strict adherence to single door opening), this test is only required to be performed every 24 months. 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 loss of primary containment OPERABILITY if the Surveillance were performed with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed at the 24 month Frequency. The 24 month Frequency is based on engineering judgment and is considered adequate given that the interlock is not challenged during use of the air lock.

REFERENCES

1. UFSAR, Section 3.8.1.1.3.5.1.
2. UFSAR, Section 6.2.6.1.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.3 Primary Containment Isolation Valves (PCIVs)

BASES

BACKGROUND

The function of the PCIVs, in combination with other accident mitigation systems, is to limit fission product release during and following postulated Design Basis Accidents (DBAs) to within limits. Primary containment isolation within the time limits specified for those PCIVs designed to close automatically ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a DBA.

The OPERABILITY requirements for PCIVs help ensure that an adequate primary containment boundary is maintained during and after an accident by minimizing potential paths to the environment. Therefore, the OPERABILITY requirements provide assurance that the primary containment function assumed in the safety analysis will be maintained. These isolation devices consist of either passive devices or active (automatic) devices. Manual valves, de-activated automatic valves secured in their closed position (including check valves with flow through the valve secured), blind flanges (which include plugs and caps as listed in Reference 1), and closed systems are considered passive devices. Check valves, or other automatic valves designed to close without operator action following an accident, are considered active devices. Two barriers in series are provided for each penetration, except for penetrations isolated by excess flow check valves, so that no single credible failure or malfunction of an active component can result in a loss of isolation or leakage that exceeds limits assumed in the safety analysis. One of these barriers may be a closed system.

The 8 and 26 inch primary containment purge valves are PCIVs that are qualified for use during all operational conditions. The 8 and 26 inch primary containment purge valves are normally maintained closed in MODES 1, 2, and 3 to ensure the primary containment boundary is maintained. However, these purge valves may be open when being used for inerting, de-inerting pressure control, ALARA, or air quality considerations since they are fully qualified.

(continued)

BASES (continued)

APPLICABLE SAFETY ANALYSES

The PCIVs LCO was derived from the assumptions related to minimizing the loss of reactor coolant inventory, and establishing the primary containment boundary during major accidents. As part of the primary containment boundary, PCIV OPERABILITY supports leak tightness of primary containment. Therefore, the safety analysis of any event requiring isolation of primary containment is applicable to this LCO.

The DBAs that result in a release of radioactive material for which the consequences are mitigated by PCIVs are a loss of coolant accident (LOCA) and a main steam line break (MSLB) (Refs. 2 and 3). In the analysis for each of these accidents, it is assumed that PCIVs are either closed or function to close within the required isolation time following event initiation. This ensures that potential paths to the environment through PCIVs (including primary containment purge valves) are minimized. Of the events analyzed in References 2 and 3, the LOCA is the most limiting event due to radiological consequences. For the MSLB, the closure time of the main steam isolation valves (MSIVs) is a significant variable from a radiological standpoint. The MSIVs are required to close within 3 to 5 seconds since the 3 second closure time is assumed in the MSIV closure (the most severe overpressurization transient) analysis (Ref. 4) and the 5 second closure time is assumed in the MSLB analysis (Ref. 3). Likewise, it is assumed that the primary containment isolates such that release of fission products to the environment is controlled.

The DBA analysis assumes that isolation of the primary containment is complete and leakage terminated, except for the maximum allowable leakage prior to fuel damage.

The single failure criterion required to be imposed in the conduct of unit safety analyses was considered in the original design of the primary containment purge valves. Two valves in series on each purge line provide assurance that both the supply and exhaust lines could be isolated even if a single failure occurred.

PCIVs satisfy Criterion 3 of 10 CFR 50.36(c)(2)(ii).

(continued)

BASES (continued)

LCO

PCIVs form a part of the primary containment boundary. The PCIV safety function is related to minimizing the loss of reactor coolant inventory and establishing the primary containment boundary during a DBA.

The power operated, automatic isolation valves are required to have isolation times within limits and actuate on an automatic isolation signal. The valves covered by this LCO are listed with their associated stroke times in the Technical Requirements Manual (Ref. 1).

The normally closed manual PCIVs are considered OPERABLE when the valves are closed and blind flanges are in place, or open under administrative controls. Normally closed automatic PCIVs which are required by design (e.g., to meet 10 CFR 50 Appendix R requirements) to be de-activated and closed, are considered OPERABLE when the valves are de-activated and closed. These passive isolation valves and devices are those listed in Reference 1. MSIVs and hydrostatically tested valves must meet additional leakage rate requirements. Other PCIV leakage rates are addressed by LCO 3.6.1.1, "Primary Containment," as Type B or C testing.

This LCO provides assurance that the PCIVs will perform their designed safety functions to minimize the loss of reactor coolant inventory and establish the primary containment boundary during accidents.

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, most PCIVs are not required to be OPERABLE and the primary containment purge valves are not required to be normally closed in MODES 4 and 5. Certain valves are required to be OPERABLE, however, to prevent inadvertent reactor vessel draindown. These valves are those whose associated instrumentation is required to be OPERABLE according to LCO 3.3.6.1, "Primary Containment Isolation Instrumentation." (This does not include the valves that isolate the associated instrumentation.)

(continued)

BASES (continued)

ACTIONS

The ACTIONS are modified by a Note allowing penetration flow path(s) to be unisolated intermittently under administrative controls. These controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated.

A second Note has been added to provide clarification that, for the purpose of this LCO, separate Condition entry is allowed for each penetration flow path. This is acceptable, since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable PCIV. Complying with the Required Actions may allow for continued operation, and subsequent inoperable PCIVs are governed by subsequent Condition entry and application of associated Required Actions.

The ACTIONS are modified by Notes 3 and 4. Note 3 ensures appropriate remedial actions are taken, if necessary, if the affected system(s) are rendered inoperable by an inoperable PCIV (e.g., an Emergency Core Cooling System subsystem is inoperable due to a failed open test return valve). Note 4 ensures appropriate remedial actions are taken when the primary containment leakage limits are exceeded. Pursuant to LCO 3.0.6, these ACTIONS are not required even when the associated LCO is not met. Therefore, Notes 3 and 4 are added to require the proper actions be taken.

<u>A.1 and A.2</u>

With one or more penetration flow paths with one PCIV inoperable except for MSIV leakage rate or hydrostatically tested line leakage rate not within limit, the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, a blind flange, and a check valve with flow through the valve secured. For penetrations isolated in accordance with Required Action A.1, the device used to isolate the

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

penetration should be the closest available one to the primary containment. The Required Action must be completed within the 4 hour Completion Time (8 hours for main steam lines). The specified time period of 4 hours is reasonable considering the time required to isolate the penetration and the relative importance of supporting primary containment OPERABILITY during MODES 1, 2, and 3. For main steam lines, an 8 hour Completion Time is allowed. The Completion Time of 8 hours for the main steam lines allows a period of time to restore the MSIVs to OPERABLE status given the fact that MSIV closure will result in isolation of the main steam line(s) and a potential for plant shutdown.

For affected penetrations that have been isolated in accordance with Required Action A.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident, and no longer capable of being automatically isolated, will be in the isolation position should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification that those devices outside the primary containment and capable of being mispositioned are in the correct position. The Completion Time for this verification of "once per 31 days for isolation devices outside primary containment" is appropriate because the devices are operated under administrative controls and the probability of their misalignment is low. For devices inside the primary containment, the specified time period of "prior to entering MODE 2 or 3 from MODE 4 if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days," is based on engineering judgment and is considered reasonable in view of the inaccessibility of the devices and the existence of other administrative controls ensuring that device misalignment is an unlikely possibility.

Condition A is modified by a Note indicating that this Condition is only applicable to those penetration flow paths with two or more PCIVs. For penetration flow paths with one PCIV, Condition C provides appropriate Required Actions.

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

Required Action A.2 is modified by two Notes. Note 1 applies to isolation devices located in high radiation areas and allows them to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned. Therefore, the probability of misalignment, once they have been verified to be in the proper position, is low.

B.1

With one or more penetration flow paths with two or more PCIVs inoperable except for MSIV leakage rate or hydrostatically tested line leakage rate not within limit, either the inoperable PCIVs must be restored to OPERABLE status or the affected penetration flow path must be isolated within 1 hour. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1.1.

Condition B is modified by a Note indicating this Condition is only applicable to penetration flow paths with two or more PCIVs. For penetration flow paths with one PCIV, Condition C provides the appropriate Required Actions.

(continued)

BASES

ACTIONS (continued)

C.1 and C.2

When one or more penetration flow paths with one PCIV inoperable except for MSIV leakage rate or hydrostatically tested line leakage rate not within limit, the inoperable valve must be restored to OPERABLE status or the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. A check valve may not be used to isolate the affected penetration. Required Action C.1 must be completed within 4 hours except for excess flow check valves (EFCVs) and penetrations with a closed system and 72 hours for EFCVs and penetrations with a closed system. The Completion Time of 4 hours for valves other than EFCVs and in penetrations with a closed system is reasonable considering the time required to isolate the penetration and the relative importance of supporting primary containment OPERABILITY in MODES 1, 2, and 3. The 72 hour Completion Time for penetrations with a closed system is reasonable considering the relative stability of the closed system (hence, reliability) to act as a penetration isolation boundary and the relative importance of supporting primary containment OPERABILITY during MODES 1, 2, and 3. The closed system must meet the requirements of Reference 5. The Completion Time of 72 hours for EFCVs is also reasonable considering the mitigating effects of a small pipe diameter and restricting orifice and the isolation boundary provided by the instrument. In the event the affected penetration is isolated in accordance with Required Action C.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident are isolated. This Required Action does not require any testing or valve manipulation. Rather, it involves verification that these devices outside containment and capable of potentially being mispositioned are in the correct position. The Completion Time of "once per 31 days" is appropriate because the devices are operated under administrative controls and the probability of their misalignment is low.

(continued)

BASES

ACTIONS

C.1 and C.2 (continued)

Condition C is modified by a Note indicating this Condition is applicable only to those penetration flow paths with only one PCIV. For penetration flow paths with two or more PCIVs, Conditions A and B provide the appropriate Required Actions. This Note is necessary since this Condition is written specifically to address those penetrations with a single PCIV.

Required Action C.2 is modified by two Notes. Note 1 applies to isolation devices located in high radiation areas and allows them to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned. Therefore, the probability of misalignment, once they have been verified to be in the proper position, is low.

D.1

With the MSIV leakage rate (SR 3.6.1.3.10) or hydrostatically tested line leakage rate (SR 3.6.1.3.11) not within limit, the assumptions of the safety analysis may not be met. Therefore, the leakage rate must be restored to within limit within the Completion Times appropriate for each type of valve leakage: a) hydrostatically tested line leakage not on a closed system is required to be restored within 4 hours; b) MSIV leakage is required to be restored within 8 hours; and c) hydrostatically tested line leakage on a closed system is required to be restored within 72 hours. Restoration can be accomplished by isolating the penetration that caused the limit to be exceeded by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. When a penetration is isolated, the

(continued)

BASES

ACTIONS

D.1 (continued)

leakage rate for the isolated penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed to be the lesser actual pathway leakage of the two devices. The 4 hour Completion Time for hydrostatically tested line leakage not on a closed system is reasonable considering the time required to restore leakage by isolating the penetration and the relative importance of the hydrostatically tested line leakage to the overall containment function. The Completion Time of 8 hours for MSIV leakage allows a period of time to restore the MSIV leakage and is acceptable given the fact that MSIV closure will result in isolation of the main steam line(s) and a potential for plant shutdown. The 72 hour Completion Time for hydrostatically tested line leakage on a closed system is acceptable based on the available water seal expected to remain as a gaseous fission product boundary during the accident and in many cases, the associated closed system. The closed system must meet the requirements of Reference 5.

E.1, and E.2

If any Required Action and associated Completion Time cannot be met 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 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.1 and F.2

If any Required Action and associated Completion Time cannot be met for PCIV(s) required OPERABLE in MODE 4 or 5, the plant must be placed in a condition in which the LCO does not apply. Action must be immediately initiated to suspend operations with a potential for draining the reactor vessel (OPDRVs) to minimize the probability of a vessel draindown

(continued)

BASES

ACTIONS

F.1 and F.2 (continued)

and subsequent potential for fission product release. Actions must continue until OPDRVs are suspended. If suspending the OPDRVs would result in closing the residual heat removal (RHR) shutdown cooling isolation valves, an alternative Required Action is provided to immediately initiate action to restore the valves to OPERABLE status. This allows RHR shutdown cooling to remain in service while actions are being taken to restore the valve.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.1

This SR verifies that the 8 inch and 26 inch primary containment purge valves are closed as required or, if open, opened for an allowable reason.

The SR is modified by a Note stating that the SR is not required to be met when the purge valves are open for the stated reasons. The Note states that these valves may be opened for inerting, de-inerting, pressure control, ALARA, or air quality considerations for personnel entry, or for Surveillances that require the valves to be open, provided the drywell purge valves and suppression chamber purge valves are not open simultaneously. This is required to prevent a bypass path between the suppression chamber and the drywell, which would allow steam and gases from a LOCA to bypass the downcomers to the suppression pool. These primary containment purge valves are capable of closing in the environment following a LOCA. Therefore, these valves are allowed to be open for limited periods of time. The 31 day Frequency is consistent with other primary containment isolation valve requirements discussed in SR 3.6.1.3.2.

SR 3.6.1.3.2

This SR verifies that each primary containment isolation manual valve and blind flange that is located outside primary containment and not locked, sealed, or otherwise secured and is required to be closed during accident conditions, is closed. The SR helps to ensure that post

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.2 (continued)

accident leakage of radioactive fluids or gases outside of the primary containment boundary is within design limits. This SR does not require any testing or valve manipulation. Rather, it involves verification that those PCIVs outside primary containment, and capable of being mispositioned, are in the correct position. Since verification of position for PCIVs outside primary containment is relatively easy, the 31 day Frequency was chosen to provide added assurance that the PCIVs are in the correct positions. This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

Two Notes are added to this SR. The first Note applies to valves and blind flanges located in high radiation areas and allows them to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable, since access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment of these PCIVs, once they have been verified to be in the proper position, is low. A second Note is included to clarify that PCIVs open under administrative controls are not required to meet the SR during the time the PCIVs are open. These controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated.

SR 3.6.1.3.3

This SR verifies that each primary containment manual isolation valve and blind flange located inside primary containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions, is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside the primary containment boundary is within design limits. For PCIVs inside primary

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.3 (continued)

containment, the Frequency of "prior to entering MODE 2 or 3 from MODE 4 if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days," is appropriate since these PCIVs are operated under administrative controls and the probability of their misalignment is low. This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

Two Notes are added to this SR. The first Note allows valves and blind flanges located in high radiation areas to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable since the primary containment is inerted and access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA and personnel safety. Therefore, the probability of misalignment of these PCIVs, once they have been verified to be in their proper position, is low. A second Note is included to clarify that PCIVs that are open under administrative controls are not required to meet the SR during the time that the PCIVs are open. These controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated.

SR 3.6.1.3.4

The traversing incore probe (TIP) shear isolation valves are actuated by explosive charges. Surveillance of explosive charge continuity provides assurance that TIP valves will actuate when required. Other administrative controls, such as those that limit the shelf life and operating life, as applicable, of the explosive charges, must be followed. The 31 day Frequency is based on operating experience that has demonstrated the reliability of the explosive charge continuity.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.3.5

Verifying the isolation time of each power operated, automatic PCIV is within limits is required to demonstrate OPERABILITY. MSIVs may be excluded from this SR since MSIV full closure isolation time is demonstrated by SR 3.6.1.3.6. The isolation time test ensures that each valve will isolate in a time period less than or equal to that assumed in the safety analysis. The Frequency of this SR is in accordance with the Inservice Testing Program.

SR 3.6.1.3.6

Verifying that the full closure isolation time of each MSIV is within the specified limits is required to demonstrate OPERABILITY. The full closure isolation time test ensures that the MSIV will isolate in a time period that does not exceed the times assumed in the DBA and transient analyses. The Frequency of this SR is in accordance with the Inservice Testing Program.

SR 3.6.1.3.7

Automatic PCIVs close on a primary containment isolation signal to prevent leakage of radioactive material from primary containment following a DBA. This SR ensures that each automatic PCIV will actuate to its isolation position on a primary containment isolation signal. The LOGIC SYSTEM FUNCTIONAL TEST in LCO 3.3.6.1, "Primary Containment Isolation Instrumentation," overlaps this SR to provide complete testing of the safety function. 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. Operating experience has shown that these components usually pass this Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.3.8

This SR requires a demonstration that each EFCV is OPERABLE by verifying that the valve actuates to the isolation position on an actual or simulated instrument line break condition. This SR provides assurance that the instrumentation line EFCVs will perform as designed. 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. Operating experience has shown that these components usually pass this Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

SR 3.6.1.3.9

The TIP shear isolation valves are actuated by explosive charges. An in place functional test is not possible with this design. The explosive squib is removed and tested to provide assurance that the valves will actuate when required. The replacement charge for the explosive squib shall be from the same manufactured batch as the one fired or from another batch that has been certified by having one of the batch successfully fired. Other administrative controls, such as those that limit the shelf life and operating life, as applicable, of the explosive charges, must be followed. The Frequency of 24 months on a STAGGERED TEST BASIS is considered adequate given the administrative controls on replacement charges and the frequency checks of circuit continuity (SR 3.6.1.3.4).

SR 3.6.1.3.10

The analyses in Reference 2 are based on leakage that is less than the specified leakage rate. Leakage through any one main steam line must be $\leq$ 100 scfh and through all four main steam lines must be $\leq$ 400 scfh when tested at P_t (25.0 psig). This ensures that MSIV leakage is properly accounted for in determining the overall primary containment leakage rate. The Frequency is required by the Primary Containment Leakage Rate Testing Program.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.3.11

Surveillance of hydrostatically tested lines provides assurance that the calculation assumptions of Reference 2 are met. The acceptance criteria for the combined leakage of all hydrostatically tested lines is 1 gpm times the total number of hydrostatically tested PCIVs when tested at $\geq$ 1.1 P_a. The combined leakage rates must be demonstrated in accordance with the leakage test Frequency required by the Primary Containment Leakage Rate Testing Program.

REFERENCES

1. Technical Requirements Manual.
2. UFSAR, Section 15.6.5.
3. UFSAR, Section 15.6.4.
4. UFSAR, Section 15.2.4.
5. UFSAR, Section 6.2.4.2.3.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.4 Drywell and Suppression Chamber Pressure

BASES

BACKGROUND

The drywell and suppression chamber internal pressure is limited during normal operation to preserve the initial conditions assumed in the accident analyses for a Design Basis Accident (DBA) or loss of coolant accident (LOCA).

Transient events, which include inadvertent drywell spray initiation, can reduce the drywell and suppression chamber internal pressure. Without an appropriate limit on the minimum drywell and suppression chamber internal pressure (-0.5 psig), the design limit for negative containment differential pressure of 5.0 psid could be exceeded (Ref. 1).

The limitation on the maximum drywell and suppression chamber internal pressure (0.75 psig) provides added assurance that the peak LOCA drywell and suppression chamber pressure does not exceed the design value of 45 psig (Ref. 1).

APPLICABLE SAFETY ANALYSES

Primary containment performance for the DBA is evaluated for the entire spectrum of break sizes for postulated LOCAs inside containment (Ref. 2). Among the inputs to the design basis analysis is the initial drywell and suppression chamber internal pressure. The initial pressure limitation requirements ensure that peak primary containment pressure for a DBA LOCA does not exceed the design value of 45 psig and that peak negative pressure for an inadvertent drywell spray event does not exceed the design value of 5.0 psid.

Primary containment pressure satisfies Criterion 2 of 10 CFR 50.36(c)(2)(ii).

LCO

A limitation on the drywell and suppression chamber internal pressure of ≥ -0.5 psig and ≤ +0.75 psig is required to ensure that primary containment initial conditions are consistent with the initial safety analyses assumptions so

(continued)

BASES

LCO (cont'd)	that containment pressures remain within design values during a LOCA and the design value of containment negative pressure is not exceeded during an inadvertent operation of drywell sprays.
APPLICABILITY	In MODES 1, 2, and 3, a DBA could result in 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, maintaining drywell and suppression chamber internal pressure within limits is not required in MODE 4 or 5.
ACTIONS	<u>A.1</u> When drywell or suppression chamber internal pressure is not within the limits of the LCO, drywell and suppression chamber internal pressure must be restored to within limits within 1 hour. The Required Action is necessary to return operation to within the bounds of the primary containment analysis. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1.1, "Primary Containment," which requires that primary containment be restored to OPERABLE status within 1 hour. <u>B.1 and B.2</u> If drywell and suppression chamber internal pressure cannot be restored to within limits 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.

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS	<u>SR 3.6.1.4.1</u> Verifying that drywell and suppression chamber internal pressure is within limits ensures that operation remains within the limits assumed in the primary containment analysis. The 12 hour Frequency of this SR was developed based on operating experience related to trending primary containment pressure variations during the applicable MODES. Furthermore, the 12 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal primary containment pressure condition.
REFERENCES	1. UFSAR, Section 6.2.1.1.3. 2. UFSAR, Section 6.2.1.1.3.1.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.5 Drywell Air Temperature

BASES

BACKGROUND	Heat loads from the drywell, as well as piping and equipment, add energy to the airspace and raise airspace temperature. Coolers included in the unit design remove this energy and maintain an appropriate average temperature. The average airspace temperature affects the calculated response to postulated Design Basis Accidents (DBAs). This drywell air temperature limit is an initial condition input for the Reference 1 safety analyses.
APPLICABLE SAFETY ANALYSES	Primary containment performance for the DBA is evaluated for a entire spectrum of break sizes for postulated loss of coolant accidents (LOCAs) inside containment (Ref. 1). Among the inputs to the design basis analysis is the initial drywell average air temperature. Analyses assume an initial average drywell temperature of 135°F. Maintaining the expected initial conditions ensures that safety analyses remain valid and ensures that the peak LOCA primary drywell temperature does not exceed the maximum allowable temperature of 340°F (Ref. 1). Exceeding this design temperature may result in the degradation of the primary containment structure under accident loads. Equipment inside primary containment, and needed to mitigate the effects of a DBA, is designed to operate and be capable of operating under environmental conditions expected for the accident. Drywell air temperature satisfies Criterion 2 of 10 CFR 50.36(c)(2)(ii).
LCO	With an initial drywell average air temperature less than or equal to the LCO temperature limit, the peak accident temperature is maintained below the drywell design temperature. As a result, the ability of primary containment to perform its design function is ensured.
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

(continued)

BASES

APPLICABILITY (continued)

reduced due to the pressure and temperature limitations of these MODES. Therefore, maintaining drywell average air temperature within the limit is not required in MODE 4 or 5.

ACTIONS

A.1

When drywell average air temperature is not within the limit of the LCO, it must be restored within 8 hours. This Required Action is necessary to return operation to within the bounds of the primary containment analysis. The 8 hour Completion Time is acceptable, considering the sensitivity of the analysis to variations in this parameter, and provides sufficient time to correct minor problems.

B.1 and B.2

If the drywell average air temperature cannot be restored to within the limit 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.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.5.1

Verifying that the drywell average air temperature is within the LCO limit ensures that operation remains within the limits assumed for the primary containment analyses. The drywell average air temperature is determined using the average temperature of the operating return air plenum(s) upstream of the primary containment ventilation heat exchanger coil and cabinet located at elevation 740 ft 0 inches, azimuth 248°, and elevation 740 ft 0 inches, azimuth 76°. This provides a representative sample of the overall drywell atmosphere.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.5.1 (continued)

The 24 hour Frequency of this SR was developed based on operating experience related to drywell average air temperature variations and temperature dependent drift of instrumentation located in the drywell during the applicable MODES and the low probability of a DBA occurring between Surveillances. Furthermore, the 24 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal drywell air temperature condition.

REFERENCES

1. UFSAR, Section 6.2.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.6 Suppression Chamber-to-Drywell Vacuum Breakers

BASES

BACKGROUND

The function of the suppression-chamber-to-drywell vacuum breakers is to relieve vacuum in the drywell. There are four vacuum breakers located outside the primary containment which form an extension of the primary containment boundary. The vacuum relief valves are mounted in special piping between the drywell and the suppression chamber, which allow air and steam flow from the suppression chamber to the drywell when the drywell is at a negative pressure with respect to the suppression chamber. Therefore, suppression chamber-to-drywell vacuum breakers prevent an excessive negative differential pressure across the wetwell drywell boundary. Each vacuum breaker is a self actuating valve with one vacuum breaker in each line. Manual isolation valves are located on each side of each vacuum breaker.

A negative differential pressure across the drywell wall is caused by rapid depressurization of the drywell. Events that cause this rapid depressurization are cooling cycles, inadvertent drywell spray actuation, and steam condensation from sprays or subcooled water reflood of a break in the event of a primary system rupture. Cooling cycles result in minor pressure transients in the drywell that occur slowly and are normally controlled by heating and ventilation equipment. Spray actuation or spill of subcooled water out of a break results in more significant pressure transients and becomes important in sizing the vacuum breakers.

In the event of a primary system rupture, steam condensation within the drywell results in the most severe pressure transient. Following a primary system rupture, air in the drywell is purged into the suppression chamber free airspace, leaving the drywell full of steam. Subsequent condensation of the steam can be caused in two possible ways, namely, Emergency Core Cooling Systems flow from a recirculation line break, or drywell spray actuation following a loss of coolant accident (LOCA). These two cases determine the maximum depressurization rate of the drywell.

(continued)

BASES

BACKGROUND (continued)

In addition, the water column in the Mark II Vent System downcomer is controlled by the drywell-to-suppression chamber differential pressure. If the drywell pressure is less than the suppression chamber pressure, there will be an increase in the downcomer water column height. This will result in an increase in the water clearing inertia in the event of a postulated LOCA, resulting in an increase in the peak drywell pressure. This in turn will result in an increase in the pool swell dynamic loads. The vacuum breakers limit the height of the waterleg in the downcomer during normal operation.

APPLICABLE SAFETY ANALYSES

Analytical methods and assumptions involving the suppression chamber-to-drywell vacuum breakers are presented in Reference 1 as part of the accident response of the primary containment systems. Suppression chamber-to-drywell vacuum breakers are provided as part of the primary containment to limit the negative differential pressure across the drywell and suppression chamber walls to maintain the structural integrity of primary containment.

The safety analyses assume that the vacuum breakers are closed initially and are fully open at a differential pressure of 1.0 psid (Refs. 1 and 2). Additionally, one of the four vacuum breakers is assumed to fail in a closed position (Refs. 1 and 2). The results of the analyses show that the design pressure is not exceeded even under the worst case accident scenario. The vacuum breaker opening differential pressure setpoint and the requirement that four vacuum breakers be OPERABLE (the additional vacuum breaker is required to meet the single failure criterion) are a result of the requirement placed on the vacuum breakers to limit the downcomer waterleg height. Design Basis Accident (DBA) analyses assume the vacuum breakers to be closed initially and to remain closed and leak tight until the suppression pool is at a positive pressure relative to the drywell.

The suppression chamber-to-drywell vacuum breakers satisfy Criterion 3 of 10 CFR 50.36(c)(2)(ii).

(continued)

BASES (continued)

LCO

All vacuum breakers must be OPERABLE to provide assurance that the vacuum breakers will open so that drywell-to-suppression chamber negative differential pressure remains below the design value. This LCO also ensures that all suppression chamber-to-drywell vacuum breakers are closed (except during testing or when the vacuum breakers are performing their intended design function). The manual isolation valves in each vacuum breaker line must also be open for the associated vacuum breaker to be considered OPERABLE. The requirement that the vacuum breakers be closed ensures that there is no excessive bypass leakage should a LOCA occur.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could result in excessive negative differential pressure across the drywell wall, caused by the rapid depressurization of the drywell. The event that results in the limiting rapid depressurization of the drywell is the primary system rupture that purges the drywell of air and fills the drywell free airspace with steam. Subsequent condensation of the steam would result in depressurization of the drywell. The limiting pressure and temperature of the primary system prior to a DBA occur in MODES 1, 2, and 3. Excessive negative pressure inside the drywell could occur due to inadvertent actuation of drywell sprays.

In MODES 4 and 5, the probability and consequences of these events are reduced by the pressure and temperature limitations in these MODES; therefore, maintaining suppression chamber-to-drywell vacuum breakers OPERABLE is not required in MODE 4 or 5.

ACTIONS

A.1

With one of the vacuum breakers inoperable for opening (e.g., the vacuum breaker is not open and may be stuck closed or not within its opening setpoint limit, so that it would not function as designed during an event that depressurized the drywell), the remaining three OPERABLE vacuum breakers are capable of providing the vacuum relief function. However, overall system 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,

(continued)

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.

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.

C.1 and C.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

C.1 and C.2 (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.

D.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.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.2.1 Suppression Pool Average Temperature

BASES

BACKGROUND

The primary containment utilizes a Mark II over/under pressure suppression configuration, with the suppression pool located at the bottom of the primary containment. The suppression pool is designed to absorb the decay heat and sensible heat released during a reactor blowdown from safety/relief valve discharges or from a loss of coolant accident (LOCA). The suppression pool must also condense steam from the Reactor Core Isolation Cooling System turbine exhaust and provides the main emergency water supply source for the reactor vessel. The suppression pool must quench all the steam released through the downcomer lines during a loss of coolant accident (LOCA). This is the essential mitigative feature of a pressure suppression containment that ensures that the peak containment pressure is maintained below the design value (45 psig). Suppression pool average temperature (along with LCO 3.6.2.2, "Suppression Pool Water Level") is a key indication of the capacity of the suppression pool to fulfill these requirements.

The technical concerns that lead to the development of suppression pool average temperature limits are as follows:

a. Complete steam condensation;

b. Primary containment peak pressure and temperature;

c. Condensation oscillation (CO) loads; and

d. Chugging loads.

APPLICABLE SAFETY ANALYSES

The postulated DBA against which the primary containment performance is evaluated is the entire spectrum of postulated pipe breaks within the primary containment. Inputs to the safety analyses include initial suppression pool water volume and suppression pool temperature (Reference 1 for LOCAs and References 1 and 2 for the suppression pool temperature analyses required by Reference 3). An initial pool temperature of 105°F is

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

assumed for the Reference 1 analyses. Reactor shutdown at a pool temperature of 110°F and vessel depressurization at a pool temperature of 120°F are assumed for the Reference 1 and 2 analyses.

Suppression pool average temperature satisfies Criteria 2 and 3 of 10 CFR 50.36(c)(2)(ii).

LCO

A limitation on the suppression pool average temperature is required to assure that the primary containment conditions assumed for the safety analyses are met. This limitation subsequently ensures that peak primary containment pressures and temperatures do not exceed maximum allowable values during a postulated DBA or any transient resulting in heatup of the suppression pool. The LCO requirements are as follows:

a. Average temperature ≤ 105°F with THERMAL POWER > 1% RTP. This requirement ensures that licensing bases initial conditions are met. This requirement also ensures that the plant has testing flexibility, and was selected to provide margin below the 110°F limit at which reactor shutdown is required.

b. Average temperature ≤ 110°F with THERMAL POWER ≤ 1% RTP. This requirement ensures that the plant will be shut down at > 110°F. The pool is designed to absorb decay heat and sensible heat but could be heated beyond design limits by the steam generated if the reactor is not shut down.

At 1% RTP, heat input is approximately equal to normal system heat losses.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause significant heatup of the suppression pool. 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, maintaining suppression pool average temperature within limits is not required in MODE 4 or 5.

(continued)

BASES (continued)

ACTIONS

A.1, A.2, and A.3

With the suppression pool average temperature above the specified limit and when above the specified power limit, the initial conditions exceed the conditions assumed for the Reference 1 and 2 analyses. However, primary containment cooling capability still exists, and the primary containment pressure suppression function will occur at temperatures well above that assumed for safety analyses. Therefore, continued operation is allowed for a limited time. The 24 hour Completion Time is adequate to allow the suppression pool temperature to be restored to below the limit. Additionally, when pool temperature is > 105°F, increased monitoring of the pool temperature is required to ensure it remains ≤ 110°F. The once per hour Completion Time is adequate based on past experience, which has shown that suppression pool temperature increases relatively slowly except when testing that adds heat to the pool is being performed. Furthermore, the once per hour Completion Time is considered adequate in view of other indications in the control room, including alarms, to alert the operator to an abnormal suppression pool average temperature condition. In addition, testing that adds heat to the suppression pool must be immediately suspended to preserve the pool heat absorption capability.

B.1

If the suppression pool average temperature cannot be restored to within limits within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, THERMAL POWER must be reduced to ≤ 1% RTP within 12 hours. The 12 hour Completion Time is reasonable, based on operating experience, to reduce reactor power from full power in an orderly manner and without challenging plant systems.

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

Suppression pool average temperature > 110°F requires that the reactor be shut down immediately. This is accomplished by placing the reactor mode switch in the shutdown position. Further cooldown to MODE 4 within 36 hours is required at

(continued)

BASES

ACTIONS

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

normal cooldown rates (provided pool temperature remains ≤ 120°F). Additionally, when pool temperature is > 110°F, increased monitoring of pool temperature is required to ensure that it remains ≤ 120°F. The once per 30 minute Completion Time is adequate, based on operating experience. Given the high pool temperature in this condition, the monitoring Frequency is increased to twice that of Condition A. Furthermore, the 30 minute Completion Time is considered adequate in view of other indications available in the control room to alert the operator to an abnormal suppression pool average temperature condition.

D.1 and D.2

If suppression pool average temperature cannot be maintained ≤ 120°F, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the reactor pressure must be reduced to < 200 psig within 12 hours and the plant must be brought 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 without challenging plant systems.

Continued addition of heat to the suppression pool with pool temperature > 120°F could result in exceeding the design basis maximum allowable values for primary containment temperature or pressure. Furthermore, if a blowdown were to occur when temperature was > 120°F, the maximum allowable bulk and local temperatures could be exceeded very quickly.

SURVEILLANCE REQUIREMENTS

SR 3.6.2.1.1

The suppression pool average temperature is regularly monitored to ensure that the required limits are satisfied. Average temperature is determined by taking an arithmetic average of the OPERABLE suppression pool water temperature channels, and may include an allowance for temperature stratification. The 24 hour Frequency has been shown to be acceptable based on operating experience. When heat is being added to the suppression pool by testing, however, it

(continued)

BASES

SURVEILLANCE REQUIREMENTS	SR 3.6.2.1.1 (continued) is necessary to monitor suppression pool temperature more frequently. The 5 minute Frequency during testing is justified by the rates at which testing will heat up the suppression pool, has been shown to be acceptable based on operating experience, and provides assurance that allowable pool temperatures are not exceeded. The Frequencies are further justified in view of other indications available in the control room, including alarms, to alert the operator to an abnormal suppression pool average temperature condition.

REFERENCES

1. UFSAR, Section 6.2.
2. LaSalle County Station Mark II Design Assessment Report, Section 6.2, June 1981.
3. NUREG-0783.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.2.2 Suppression Pool Water Level

BASES

BACKGROUND

The primary containment utilizes a Mark II over/under pressure suppression configuration, with the suppression pool located at the bottom of the primary containment. The suppression pool is designed to absorb the decay heat and sensible heat released during a reactor blowdown from safety/relief valve (S/RV) discharges or from a loss of coolant accident (LOCA). The suppression pool must also condense steam from the Reactor Core Isolation Cooling (RCIC) System turbine exhaust and provides the main emergency water supply source for the reactor vessel. The suppression pool volume ranges between 128,800 ft^3 at the low water level limit of -4.5 inches and 131,900 ft^3 at the high water level limit of 3 inches. The level is referenced to a plant elevation of 699 ft 11 inches.

If the suppression pool water level is too low, an insufficient amount of water would be available to adequately condense the steam from the S/RV quenchers, main vents, or RCIC turbine exhaust lines. Low suppression pool water level could also result in an inadequate emergency makeup water source to the Emergency Core Cooling System. The lower volume would also absorb less steam energy before heating up excessively. Therefore, a minimum suppression pool water level is specified.

If the suppression pool water level is too high, it could result in excessive clearing loads from S/RV discharges and excessive pool swell loads resulting from a Design Basis Accident (DBA) LOCA. Therefore, a maximum pool water level is specified. This LCO specifies an acceptable range to prevent the suppression pool water level from being either too high or too low.

APPLICABLE SAFETY ANALYSES

Initial suppression pool water level affects suppression pool temperature response calculations, calculated drywell pressure for a DBA, calculated pool swell loads for a DBA LOCA, and calculated loads due to S/RV discharges. Suppression pool water level must be maintained within the limits specified so that the safety analysis of Reference 1 remains valid.

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)	Suppression pool water level satisfies Criteria 2 and 3 of 10 CFR 50.36(c)(2)(ii).
LCO	A limit that suppression pool water level be ≥ -4.5 inches and ≤ 3 inches (referenced to plant elevation 699 ft 11 inches) is required to ensure that the primary containment conditions assumed for the safety analysis are met. Either the high or low water level limits were used in the safety analysis, depending upon which is conservative for a particular calculation.
APPLICABILITY	In MODES 1, 2, and 3, a DBA could cause significant loads on the primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced because of the pressure and temperature limitations in these MODES. The requirements for maintaining suppression pool water level within limits in MODE 4 or 5 is addressed in LCO 3.5.2, "ECCS-Shutdown."
ACTIONS	<u>A.1</u> With suppression pool water level outside the limits, the conditions assumed for the safety analysis are not met. If water level is below the minimum level, the pressure suppression function still exists as long as the downcomers are covered, RCIC turbine exhausts are covered, and S/RV quenchers are covered. If suppression pool water level is above the maximum level, protection against overpressurization still exists due to the margin in the peak containment pressure analysis and the capability of the suppression pool sprays. Therefore, continued operation for a limited time is allowed. The 2 hour Completion Time is sufficient to restore suppression pool water level to within specified limits. Also, it takes into account the low probability of an event impacting the suppression pool water level occurring during this interval.

(continued)

BASES

ACTIONS (continued)	B.1 and B.2 If suppression pool water level cannot be restored to within limits 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.
SURVEILLANCE REQUIREMENTS	SR 3.6.2.2.1 Verification of the suppression pool water level is to ensure that the required limits are satisfied. The 24 hour Frequency has been shown to be acceptable based on operating experience. Furthermore, the 24 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal suppression pool water level condition.
REFERENCES	1. UFSAR, Section 6.2.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.2.3 Residual Heat Removal (RHR) Suppression Pool Cooling

BASES

BACKGROUND

Following a Design Basis Accident (DBA), the RHR Suppression Pool Cooling System removes heat from the suppression pool. The suppression pool is designed to absorb the sudden input of heat from the primary system. In the long term, the pool continues to absorb residual heat generated by fuel in the reactor core. Some means must be provided to remove heat from the suppression pool so that the temperature inside the primary containment remains within design limits. This function is provided by two redundant RHR suppression pool cooling subsystems. The purpose of this LCO is to ensure that both subsystems are OPERABLE in applicable MODES.

Each RHR subsystem contains a pump and a heat exchanger and is manually initiated and independently controlled. The two RHR subsystems perform the suppression pool cooling function by circulating water from the suppression pool through the RHR heat exchangers and returning it to the suppression pool. RHR service water, circulating through the tube side of the heat exchangers, exchanges heat with the suppression pool water and discharges this heat to the external heat sink.

The heat removal capability of one RHR subsystem is sufficient to meet the overall DBA pool cooling requirement to limit peak temperature to 200°F for loss of coolant accidents (LOCAs) and transient events such as a turbine trip or a stuck open safety/relief valve (S/RV). S/RV leakage and Reactor Core Isolation Cooling System testing increase suppression pool temperature more slowly. The RHR Suppression Pool Cooling System is also used to lower the suppression pool water bulk temperature following such events.

APPLICABLE SAFETY ANALYSES

Reference 1 contains the results of analyses used to predict primary containment pressure and temperature following large and small break LOCAs. The intent of the analyses is to demonstrate that the heat removal capacity of the RHR Suppression Pool Cooling System is adequate to maintain the primary containment conditions within design limits. The

(continued)

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	<u>A.1</u> 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.

(continued)

BASES

ACTIONS (continued)

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.

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

B 3.6 CONTAINMENT SYSTEMS

B 3.6.2.4 Residual Heat Removal (RHR) Suppression Pool Spray

BASES

BACKGROUND

Following a Design Basis Accident (DBA), the RHR Suppression Pool Spray System removes heat from the suppression chamber airspace. The suppression pool is designed to absorb the sudden input of heat from the primary system from a DBA or a rapid depressurization of the reactor pressure vessel (RPV) through safety/relief valves. The heat addition to the suppression pool results in increased steam in the suppression chamber, which increases primary containment pressure. Steam blowdown from a DBA can also bypass the suppression pool and end up in the suppression chamber airspace. Some means must be provided to remove heat from the suppression chamber so that the pressure and temperature inside primary containment remain within analyzed design limits. This function is provided by two redundant RHR suppression pool spray subsystems. The purpose of this LCO is to ensure that both subsystems are OPERABLE in applicable MODES.

Each of the two RHR suppression pool spray subsystems contains one pump and one heat exchanger, which are manually initiated and independently controlled. The two subsystems perform the suppression pool spray function by circulating water from the suppression pool through the RHR heat exchangers and returning it to the suppression pool spray sparger. The sparger only accommodates a small portion of the total RHR pump flow; the remainder of the flow returns to the suppression pool through the suppression pool cooling return line (provided the associated valve is open). Thus, both suppression pool cooling and suppression pool spray functions are normally performed when the Suppression Pool Spray System is initiated. Either RHR suppression pool spray subsystem is sufficient to condense the steam from small bypass leaks from the drywell to the suppression chamber airspace during the postulated DBA.

APPLICABLE SAFETY ANALYSES

Reference 1 contains the results of analyses used to predict primary containment pressure and temperature following large and small break loss of coolant accidents. The intent of the analyses is to demonstrate that the pressure reduction

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

capacity of the RHR Suppression Pool Spray System is adequate to maintain the primary containment conditions within design limits. The time history for primary containment pressure is calculated to demonstrate that the maximum pressure remains below the design limit.

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

LCO

In the event of a DBA, a minimum of one RHR suppression pool spray subsystem is required to mitigate potential bypass leakage paths and maintain the primary containment peak pressure below the design limits (Ref. 1). To ensure that these requirements are met, two RHR suppression pool spray 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 spray subsystem is OPERABLE when one of the pumps, the heat exchanger, and associated piping, valves, instrumentation, and controls are OPERABLE.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause 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, maintaining RHR suppression pool spray subsystems OPERABLE is not required in MODE 4 or 5.

ACTIONS

A.1

With one RHR suppression pool spray subsystem inoperable, the inoperable subsystem must be restored to OPERABLE status within 7 days. In this condition, the remaining OPERABLE RHR suppression pool spray subsystem is adequate to perform the primary containment bypass leakage mitigation function.

However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could result in reduced primary containment bypass mitigation capability. The 7 day Completion Time was chosen in light of the redundant RHR suppression pool spray capabilities afforded by the OPERABLE subsystem and the low probability of a DBA occurring during this period.

(continued)

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

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 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 3.6.2.4.1

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 $\geq$ 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) 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.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.3.1 Primary Containment Hydrogen Recombiners

BASES

BACKGROUND

The primary containment hydrogen recombiner eliminates the potential breach of primary containment due to a hydrogen oxygen reaction and is part of combustible gas control required by 10 CFR 50.44, "Standards for Combustible Gas Control in Light-Water-Cooled Reactors" (Ref. 1), and GDC 41, "Containment Atmosphere Cleanup" (Ref. 2). The primary containment hydrogen recombiners are required to reduce the hydrogen concentration in the primary containment following a loss of coolant accident (LOCA). The primary containment hydrogen recombiners accomplish this by recombining hydrogen and oxygen to form water vapor. The vapor is condensed and returned to the suppression pool, thus eliminating any discharge to the environment. The primary containment hydrogen recombiner is manually initiated, since flammability limits would not be reached until several hours after a Design Basis Accident (DBA).

Two 100% capacity independent primary containment hydrogen recombiner subsystems are provided and are shared between Unit 1 and Unit 2. Each consists of controls located in the control room and in the auxiliary electric equipment room, a power supply, and a recombiner located in the reactor building. Recombination is accomplished by heating a hydrogen air mixture to > 1150°F. The resulting water vapor and discharge gases are cooled prior to discharge from the unit. Air flows through the unit at 125 cfm, with a blower in the unit providing the motive force. A single recombiner is capable of maintaining the hydrogen concentration in primary containment below the 4.0 volume percent (v/o) flammability limit. Two recombiners are provided to meet the requirement for redundancy and independence. Each recombiner is powered from a separate Engineered Safety Feature bus and is provided with separate power panel and control panel (with one recombiner powered from Unit 1 and the other recombiner powered from Unit 2).

Emergency operating procedures direct that the hydrogen concentration in primary containment be monitored following a DBA and that the primary containment hydrogen recombiner

(continued)

BASES

BACKGROUND (continued)	be manually activated to prevent the primary containment atmosphere from reaching a bulk hydrogen concentration of 4.0 v/o.

APPLICABLE SAFETY ANALYSES

The primary containment hydrogen recombiners provide the capability of controlling the bulk hydrogen concentration in primary containment to less than the lower flammable concentration of 4.0 v/o following a DBA. This control would prevent a primary containment wide hydrogen burn, thus ensuring that pressure and temperature conditions assumed in the analysis are not exceeded. The limiting DBA relative to hydrogen generation is a LOCA.

Hydrogen may accumulate in primary containment following a LOCA as a result of:

a. A metal steam reaction between the zirconium fuel rod cladding and the reactor coolant; or

b. Radiolytic decomposition of water in the Reactor Coolant System.

To evaluate the potential for hydrogen accumulation in primary containment following a LOCA, the hydrogen generation as a function of time following the initiation of the accident is calculated. Assumptions recommended by Reference 3 were complied with to maximize the amount of hydrogen calculated.

The calculation confirms that when the mitigating systems are actuated in accordance with plant procedures, the peak hydrogen concentration in the primary containment remains < 4 v/o (Ref. 4).

The primary containment hydrogen recombiners satisfy Criterion 3 of 10 CFR 50.36(c)(2)(ii).

LCO

Two primary containment hydrogen recombiners must be OPERABLE. This ensures operation of at least one primary containment hydrogen recombiner in the event of a worst case single active failure.

(continued)

BASES

LCO (continued)	Operation with at least one primary containment hydrogen recombiner subsystem ensures that the post LOCA hydrogen concentration can be prevented from exceeding the flammability limit.
APPLICABILITY	In MODES 1 and 2, the two primary containment hydrogen recombiners are required to control the hydrogen concentration within primary containment below its flammability limit of 4.0 v/o following a LOCA, assuming a worst case single failure. In MODE 3, both the hydrogen production rate and the total hydrogen production after a LOCA would be less than that calculated for the DBA LOCA. Also, because of the limited time in this MODE, the probability of an accident requiring the primary containment hydrogen recombiner is low. Therefore, the primary containment hydrogen recombiners are not required in MODE 3. In MODES 4 and 5, the probability and consequences of a LOCA are low due to the pressure and temperature limitations in these MODES. Therefore, the primary containment hydrogen recombiners are not required in these MODES.
ACTIONS	A.1 With one primary containment hydrogen recombiner inoperable, the inoperable primary containment hydrogen recombiner must be restored to OPERABLE status within 30 days. In this condition, the remaining OPERABLE primary containment recombiner is adequate to perform the hydrogen control function. However, the overall reliability is reduced because a single failure in the OPERABLE recombiner could result in reduced hydrogen control capability. The 30 day Completion Time is based on the low probability of the occurrence of a LOCA that would generate hydrogen in amounts capable of exceeding the flammability limit, the amount of time available after the event for operator action to prevent hydrogen accumulation exceeding this limit, and the low probability of failure of the OPERABLE primary containment hydrogen recombiner.

(continued)

BASES

ACTIONS

A.1 (continued)

Required Action A.1 has been modified by a Note stating that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when one recombiner is inoperable. This allowance is provided because of the low probability of the occurrence of a LOCA that would generate hydrogen in amounts capable of exceeding the flammability limit, the low probability of the failure of the OPERABLE recombiner, and the amount of time available after a postulated LOCA for operator action to prevent exceeding the flammability limit.

B.1 and B.2

With two primary containment hydrogen recombiners inoperable, the ability to perform the hydrogen control function via alternate capabilities must be verified by administrative means within 1 hour. The alternate hydrogen control capabilities are provided by the Primary Containment Vent and Purge System. The 1 hour Completion Time allows a reasonable period of time to verify that a loss of hydrogen control function does not exist. In addition, the alternate hydrogen control system capability must be verified once per 12 hours thereafter to ensure its continued availability. Both the initial verification and all subsequent verifications may be performed as an administrative check by examining logs or other information to determine the availability of the alternate hydrogen control system. It does not mean to perform the Surveillances needed to demonstrate OPERABILITY of the alternate hydrogen control system. If the ability to perform the hydrogen control function is maintained, continued operation is permitted with two hydrogen recombiners inoperable for up to 7 days. Seven days is a reasonable time to allow two hydrogen recombiners to be inoperable because the hydrogen control function is maintained and because of the low probability of the occurrence of a LOCA that would generate hydrogen in the amounts capable of exceeding the flammability limit.

(continued)

BASES

ACTIONS (continued)

C.1

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. The allowed Completion Time of 12 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.3.1.1

Performance of a system functional test for each primary containment hydrogen recombiner ensures that the recombiners are OPERABLE and can attain and sustain the temperature necessary for hydrogen recombination. In particular, this SR requires verification that the reaction chamber gas temperature increases to ≥ 1175°F in ≤ 2 hours and that significant heater elements are not burned out by determining that the current in each phase differs by less than or equal to 5% from the other phases and is within 5% of the value observed in the original acceptance test, corrected for line voltage differences.

Operating experience has shown that these components usually pass the Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

SR 3.6.3.1.2

This SR requires performance of a resistance to ground test of each heater phase to ensure that there are no detectable grounds in any heater phase. This is accomplished by verifying that the resistance to ground for any heater phase is ≥ 1.0E5 ohms within 30 minutes following completion of SR 3.6.3.1.1.

Operating experience has shown that these components usually pass the Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

(continued)

BASES (continued)

REFERENCES

1. 10 CFR 50.44.
2. 10 CFR 50, Appendix A, GDC 41.
3. Regulatory Guide 1.7, Revision 0, March 10, 1971.
4. UFSAR, Section 6.2.5.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.3.2 Primary Containment Oxygen Concentration

BASES

BACKGROUND

The primary containment is designed to withstand events that generate hydrogen either due to the zirconium metal water reaction in the core or due to radiolysis. The primary method to control hydrogen is to inert the primary containment. With the primary containment inerted, that is, oxygen concentration < 4.0 volume percent (v/o), a combustible mixture cannot be present in the primary containment for any hydrogen concentration. The capability to inert the primary containment and maintain oxygen < 4.0 v/o works together with the Hydrogen Recombiner System (LCO 3.6.3.1, "Primary Containment Hydrogen Recombiners") to provide redundant and diverse methods to mitigate events that produce hydrogen. For example, an event that rapidly generates hydrogen from zirconium metal water reaction will result in excessive hydrogen in primary containment, but oxygen concentration will remain < 4.0 v/o and no combustion can occur. Long term generation of both hydrogen and oxygen from radiolytic decomposition of water may eventually result in a combustible mixture in primary containment, except that the hydrogen recombiners remove hydrogen and oxygen gases faster than they can be produced from radiolysis and again no combustion can occur. This LCO ensures that oxygen concentration does not exceed 4.0 v/o during operation in the applicable conditions.

APPLICABLE SAFETY ANALYSES

The Reference 1 calculations assume that the primary containment is inerted when a Design Basis Accident loss of coolant accident occurs. Thus, the hydrogen assumed to be released to the primary containment as a result of metal water reaction in the reactor core will not produce combustible gas mixtures in the primary containment. Oxygen, which is subsequently generated by radiolytic decomposition of water, is recombined by the hydrogen recombiners (LCO 3.6.3.1) more rapidly than it is produced.

Primary containment oxygen concentration satisfies Criterion 2 of 10 CFR 50.36(c)(2)(ii).

(continued)

BASES (continued)

LCO

The primary containment oxygen concentration is maintained < 4.0 v/o to ensure that an event that produces any amount of hydrogen does not result in a combustible mixture inside primary containment.

APPLICABILITY

The primary containment oxygen concentration must be within the specified limit when primary containment is inerted, except as allowed by the relaxations during startup and shutdown addressed below. The primary containment must be inert in MODE 1, since this is the condition with the highest probability of an event that could produce hydrogen.

Inerting the primary containment is an operational problem because it prevents containment access without an appropriate breathing apparatus. Therefore, the primary containment is inerted as late as possible in the plant startup and de-inerted as soon as possible in the plant shutdown. As long as reactor power is < 15% RTP, the potential for an event that generates significant hydrogen is low and the primary containment need not be inert. Furthermore, the probability of an event that generates hydrogen occurring within the first 24 hours of a startup, or within the last 24 hours before a shutdown, is low enough that these "windows," when the primary containment is not inerted, are also justified. The 24 hour time period is a reasonable amount of time to allow plant personnel to perform inerting or de-inerting.

ACTIONS

A.1

If oxygen concentration is ≥ 4.0 v/o at any time while operating in MODE 1, with the exception of the relaxations allowed during startup and shutdown, oxygen concentration must be restored to < 4.0 v/o within 24 hours. The 24 hour Completion Time is allowed when oxygen concentration is ≥ 4.0 v/o because of the availability of other hydrogen mitigating systems (e.g., hydrogen recombiners) and the low probability and long duration of an event that would generate significant amounts of hydrogen occurring during this period.

(continued)

BASES

ACTIONS (continued)

B.1

If oxygen concentration cannot be restored to within limits within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, power must be reduced to ≤ 15% RTP within 8 hours. The 8 hour Completion Time is reasonable, based on operating experience, to reduce reactor power from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.3.2.1

The primary containment must be determined to be inerted by verifying that oxygen concentration is < 4.0 v/o. The 7 day Frequency is based on the slow rate at which oxygen concentration can change and on other indications of abnormal conditions (which could lead to more frequent checking by operators in accordance with plant procedures). Also, this Frequency has been shown to be acceptable through operating experience.

REFERENCES

1. UFSAR, Section 6.2.5.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.4.1 Secondary Containment

BASES

BACKGROUND

The function of the secondary containment is to contain dilute, and hold up fission products that may leak from primary containment following a Design Basis Accident (DBA). In conjunction with operation of the Standby Gas Treatment (SGT) System and closure of certain valves whose lines penetrate the secondary containment, the secondary containment is designed to reduce the activity level of the fission products prior to release to the environment and to isolate and contain fission products that are released during certain operations that take place inside primary containment, when primary containment is not required to be OPERABLE, or that take place outside primary containment.

The secondary containment is a structure that completely encloses the primary containment and those components that may be postulated to contain primary system fluid. This structure forms a control volume that serves to hold up and dilute the fission products. It is possible for the pressure in the control volume to rise relative to the environmental pressure (e.g., due to pump/motor heat load additions). To prevent ground level exfiltration while allowing the secondary containment to be designed as a conventional structure, the secondary containment requires support systems to maintain the control volume pressure at less than the external pressure. Requirements for these systems are specified separately in LCO 3.6.4.2, "Secondary Containment Isolation Valves (SCIVs)," and LCO 3.6.4.3, "Standby Gas Treatment (SGT) System."

APPLICABLE SAFETY ANALYSES

There are two principal accidents for which credit is taken for secondary containment OPERABILITY. These are a LOCA (Ref. 1) and a fuel handling accident (Ref. 2). The secondary containment performs no active function in response to each of these limiting events; however, its leak tightness is required to ensure that the release of radioactive materials from the primary containment is restricted to those leakage paths and associated leakage rates assumed in the accident analysis, and that fission products entrapped within the secondary containment

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)	structure will be treated by the SGT System prior to discharge to the environment. Secondary containment satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).
LCO	An OPERABLE secondary containment provides a control volume into which fission products that bypass or leak from primary containment, or are released from the reactor coolant pressure boundary components located in secondary containment, can be diluted and processed prior to release to the environment. For the secondary containment to be considered OPERABLE, it must have adequate leak tightness to ensure that the required vacuum can be established and maintained, the hatches and blowout panels must be closed and sealed, the sealing mechanisms associated with each secondary containment penetration (e.g., welds, bellows, or O-rings) must be OPERABLE (such that secondary containment leak tightness can be maintained), and all inner or all outer doors in each secondary containment access opening must be closed.
APPLICABILITY	In MODES 1, 2, and 3, a LOCA could lead to a fission product release to primary containment that leaks to secondary containment. Therefore, secondary containment OPERABILITY is required during the same operating conditions that require primary containment OPERABILITY. In MODES 4 and 5, the probability and consequences of the LOCA are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining secondary containment OPERABLE is not required in MODE 4 or 5 to ensure a control volume, except for other situations for 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.

(continued)

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

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.

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

ACTIONS

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

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, Required Action C.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. 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.

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.1

This SR ensures that the secondary containment boundary is sufficiently leak tight to preclude exfiltration. The 24 hour Frequency of this SR was developed based on operating experience related to secondary containment vacuum variations during the applicable MODES and the low probability of a DBA occurring.

Furthermore, the 24 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal secondary containment vacuum condition.

SR 3.6.4.1.2

Verifying that one secondary containment access door in each access opening is closed ensures that the infiltration of outside air of such a magnitude as to prevent maintaining the desired negative pressure does not occur. Verifying that all such doors are closed provides adequate assurance that exfiltration from the secondary containment will not occur. Maintaining secondary containment OPERABILITY requires verifying one door in the access opening is closed. An access opening contains one inner and one outer door. In

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.2 (continued)

some cases a secondary containment barrier contains multiple inner or multiple outer doors. For these cases, the access openings share the inner door or the outer door, i.e., the access openings have a common inner or outer door. The intent is to not breach the secondary containment at any time when secondary containment is required. This is achieved by maintaining the inner or outer portion of the barrier closed at all times, i.e., all inner doors closed or all outer doors closed. Thus each access opening has one door closed. However, each secondary containment access door is normally kept closed, except when the access opening is being used for entry and exit or when maintenance is being performed on the access opening. The 31 day Frequency for this SR has been shown to be adequate based on operating experience, and is considered adequate in view of the existing administrative controls on door status.

SR 3.6.4.1.3 and SR 3.6.4.1.4

The SGT System exhausts the secondary containment atmosphere to the environment through appropriate treatment equipment. Each SGT subsystem is designed to drawdown pressure in the secondary containment to ≥ 0.25 inches of vacuum water gauge in ≤ 300 seconds and maintain pressure in the secondary containment at ≥ 0.25 inches of vacuum water gauge for 1 hour at a flow rate of ≤ 4400 cfm. To ensure that all fission products released to secondary containment are treated, SR 3.6.4.1.3 and SR 3.6.4.1.4 verify that a pressure in the secondary containment that is less than the pressure external to the secondary containment boundary can rapidly be established and maintained. When the SGT System is operating as designed, the establishment and maintenance of secondary containment pressure cannot be accomplished if the secondary containment boundary is not intact. Establishment of this pressure is confirmed by SR 3.6.4.1.3, which demonstrates that the secondary containment can be drawn down to ≥ 0.25 inches of vacuum water gauge in ≤ 300 seconds using one SGT subsystem. SR 3.6.4.1.4 demonstrates that the pressure in the secondary containment can be maintained ≥ 0.25 inches of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate ≤ 4400 cfm. This

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.3 and SR 3.6.4.1.4 (continued)

flow rate is the assumed secondary containment leak rate during the drawdown period. The 1 hour test period allows secondary containment to be in thermal equilibrium at 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.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.4.2 Secondary Containment Isolation Valves (SCIVs)

BASES

BACKGROUND

The function of the SCIVs, in combination with other accident mitigation systems, is to limit fission product release during and following postulated Design Basis Accidents (DBAs) (Refs. 1 and 2). Secondary containment isolation within the time limits specified for those isolation valves designed to close automatically ensures that fission products that leak from primary containment following a DBA, that are released during certain operations when primary containment is not required to be OPERABLE, or that take place outside primary containment, are maintained within the secondary containment boundary.

The OPERABILITY requirements for SCIVs help ensure that an adequate secondary containment boundary is maintained during and after an accident by minimizing potential paths to the environment. These isolation devices are either passive or active (automatic). Manual valves, de-activated automatic valves secured in their closed position (including check valves with flow through the valve secured), and blind flanges are considered passive devices.

Automatic SCIVs (i.e., dampers) close on a secondary containment isolation signal to establish a boundary for untreated radioactive material within secondary containment following a DBA or other accidents.

Other penetrations required to be closed during accident conditions are isolated by the use of valves in the closed position or blind flanges.

APPLICABLE SAFETY ANALYSES

The SCIVs must be OPERABLE to ensure the secondary containment barrier to fission product releases is established. The principal accidents for which the secondary containment boundary is required are a loss of coolant accident (Ref. 1) and fuel handling accident (Ref. 2). The secondary containment performs no active function in response to each of these limiting events, but

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)	the boundary established by SCIVs is required to ensure that leakage from the primary containment is processed by the Standby Gas Treatment (SGT) System before being released to the environment. Maintaining SCIVs OPERABLE with isolation times within limits ensures that fission products will remain trapped inside secondary containment so that they can be treated by the SGT System prior to discharge to the environment. SCIVs satisfy Criterion 3 of 10 CFR 50.36(c)(2)(ii).
LCO	SCIVs form a part of the secondary containment boundary. The SCIV safety function is related to control of offsite radiation releases resulting from DBAs. The power operated, automatic isolation valves are considered OPERABLE when their isolation times are within limits and the valves actuate on an automatic isolation signal. The valves covered by this LCO, along with their associated stroke times, are listed in the Technical Requirements Manual (Ref. 3). The normally closed manual SCIVs are considered OPERABLE when the valves are closed and blind flanges are in place, or open under administrative controls. These passive isolation valves or devices are listed in Reference 3.
APPLICABILITY	In MODES 1, 2, and 3, a DBA could lead to a fission product release to the primary containment that leaks to the secondary containment. Therefore, OPERABILITY of SCIVs is required. In MODES 4 and 5, the probability and consequences of these events are reduced due to pressure and temperature limitations in these MODES. Therefore, maintaining SCIVs OPERABLE is not required in MODE 4 or 5, except for 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.

(continued)

BASES (continued)

ACTIONS

The ACTIONS are modified by three Notes. The first Note allows penetration flow paths to be unisolated intermittently under administrative controls. These controls consist of stationing a dedicated operator, who is in continuous communication with the control room, at the controls of the isolation device. In this way, the penetration can be rapidly isolated when the need for secondary containment isolation is indicated.

The second Note provides clarification that, for the purpose of this LCO, separate Condition entry is allowed for each penetration flow path. This is acceptable, since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable SCIV. Complying with the Required Actions may allow for continued operation, and subsequent inoperable SCIVs are governed by subsequent Condition entry and application of associated Required Actions.

The third Note ensures appropriate remedial actions are taken, if necessary, if the affected system(s) are rendered inoperable by an inoperable SCIV.

<u>A.1 and A.2</u>

In the event that there are one or more penetration flow paths with one SCIV inoperable, the affected penetration flow path(s) must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criteria are a closed and de-activated automatic SCIV, a closed manual valve, and a blind flange. For penetrations isolated in accordance with Required Action A.1, the device used to isolate the penetration should be the closest available device to secondary containment. This Required Action must be completed within the 8 hour Completion Time. The specified time period is reasonable considering the time required to isolate the penetration and the low probability of a DBA, which requires the SCIVs to close, occurring during this short time.

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

For affected penetrations that have been isolated in accordance with Required Action A.1, the affected penetration must be verified to be isolated on a periodic basis. This is necessary to ensure that secondary containment penetrations required to be isolated following an accident, but no longer capable of being automatically isolated, will be in the isolation position should an event occur. The Completion Time of once per 31 days is appropriate because the isolation devices are operated under administrative controls and the probability of their misalignment is low. This Required Action does not require any testing or device manipulation. Rather, it involves verification that the affected penetration remains isolated.

Required Action A.2 is modified by two Notes. Note 1 applies to isolation devices located in high radiation areas and allows them to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned. Therefore, the probability of misalignment, once they have been verified to be in the proper position, is low.

B.1

With two SCIVs in one or more penetration flow paths inoperable, the affected penetration flow path must be isolated within 4 hours. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. The 4 hour Completion Time is reasonable, considering the time required to isolate the penetration and the low probability of a DBA, which requires the SCIVs to close, occurring during this short time.

(continued)

BASES

ACTIONS

B.1 (continued)

The Condition has been modified by a Note stating that Condition B is only applicable to penetration flow paths with two isolation valves. This clarifies that only Condition A is entered if one SCIV is inoperable in each of two penetrations.

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.

D.1, D.2, and D.3

If any Required Action and associated Completion Time cannot be met, the plant must be placed in a condition in which the LCO does not apply. If applicable, CORE ALTERATIONS and the 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 in order to minimize the probability of a vessel draindown and the subsequent potential for fission product release. Actions must continue until OPDRVs are suspended.

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, Required Action D.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. Entering LCO 3.0.3 while in MODE 1, 2, or 3 would require the unit to be shutdown,

(continued)

BASES

ACTIONS

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

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.

SURVEILLANCE REQUIREMENTS

SR 3.6.4.2.1

This SR verifies each secondary containment isolation manual valve and blind flange that is not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside of the secondary containment boundary is within design limits. This SR does not require any testing or valve manipulation. Rather, it involves verification that those SCIVs in secondary containment that are capable of being mispositioned are in the correct position.

Since these SCIVs are readily accessible to personnel during normal unit operation and verification of their position is relatively easy, the 31 day Frequency was chosen to provide added assurance that the SCIVs are in the correct positions. This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

Two Notes have been added to this SR. The first Note applies to valves and blind flanges located in high radiation areas and allows them to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable, since access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment of these SCIVs, once they have been verified to be in the proper position, is low.

A second Note has been included to clarify that SCIVs that are open under administrative controls are not required to meet the SR during the time the SCIVs are open. These

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.2.1 (continued)

controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for secondary containment isolation is indicated.

SR 3.6.4.2.2

Verifying the isolation time of each power operated, automatic SCIV is within limits is required to demonstrate OPERABILITY. The isolation time test ensures that the SCIV will isolate in a time period less than or equal to that assumed in the safety analyses. The Frequency of this SR is 92 days.

SR 3.6.4.2.3

Verifying that each automatic SCIV closes on a secondary containment isolation signal is required to prevent leakage of radioactive material from secondary containment following a DBA or other accidents. This SR ensures that each automatic SCIV will actuate to the isolation position on a secondary containment isolation 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. UFSAR, Section 15.6.5.

2. UFSAR, Section 15.7.4.

3. Technical Requirements Manual.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.4.3 Standby Gas Treatment (SGT) System

BASES

BACKGROUND

The SGT System is required by 10 CFR 50, Appendix A, GDC 41, "Containment Atmosphere Cleanup" (Ref. 1). The function of the SGT System is to ensure that radioactive materials that leak from the primary containment into the secondary containment following a Design Basis Accident (DBA) are filtered and adsorbed prior to exhausting to the environment.

The SGT System consists of two independent subsystems that are shared between Unit 1 and Unit 2, each with its own set of ductwork, dampers, charcoal filter train, and controls. Each SGT System discharges to the plant vent stack through a common exhaust pipe.

Each charcoal filter train consists of (components listed in order of the direction of the air flow):

a. A centrifugal filter unit fan and centrifugal cooling fan;

b. A demister;

c. An electric heater;

d. A prefilter bank;

e. A high efficiency particulate air (HEPA) filter bank;

f. A charcoal adsorber; and

g. A second HEPA filter bank.

The sizing of the SGT System equipment and components is based on the results of an infiltration analysis. Each SGT subsystem is capable of processing the secondary containment volume, which includes both Unit 1 and Unit 2. The internal pressure of the SGT System boundary region is maintained at a negative pressure of 0.25 inch water gauge when the system is in operation, which represents the internal pressure required to ensure zero exfiltration of air from the building.

(continued)

BASES

BACKGROUND (continued)	The demister is provided to remove entrained water in the air, while the electric heater reduces the relative humidity of the airstream to ≤ 70% (Ref. 2). The prefilter removes large particulate matter, while the HEPA filter is provided to remove fine particulate matter and protect the charcoal from fouling. The charcoal adsorber removes gaseous elemental iodine and organic iodides, and the final HEPA filter is provided to collect any carbon fines exhausted from the charcoal adsorber. The SGT System automatically starts and operates in response to actuation signals from either Unit 1 or Unit 2 indicative of conditions or an accident that could require operation of the system. Following initiation, both supply fans start. SGT System flows are controlled automatically by flow control dampers located up stream of the supply fans.
APPLICABLE SAFETY ANALYSES	The design basis for the SGT System is to mitigate the consequences of a loss of coolant accident and fuel handling accidents (Refs. 3 and 4). For all events analyzed, the SGT System is shown to be automatically initiated to reduce, via filtration and adsorption, the radioactive material released to the environment. The SGT System satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).
LCO	Following a DBA, a minimum of one SGT subsystem is required to maintain the secondary containment at a negative pressure with respect to the environment and to process gaseous releases. Meeting the LCO requirements for two OPERABLE subsystems ensures operation of at least one SGT subsystem in the event of a single active failure.
APPLICABILITY	In MODES 1, 2, and 3, a DBA could lead to a fission product release to primary containment that leaks to secondary containment. Therefore, SGT System OPERABILITY is required during these MODES. 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, maintaining the SGT System OPERABLE is not required in MODE 4 or 5, except for

(continued)

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

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 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.

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.

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 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. 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.

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.

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

(continued)

BASES

ACTIONS

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

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.

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, 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. 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.

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). The VFTP includes testing HEPA filter performance, charcoal adsorber

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.3.2 (continued)

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.

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
5. ANSI/ASME N510-1989.

3/4.6.1 PRIMARY CONTAINMENT

PRIMARY CONTAINMENT INTEGRITY A.1 ITS 3.6.1.1

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.1 3.6.1.1 PRIMARY CONTAINMENT INTEGRITY shall be maintained. OPERABLE A.2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2,* and 3. A.3

ACTION: A.2

ACTION A Without PRIMARY CONTAINMENT INTEGRITY, restore PRIMARY CONTAINMENT INTEGRITY within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in ACTION B COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 PRIMARY CONTAINMENT INTEGRITY shall be demonstrated: OPERABLE A.2

a. At least once per 31 days by verifying that all primary containment penetrations** not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in position, except for valves that are open under administrative control as permitted by Specification 3.6.3. A.4 moved to ITS 3.6.1.3

SR 3.6.1.1.1 b. Perform required visual examinations and leakage rate testing except for primary containment air lock testing and main steam lines through the isolation valves, in accordance with and at the frequency specified by the Primary Containment Leakage Rate Testing Program.

*See Special Test Exception 3.10.1. A.3

**Except valves, blind flanges, and deactivated automatic valves which are located inside the containment, and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except such verification need not be performed when the primary containment has not been deinerted since the last verification or more often than once per 92 days. A.4 moved to ITS 3.6.1.3

ITS 3.6.1.1

A.1

SURVEILLANCE REQUIREMENTS (Continued)

c. By verifying each primary containment air lock OPERABLE per Specification 3.6.1.3.

d. By verifying the suppression chamber OPERABLE per Specification 3.6.2.1.

A.5

SR 3.6.1.1.2

e. Verify primary containment structural integrity in accordance with the Inservice Inspection Program for Post Tensioning Tendons. The frequency shall be in accordance with the Inservice Inspection Program for Post Tensioning Tendons.

SUPPRESSION CHAMBER# A.1 ITS 3.6.1.1

LIMITING CONDITION FOR OPERATION

3.6.2.1 The suppression chamber shall be OPERABLE with:

a. The pool water:

1. Volume between 131,900 ft^3 and 128,800 ft^3, equivalent to a level between +3 inches** and -4 1/2 inches**, and a

2. Maximum average temperature of 105°F during OPERATIONAL CONDITION 1 or 2, except that the maximum average temperature may be permitted to increase to:

a) 110°F with THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

b) 120°F with the main steam line isolation valves closed following a scram.

LCO 3.6.1.1 b. Drywell-to-suppression charmer bypass leakage less than or equal to 10% of the acceptable $A/\sqrt{k}$ design value of 0.03 ft^2. L-3 A.6

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

a. With the suppression chamber water level outside the above limits, restore the water level to within the limits within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. In OPERATIONAL CONDITION 1 or 2 with the suppression chamber average water temperature greater than or equal to 105°F, stop all testing which adds heat to the suppression pool, and restore the average temperature to less than or equal to 105°F within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, except, as permitted above:

1. With the suppression chamber average water temperature greater than 110°F, place the reactor mode switch in the Shutdown position and operate at least one residual heat removal loop in the suppression pool cooling mode.

2. With the suppression chamber average water temperature greater than 120°F, depressurize the reactor pressure vessel to less than 200 psig within 12 hours.

#See Specification 3.5.3 for ECCS requirements.
**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

<See ITS 3.6.2.1 and ITS 3.6.2.2>

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

c. Deleted.

d. Deleted.

within one hour, or be in Mode 3 in 12 hours, and Mode 4 in 36 hours.

ACTION A e. With the drywell-to-suppression chamber bypass leakage in excess of the limit, restore the bypass leakage to within the limit ~~prior to increasing reactor coolant temperature above 200°F.~~ L.1

SURVEILLANCE REQUIREMENTS

4.6.2.1 The suppression chamber shall be demonstrated OPERABLE:

a. By verifying the suppression chamber water volume to be within the limits at least once per 24 hours.

b. At least once per 24 hours in OPERATIONAL CONDITION 1 or 2 by verifying the suppression chamber average water temperature to be less than or equal to 105°F, except:

1. At least once per 5 minutes during testing which adds heat to the suppression chamber, by verifying the suppression chamber average water temperature less than or equal to 105°F.

2. At least once per 60 minutes when suppression chamber average water temperature is greater than 105°F, by verifying suppression chamber average water temperature less than or equal to 110°F and THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

3. At least once per 30 minutes following a scram with suppression chamber average water temperature greater than or equal to 105°F, by verifying suppression chamber average water temperature less than or equal to 120°F.

<See ITS 3.6.2.1 and ITS 3.6.2.2>

A.1 ITS 3.6.1.1

SURVEILLANCE REQUIREMENTS (Continued)

c. Deleted. (24) LD.1

SR 3.6.1.1.3 d. By conducting drywell-to-suppression chamber bypass leak tests at least once per 18 months at an initial differential pressure of 1.5 psi and verifying that the A/√k calculated from the measured leakage is within the specified limit. LA.1 A.6

If any 1.5 psi leak test results in a calculated A/√k >20% of the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission. L.5

If two consecutive 1.5 psi leak tests result in a calculated A/√k greater than the specified limit, then: L.4

1. A 1.5 psi leak test shall be performed at least once per 9 months until two consecutive 1.5 psi leak tests result in the calculated A/√k within the specified limits, and

2. A 5 psi leak test, performed with the second consecutive successful 1.5 psi leak test, results in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

If any required 5 psi leak test results in a calculated A/√k greater than the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission. L.2

If two consecutive 5 psi leak tests result in a calculated A/√k greater than the specified limit, then a 5 psi leak test shall be performed at least once per 9 months until two consecutive 5 psi leak tests result in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

3/4.6.1 PRIMARY CONTAINMENT

PRIMARY CONTAINMENT INTEGRITY

A.1

ITS 3.6.1.1

LIMITING CONDITION FOR OPERATION

A.2

LCO 3.6.1.1 3.6.1.1 PRIMARY CONTAINMENT ~~INTEGRITY~~ OPERABLE shall be maintained.

A3

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

A.2

ACTION A — Without PRIMARY CONTAINMENT ~~INTEGRITY~~, restore PRIMARY CONTAINMENT ~~INTEGRITY~~ within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in
ACTION B — COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

A.2

4.6.1.1 PRIMARY CONTAINMENT ~~INTEGRITY~~ OPERABLE shall be demonstrated:

a. At least once per 31 days by verifying that all primary containment penetrations** not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in position, except for valves that are open under administrative control as permitted by Specification 3.6.3.

A.4 moved to ITS 3.6.1.3

SR 3.6.1.1.1 b. Perform required visual examinations and leakage rate testing except for primary containment air lock testing and main steam lines through the isolation valves, in accordance with and at the frequency specified by the Primary Containment Leakage Rate Testing Program.

A.3

*See Special Test Exception 3.10.1.

**Except valves, blind flanges, and deactivated automatic valves which are located inside the containment, and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except such verification need not be performed when the primary containment has not been deinerted since the last verification or more often than once per 92 days.

A.4 moved to ITS 3.6.1.3

A.1

ITS 3.6.1.1

SURVEILLANCE REQUIREMENTS (Continued)

c. By verifying each primary containment air lock OPERABLE per Specification 3.6.1.3.

d. By verifying the suppression chamber OPERABLE per Specification 3.6.2.1.

A.5

SR3.6.1.1.2

e. Verify primary containment structural integrity in accordance with the Inservice Inspection Program for Post Tensioning Tendons. The frequency shall be in accordance with the Inservice Inspection Program for Post Tensioning Tendons.

3/4.6.2 DEPRESSURIZATION SYSTEMS

SUPPRESSION CHAMBER#

LIMITING CONDITION FOR OPERATION A.1 ITS 3.6.1.1

3.6.2.1 The suppression chamber shall be OPERABLE with:

a. The pool water:

1. Volume between 131,900 ft^3 and 128,800 ft^3, equivalent to a level between +3 inches** and -4 1/2 inches**, and a

2. Maximum average temperature of 105°F during OPERATIONAL CONDITION 1 or 2, except that the maximum average temperature may be permitted to increase to:

a) 110°F with THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

b) 120°F with the main steam line isolation valves closed following a scram.

L.3

LCD 3.6.1.1 b. Drywell-to-suppression chamber bypass leakage less than or equal to 10% of the acceptable $A/\sqrt{k}$ design value of 0.03 ft^2. A.6

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

a. With the suppression chamber water level outside the above limits, restore the water level to within the limits within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. In OPERATIONAL CONDITION 1 or 2 with the suppression chamber average water temperature greater than or equal to 105°F, stop all testing which adds heat to the suppression pool, and restore the average temperature to less than or equal to 105°F within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, except, as permitted above:

1. With the suppression chamber average water temperature greater than 110°F, place the reactor mode switch in the Shutdown position and operate at least one residual heat removal loop in the suppression pool cooling mode.

2. With the suppression chamber average water temperature greater than 120°F, depressurize the reactor pressure vessel to less than 200 psig within 12 hours.

#See Specification 3.5.3 for ECCS requirements.
**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

<See ITS 3.6.2.1 and ITS 3.6.2.2>

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

c. Deleted.

d. Deleted.

ACTION A e. With the drywell-to-suppression chamber bypass leakage in excess of the limit, restore the bypass leakage to within the limit prior to increasing reactor coolant temperature above 200°F. within one hour, or be Mode 3 in 12 hours, and Mode 4 in 36 hours. L.1

SURVEILLANCE REQUIREMENTS

4.6.2.1 The suppression chamber shall be demonstrated OPERABLE:

a. By verifying the suppression chamber water volume to be within the limits at least once per 24 hours.

b. At least once per 24 hours in OPERATIONAL CONDITION 1 or 2 by verifying the suppression chamber average water temperature to be less than or equal to 105°F, except:

1. At least once per 5 minutes during testing which adds heat to the suppression chamber, by verifying the suppression chamber average water temperature less than or equal to 105°F.

2. At least once per 60 minutes when suppression chamber average water temperature is greater than 105°F, by verifying suppression chamber average water temperature less than or equal to 110°F and THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

3. At least once per 30 minutes following a scram with suppression chamber average water temperature greater than or equal to 105°F, by verifying suppression chamber average water temperature less than or equal to 120°F.

<See ITS 3.6.2.1 and ITS 3.6.2.2>

A.1

ITS 3.6.1.1

SURVEILLANCE REQUIREMENTS (Continued)

c. Deleted. (24) LD.1

SR 3.6.1.1.3 d. By conducting drywell-to-suppression chamber bypass leak tests at least once per (18) months at an initial differential pressure of 1.5 psi and verifying that the A/√k calculated from the measured leakage is within the specified limit. LA.1 A.6

If any 1.5 psi leak test results in a calculated A/√k >20% of the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission. L.5

If two consecutive 1.5 psi leak tests result in a calculated A/√k greater than the specified limit, then: L.4

1. A 1.5 psi leak test shall be performed at least once per 9 months until two consecutive 1.5 psi leak tests result in the calculated A/√k within the specified limits, and

2. A 5 psi leak test, performed with the second consecutive successful 1.5 psi leak test, results in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

If any required 5 psi leak test results in a calculated A/√k greater than the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission. L.2

If two consecutive 5 psi leak tests result in a calculated A/√k greater than the specified limit, then a 5 psi leak test shall be performed at least once per 9 months until two consecutive 5 psi leak tests result in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 The definition of PRIMARY CONTAINMENT INTEGRITY in CTS 3.6.1.1 and the associated Action and Surveillance Requirement have not been included in the ITS. It is replaced with the requirement for primary containment to be OPERABLE. This was done because of the confusion associated with the definition compared to its use in the respective LCO. The change is editorial in that all the requirements are specifically addressed in ITS 3.6.1.1 for the primary containment along with the remainder of the LCOs in the Primary Containment Section (i.e., air locks, isolation valves, suppression pool, etc.). Therefore the change is a presentation preference adopted by the BWR ISTS, NUREG-1434, Rev. 1.

A.3 CTS 3.6.1.1 Applicability footnote *, which provides a cross reference to CTS 3.10.1, has been deleted. The format of the proposed Technical Specifications does not include providing cross references. Proposed LCO 3.0.7 adequately prescribes the use of the Special Operations LCOs without such references. Therefore the existing reference in the CTS 3.6.1.1 Applicability footnote * to the Special Test Exception of CTS 3.10.1 serves no functional purpose, and its removal is an administrative change.

A.4 CTS 4.6.1.1.a (including footnote **), relating to the position verification of PCIVs, has been moved to ITS 3.6.1.3 in accordance with the format of the BWR ISTS, NUREG-1434, Rev. 1. Any technical changes to these requirements will be discussed in the Discussion of Changes for ITS: 3.6.1.3.

A.5 The requirements for the air lock (CTS 4.6.1.1.c) and the suppression chamber (CTS 4.6.1.1.d) remain within the ITS. Providing a cross reference to them only adds confusion when evaluating compliance with Primary Containment OPERABILITY. Therefore removal of these Surveillances which reference other Specifications is administrative.

A.6 The drywell-to-suppression chamber bypass leakage requirement of CTS 3.6.2.1.b is proposed to be a supporting Surveillance for Primary Containment OPERABILITY (proposed SR 3.6.1.1.3); bypass leakage within limit is essential for the primary containment to perform its pressure suppression function and to ensure the primary containment design pressure is not exceeded. Therefore, the

ADMINISTRATIVE

A.6 (cont'd) actual LCO statement is not needed since it is part of Primary Containment OPERABILITY (ITS 3.6.1.1). This change is considered a presentation preference, which is administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 CTS 4.6.2.1 requires a drywell-to-suppression chamber bypass leak test and identifies the test must be initiated at an initial differential pressure of 1.5 psi. The detail regarding the performance of the test is proposed to be relocated to the bases. This detail is not necessary to ensure appropriate performance of this test. The requirements of ITS SR 3.6.1.1.3 continue to require that the bypass leakage remains within limits. Therefore, this relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LD.1 The Frequency for performing CTS 4.6.2.1.d (proposed SR 3.6.1.1.3), the drywell-to-suppression chamber bypass leak test, has been extended from 18 months to 24 months to facilitate a change to the LaSalle 1 and 2 refuel cycle from 18 months to 24 months. The proposed change will allow the normal Surveillance to extend the Surveillance Frequency from the current 18 month Surveillance Frequency (i.e., a maximum of 22.5 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed Specification 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

SR 3.6.1.1.3 verifies the drywell-to-suppression chamber bypass leakage is less than or equal to the bypass leakage limit. The leakage test is performed every 24 months, consistent with the requirement to perform the test during a refueling

TECHNICAL CHANGES - LESS RESTRICTIVE

LD.1 (cont'd) outage, risk of high radiation exposure, and the remote possibility of a component failure that is not identified by other drywell or primary containment SR.

Reviews of historical maintenance and surveillance data have shown that these tests normally pass their Surveillances at the current Frequency. An evaluation has been performed using this data, and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. In addition, the proposed 24 month Surveillance Frequency, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) does not invalidate any assumptions in the plant licensing basis.

"Specific"

L.1 In the ITS presentation (refer to Discussion of Change A.6 above), drywell-to-suppression chamber bypass leakage outside limits (proposed SR 3.6.1.1.3) will result in declaring the Primary Containment inoperable. ITS 3.6.1.1 ACTIONS for these conditions require commencing a shutdown to MODES 3 and 4 if the leakage problem is not corrected within 1 hour. CTS 3.6.2.1 Action e only restricts heating up reactor coolant above 200°F (i.e., entry into MODE 3). With the drywell-to-suppression chamber bypass leakage outside of limits in MODE 1, 2, or 3, CTS 3.6.2.1 does not provide actions. Since drywell-to-suppression chamber leakage are attributes of maintaining Primary Containment Integrity (in ITS terminology, primary containment OPERABILITY), a 1 hour allowed outage time is provided for this condition consistent with the primary containment is inoperable. This change will provide consistency in ITS ACTIONS for the various primary containment degradations. With primary containment OPERABILITY lost, the risk associated with continued operation for a short period of time could be less than that associated with an immediate plant shutdown. This change to CTS 3.6.2.1 is acceptable due to the low probability of an event that could pressurize the primary containment during the short time in which continued operation is allowed and primary containment is inoperable.

L.2 The accelerated test basis and elevated test pressure requirements of CTS 4.6.2.1.d.2 are deleted. CTS 4.6.2.1.d.2 requires verification of drywell-to-suppression chamber bypass leakage on an accelerated test basis and at a higher test pressure in the event that the results of consecutive drywell-to-suppression chamber bypass leakage tests are outside Technical Specification specified limits. Under the proposed change, drywell-to-suppression chamber will continue to be

TECHNICAL CHANGES - LESS RESTRICTIVE

L.2 (cont'd) verified on the frequency and at the test pressure described in CTS 4.6.2.1.d. Performance of drywell-to-suppression chamber on an accelerated test basis and at elevated test pressure is not considered to be advantageous for LaSalle 1 and 2 based upon the satisfactory results obtained from previous drywell-to-suppression pool leakage tests. Additionally, the acceptance criteria for drywell-to-suppression chamber bypass leakage measured during testing is small compared to the drywell-to-suppression chamber leakage assumed in the accident analyses, and is limited to 10% of the design value specified in the UFSAR. Consequently, the change is acceptable because it has no adverse impact on primary containment structural integrity or plant operations.

L.3 The drywell-to-suppression chamber leakage rate limit of CTS LCO 3.6.2.1.b requires that bypass leakage be less than or equal to 10% of the acceptable $A/\sqrt{k}$ design value of 0.03 ft^2. This requirement is reflected, with changes, in proposed ITS SR 3.6.1.1.3. The wording of proposed ITS SR 3.6.1.1.3 is modeled after those provided in the drywell bypass leakage limit surveillance requirement of NUREG-1434, SR 3.6.5.1.1. Proposed ITS SR 3.6.1.1.3 is also consistent with the drywell-to-suppression chamber leakage rate limit testing requirements described in the current Technical Specifications, with one exception. Proposed SR 3.6.1.1.3 will continue to require that drywell-to-suppression chamber bypass leakage be less than or equal to 10% of the acceptable limit during the first unit startup following bypass leakage testing performed in accordance with ITS 3.6.1.1, however, bypass leakage will be considered to be acceptable if it is less than or equal to the design $A/\sqrt{k}$ leakage limit at all other times between required tests. This change to CTS LCO 3.6.2.1.b is considered to be acceptable based upon a history of satisfactory results from prior drywell-to-suppression chamber bypass leakage rate testing.

L.4 CTS SR 4.6.2.1.d includes a requirement for increased testing frequency if the results of two consecutive drywell-to-suppression chamber bypass leakage rate tests result in a calculated $A/\sqrt{k}$ that is greater than the specified limit. ITS SR 3.6.1.1.3 does not include this increased testing frequency requirement. This change to CTS LCO 3.6.2.1.b is considered to be acceptable based upon a history of satisfactory results from prior drywell-to-suppression chamber bypass leakage rate testing. Additionally, existing provisions under the maintenance rule would invoke remedial actions, such as increased test frequency, in the event of an adverse trend in bypass leakage rate.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.5 The requirement in CTS 4.6.2.1.d for the NRC to review the test schedule for subsequent tests if any leak rate test result is not within the required limits has been deleted since the NRC has already approved the test schedule. If one test fails, the current Technical Specifications do not require the test frequency to be changed. The test frequency is only required to be changed if two consecutive tests have failed, as stated in CTS 4.6.2.1.d. Since the test schedule is already covered by the Technical Specifications, which has been approved by the NRC, there is no reason to have a requirement that the NRC review the test schedule (which will not change from the current test schedule) when one test fails. In addition, a historical review has shown this Surveillance has never failed. Therefore, this change is considered to be acceptable.

RELOCATED SPECIFICATIONS

None

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT AIR LOCKS [A.1]

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.2 3.6.1.3 Each primary containment air lock shall be OPERABLE. [A.2]

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2*, and 3. [L.1]

ACTION: [add proposed ACTIONs Note 1] [add proposed ACTIONs Note 2] [A.3]

ACTION A

a. With one primary containment air lock door inoperable: [add proposed Note 1 to Required Action A] [A.4] [add proposed Note 2 to Required Action A]

1. Maintain [verify] at least the OPERABLE air lock door closed [within 1 hour] and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed. [A.5] [L.2] [L.3]

2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days. [A.6] [add proposed Note to Required Action A.3] [L.4]

Action D 3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

4. The provisions of Specification 3.0.4 are not applicable. [A.6]

b. With the primary containment air lock inoperable, except as a result of an inoperable air lock door, [or inoperable interlock mechanism] [L.5] maintain [verify] [within 1 hour] at least one air lock door closed; [L.3]

Action C restore the inoperable air lock to OPERABLE status within 24 hours or be

Action D in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

[add proposed Required Action C.1] [A.3]

[add proposed ACTION B] [L.5]

*See Special Test Exception 3.10.1. [A.2]

A.1

SURVEILLANCE REQUIREMENTS

4.6.1.3 Each primary containment air lock shall be demonstrated OPERABLE:

SR3.6.1.2.1 a. By performing required primary containment air lock leakage testing in accordance with and at the frequency specified by the Primary Containment Leakage Rate Testing Program,*.

24 — L.6

SR3.6.1.2.2 b. At least once per 6 months by verifying that only one door in each air lock can be opened at a time.** — L.6

add proposed Note 1 to SR 3.6.1.2.1 — A.3

Note 2 to SR 3.6.1.2.1 *Results shall be evaluated against acceptance criteria applicable to Specification 4.6.1.1.b.

~~**Only required to be performed upon entry into primary containment air lock when the primary containment is de-inerted.~~ — L.6

 A.1

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.2 3.6.1.3 Each primary containment air lock shall be OPERABLE. A.2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2*, and 3. L.1

ACTION: add proposed ACTIONS Note 1 A.3 add proposed ACTIONS Note 2

Action A

a. With one primary containment air lock door inoperable: add proposed Note 1 to Required Action A A.4 add proposed Note 2 to Required Action A L.2

1. Maintain (verify) at least the OPERABLE air lock door closed (within 1 hour) and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed. A.5 L.3

2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days. A.6 add proposed Note to Required Action A.3 L.4

Action D

3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

4. The provisions of Specification 3.0.4 are not applicable. A.6

Action C

b. With the primary containment air lock inoperable, except as a result of an inoperable air lock door (or inoperable interlock mechanism), maintain (verify) at least one air lock door closed (within 1 hour); restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. L.5 L.3

Action D

add proposed Required Action C.1 A.3 L.3

add proposed Action B L.5

*See Special Test Exception 3.10.1. A.2

SURVEILLANCE REQUIREMENTS

4.6.1.3 Each primary containment air lock shall be demonstrated OPERABLE:

SR3.6.1.2.1 a. By performing required primary containment air lock leakage testing in accordance with and at the frequency specified by the Primary Containment Leakage Rate Testing Program,*.

SR3.6.1.2.2 b. At least once per ~~6~~ 24 months by verifying that only one door in each air lock can be opened at a time.~~**~~ L.6

add proposed Note 1 to SR 3.6.1.2.1 A.3

Note 2 to SR3.6.1.2.1 *Results shall be evaluated against acceptance criteria applicable to Specification 4.6.1.1.b.

~~**Only required to be performed upon entry into primary containment air lock when the primary containment is de-inerted.~~ L.6

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 CTS 3.6.1.3 Applicability footnote *, which provides a cross reference to CTS 3.10.1, has been deleted. The format of the proposed Technical Specifications does not include providing cross references. Proposed LCO 3.0.7 adequately prescribes the use of the Special Operations LCOs without such references. Therefore, the existing reference in the CTS 3.6.1.1 Applicability footnote * to the Special Test Exception of CTS 3.10.1 serves no purpose, and its removal is an administrative change.

A.3 Two Notes are proposed to be added to the ITS to facilitate use and understanding of the intent of:

1) (For ACTIONS Note 2) considering the primary containment inoperable in the event air lock leakage results in the acceptance criteria being not met.

2) (For SR 3.6.1.2.1 Note 1) the overall air lock acceptance criteria when one air lock door is inoperable. Since the inoperability is known to be only affecting one door, the barrel and the other OPERABLE door are providing a sufficient containment barrier. Even though the overall test could not be satisfied (SR 3.0.1 would normally require this to result in declaring the LCO not met - possibly requiring proposed Condition C (CTS 3.6.1.3 Action C) to be entered), the Note clarifies the intent that the previous test not be considered "not met."

In addition, proposed Required Action C.1 will ensure that the primary containment overall leakage is evaluated, against the acceptance criteria, if an air lock is inoperable.

These clarifications are consistent with the intent and interpretation of the existing Technical Specifications, and are therefore considered administrative presentation preferences.

ADMINISTRATIVE (continued)

A.4 A Note to ITS 3.6.1.2 Required Action A (Note 1: "Required Actions...are not applicable if...Condition C is entered") is added to provide more explicit instructions for proper application of the ACTIONS for Technical Specification compliance. In conjunction with the proposed Specification 1.3, "Completion Times," these ACTIONS provide direction consistent with the intent of CTS 3.6.1.3 Actions for one inoperable air lock door in the air lock. In the ITS 3.6.1.2 Required Action A Note, there is a recognition that if both doors in the air lock are inoperable (Condition C entered), then an "OPERABLE" door does not exist to be closed (ITS 3.6.1.2 Required Actions A.1, A.2, and A.3 cannot be met). Since this change only provides clearer direction and is consistent with the interpretation of the CTS, the change is considered administrative.

A.5 The revised presentation of CTS 3.6.1.3 Action a.1 (based on the BWR ISTS, NUREG-1434, Rev. 1) does not explicitly detail options to "restore...to OPERABLE status." This action is always an option, and is implied in all Actions. Omitting this action from the ITS is editorial.

A.6 The requirement for performing the overall air lock leakage test is a requirement of 10 CFR 50 Appendix J (as described in the Primary Containment Leakage Rate Testing Program in Section 5.5 of the ITS). This requirement is embodied in proposed SR 3.6.1.2.1. It is possible that the test would not be able to be performed with an inoperable air lock door, and a plant shutdown would be required due to the inability to perform the required Surveillance. However, this restriction on continued operation need not be specified (as is the case in CTS 3.6.1.3 Action a.2) since it exists inherently as a result of the required Appendix J testing. Since the ITS ACTIONS are revised to eliminate the reference to this Surveillance restriction, the exception to Specification 3.0.4 applicability (CTS 3.6.1.3 Action a.4) is not necessary, because ITS 3.0.4 allows MODE changes provided continued operations is allowed in the ACTIONS. Therefore, no change in operation requirements or intent is made, and the proposed revision to eliminate a specific restriction on continued operation, and the corresponding exception to Specification 3.0.4, is considered an administrative presentation preference.

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

None

"Specific"

L.1 ITS 3.6.1.2 ACTIONS Note 1 is added to the Technical Specifications to allow entry through a closed or locked air lock door for the purpose of making repairs. If the outer door is inoperable, then it may be easily accessed for repair. If the inner door is the one that is inoperable, it is proposed to allow entry through the OPERABLE outer door, which means there is a short time during which the primary containment boundary is not intact (during access through the outer door). The proposed allowance will have strict administrative controls, which are detailed in the Bases. A dedicated (i.e., not involved with any repair or other maintenance effort) individual will be assigned to ensure: 1) the door is opened only for the period of time required to gain entry into or exit from the air lock, and 2) the OPERABLE door is re-locked prior to the departure of the dedicated individual.

Repairs are directed towards reestablishing two OPERABLE doors in the air lock. Two OPERABLE doors closed is clearly the most desirable plant condition for the air lock. The CTS 3.6.1.3 Actions, in some circumstances, allow indefinite operation with only one OPERABLE door locked closed. Two OPERABLE doors closed is clearly an improvement on safety over one OPERABLE door locked closed. By not allowing access to make repairs, the CTS 3.6.1.3 Actions could result in an inability of the plant to establish and maintain this highest level of safety possible (two OPERABLE doors closed), without a forced plant shutdown.

Therefore, allowing entry and exit, while temporarily allowing loss of containment integrity, is proposed based on the expected result of restoring two OPERABLE doors to the air lock. Restricting this access to make repairs of an inoperable door or air lock ensures this allowance applies only towards meeting this goal. This change is acceptable due to the low probability of an event that could pressurize the primary containment during the short time in which the containment integrity is compromised, and the increased safety attained by completing repairs such that two OPERABLE doors can be closed.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.2 ITS 3.6.1.2 Required Action A Note 2 is added to the Technical Specifications to allow entry through a closed and/or locked OPERABLE air lock door (for reasons other than repairs) for a limited period of time (i.e., 7 days). Although one OPERABLE air lock door locked closed is sufficient to maintain containment integrity function and allow continued operation, entry and exit during operation may be necessary to perform maintenance and inspections as well as allowing access for operational considerations, such as preventative maintenance, etc. Should the air lock become inoperable and access not be allowed, a plant shutdown could be forced in a short period of time due to failure to attend to these activities.

The allowance is proposed to have strict administrative controls, which are detailed in the Bases. A dedicated (i.e., not involved with any repair or other maintenance effort) individual will be assigned to ensure: 1) the door is opened only for the period of time required to gain entry or exit from the air lock, and 2) the OPERABLE door is re-locked prior to the departure of the dedicated individual.

Therefore, allowing the OPERABLE door to be opened (temporarily allowing loss of containment integrity) for brief moments, is an acceptable exchange in risk; the risk of an event during the brief period of OPERABLE door opening for access, versus the risk associated with the transient of the plant shutdown that would follow from not attending to required activities within the containment.

L.3 In reference to immediately maintaining an air lock door closed, the word "maintain" in CTS 3.6.1.3 Actions a.1 and b is changed to "verify" and 1 hour is allowed to complete the verification in ITS 3.6.1.2 (Required Actions A.1 and C.2). This change is acceptable because the level of degradation associated with the CTS Actions is no worse than that allowed for Primary Containment Integrity (CTS 3.6.1.1) not maintained. CTS 3.6.1.1 (ITS 3.6.1.1) allows the primary containment to be inoperable for 1 hour. Also, the primary containment air lock doors are normally closed except for entry and exit. Therefore, the probability that the OPERABLE air lock door is open is low during the 1 hour period.

L.4 A Note has been added to ITS 3.6.1.2 Required Action A.3 to allow administrative means to be used to verify a locked closed OPERABLE air lock door in high radiation areas or areas with limited access due to inerting. The air lock door is initially verified to be in the proper position and access to it is restricted during operation due to the high levels of radiation or since the containment is inerted. Therefore, the probability of misalignment of the air lock door is acceptably small. Eliminating the physical door verification in areas

TECHNICAL CHANGES - LESS RESTRICTIVE

L.4 (cont'd) of high radiation and inerting removes a risk to personnel safety. Also, not requiring access to areas of high radiation to verify proper containment air lock door alignment reduces exposure to plant personnel and is consistent with the As-Low-As-Reasonably-Achievable (ALARA) concept.

L.5 Currently, if the interlock mechanism is inoperable, CTS 3.6.1.3 Action b requires it to be restored in 24 hours or a shutdown is required. ITS 3.6.1.2 ACTION B is added to specifically address the inoperable air lock interlock mechanism. Provided one inoperable air lock door in the air lock can be maintained closed, the assumptions of the accident analysis are maintained and operation should be allowed to continue. This closed OPERABLE door is also required to be locked to assure it remains closed. In the event containment access is desired, it is proposed containment access be allowed under strict administrative control (ITS 3.6.1.2 Required Action B Note 2). To provide a level of assurance equivalent to the mechanical interlock that at least one operable door will remain closed at all times during entry and exit, the proposed change requires an individual dedicated to assure that two doors are not open simultaneously and one door is re-locked prior to leaving. In addition, due to this new ACTION, CTS 3.6.1.3 Action b has been modified to also not be applicable if the air lock is inoperable as a result of an inoperable interlock mechanism.

L.6 The Frequency for the air lock interlock test, CTS 4.6.1.3.b and footnote ** is proposed to be changed from once per 6 months only upon entry into the primary containment air lock when primary containment is de-inerted, to 24 months in proposed SR 3.6.1.2.2. Typically, the interlock is installed after each refueling outage, verified OPERABLE with the Surveillance, and not disturbed until the next refueling outage. If the need for maintenance arises when the interlock is required, the performance of the interlock Surveillance would be required following the maintenance. In addition, when an air lock is opened during times the interlock is required, the operator first verifies that one door is completely shut before attempting to open the other door. Therefore, the interlock is not challenged except during actual testing of the interlock. Consequently, it should be sufficient to ensure proper operation of the interlock by testing the interlock on a 24 month interval.

Testing of the air lock interlock mechanism is accomplished through having one door not completely engaged in the closed position, while attempting to open the second door. Failure of this Surveillance effectively results in a loss of primary containment OPERABILITY. Administrative controls and training do not allow this interlock to be challenged for normal ingress and egress. One door is opened, all personnel and equipment as necessary are placed into the air lock,

TECHNICAL CHANGES - LESS RESTRICTIVE

L.6 (cont'd) and then the door is completely closed prior to attempting to open the second door. This Surveillance is contrary to processes and training of conservative operation, in that it requires an operator to challenge an interlock during a MODE when the interlock function is required. The door interlock mechanism cannot be readily bypassed; linkages must be removed, which are under the control of station processes such as temporary modifications, primary containment closure procedures, and out of service practices. Failure rate of this physical device is very low based on the design of the interlock.

Historically, this interlock verification has had its Frequency chosen to coincide with the Frequency of the overall air lock leakage test. According to 10 CFR 50, Appendix J, Option A, this Frequency is once per 6 months. However, Appendix J, Option B, to which LaSalle 1 and 2 are currently licensed, allows for an extension of the overall air lock leakage test Frequency to a maximum of 30 months.

Therefore, it is proposed to change the required Frequency for this Surveillance to 24 months (and, with the allowance of SR 3.0.2, this provides a total of 30 months, which corresponds to the overall air lock leakage test Frequency). In this fashion, the interlock can be tested in a MODE where the interlock is not required.

RELOCATED SPECIFICATIONS

None

3/4.6.3 PRIMARY CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.3 3.6.3 Each primary containment isolation valve and reactor instrumentation line excess flow check valve shall be OPERABLE**.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3. add proposed 2nd Applicability M.1

ACTION: add proposed Note 2 to ACTIONS A.2 / add proposed Notes 3 and 4 to ACTIONS A.3

ACTIONS A and C a. With one or more of the primary containment isolation valves, except the reactor instrumentation line excess flow check valves, inoperable:

1. Maintain at least one isolation valve OPERABLE in each affected penetration that is open and within 4 hours either; A.4 L.1

a) Restore the inoperable valve(s) to OPERABLE status, or A.5

b) Isolate each affected penetration by use of at least one deactivated automatic valve secured in the isolated position,* or L.2

c) Isolate each affected penetration by use of at least one closed manual valve or blind flange.* or check valve with flow secured (Required Action A.1 only)

ACTION E 2. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. L.3

add proposed ACTION B

ACTION C b. With one or more of the reactor instrumentation line excess flow check valves inoperable:

1. Operation may continue and the provisions of Specification 3.0.3 are not applicable provided that within 4 hours either: (72) A.6 L.4

a) The inoperable valve is returned to OPERABLE status, or A.5

b) The instrument line is isolated and the associated instrument is declared inoperable. (Note 3 to ACTIONS)

ACTION E 2. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

add proposed ACTION D L.13

add proposed ACTION F M.1

(Note 1 to ACTIONS) *Isolation valves closed to satify these requirements may be reopened on an intermittent basis under administrative control. L.5

(Note 2 to SR 3.6.1.3.2 and SR 3.6.1.3.3) **Locked or sealed closed valves may be opened on an intermittent basis under administrative control.

A.1

ITS 3.6.1.3

SURVEILLANCE REQUIREMENTS

4.6.3.1 Each primary containment isolation valve shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by cycling the valve through at least one complete cycle of full travel and verifying the specified isolation time. L.6

SR 3.6.1.3.7 4.6.3.2 Each primary containment automatic isolation valve shall be demonstrated OPERABLE during COLD SHUTDOWN or REFUELING at least once per 18 (24) months by verifying that on a containment isolation test signal each automatic isolation valve actuates to its isolation position. (or actual) L.7 L.8 LD.1

SR 3.6.1.3.5 4.6.3.3 The isolation time of each primary containment power operated or automatic isolation valve shall be determined to be within its limit when tested pursuant to Specification 4.0.5. LA.1

SR 3.6.1.3.8 4.6.3.4 Each reactor instrumentation line excess flow check valve shall be demonstrated OPERABLE at least once per 18 (24) months by verifying that the valve checks flow. (actuates to the isolation position) LD.1 L.9

4.6.3.5 Each traversing in-core probe system explosive isolation valve shall be demonstrated OPERABLE:

SR 3.6.1.3.4 a. At least once per 31 days by verifying the continuity of the explosive charge. LD.1

SR 3.6.1.3.9 b. At least once per 18 (24) months by removing the explosive squib from at least one explosive valve such that the explosive squib in each explosive valve will be tested at least once per 90 (120) months, and initiating the explosive squib. The replacement charge for the exploded squib shall be from the same manufactured batch as the one fired or from another batch which has been certified by having at least one of that batch successfully fired. No explosive squib shall remain in use beyond the expiration of its shelf-life and operating life. (definition of STAGGERED TEST BASIS) LD.1 LA.2

4.6.3.6 At the frequency specified by the Primary Containment Leakage Rate Testing Program:

SR 3.6.1.3.10 a. Verify leakage rate for any one main steamline through the isolation valves is ≤ 100 scfh, not to exceed 400 scfh for all four main steamlines, when tested at ≥ 25.0 psig.

SR 3.6.1.3.11 b. Verify combined leakage rate through hydrostatically tested lines that penetrate the primary containment is within limits.

REACTOR COOLANT SYSTEM

3/4.4.7 MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.3 3.4.7 Two main steam line isolation valves (MSIVs) per main steam line shall be OPERABLE with closing times greater than or equal to 3 and less than or equal to 5 seconds. A.7

SR 3.6.1.3.6

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3. L.5

ACTION: add proposed Note 1 to ACTIONS; add proposed Note 2 to ACTIONS A.2

With one or more MSIVs inoperable:

ACTION A 1. Maintain at least one MSIV OPERABLE in each affected main steam line that is open and within 8 hours either: A.4

a) Restore the inoperable valve(s) to OPERABLE status, or A.5

b) Isolate the affected main steam line by use of a deactivated MSIV in the closed position. L.2

ACTION E 2. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

add proposed ACTION B L.3

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.6 4.4.7 Each of the above required MSIVs shall be demonstrated OPERABLE by verifying full closure between 3 and 5 seconds when tested pursuant to Specification 4.0.5.

A.1

ITS 3.6.1.3

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

PRIMARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 PRIMARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2,* and 3.

ACTION:

Without PRIMARY CONTAINMENT INTEGRITY, restore PRIMARY CONTAINMENT INTEGRITY within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

See ITS 3.6.1.1

L.10 add proposed Notes 1 and 2 to Required Actions A.2 and C.2 and Note 1 to SR 3.6.1.3.2 and SR 3.6.1.3.3

SURVEILLANCE REQUIREMENTS

4.6.1.1 PRIMARY CONTAINMENT INTEGRITY shall be demonstrated:

Required Actions A.2 and C.2 and SR 3.6.1.3.2

a.* At least once per 31 days by verifying that all primary containment penetrations** not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in position, except for valves that are open under administrative control as permitted by Specification 3.6.3.

and not locked, sealed, or secured — L.11

or check valves with flow secured — L.2

SR 3.6.1.3.2; Required Actions A.2 and C.2

Note 1 to ACTIONS, Note 2 to SR 3.6.1.3.2, and Note 2 to SR 3.6.1.3.3 — L.5

b. Perform required visual examinations and leakage rate testing except for primary containment air lock testing and main steam lines through the isolation valves, in accordance with and at the frequency specified by the Primary Containment Leakage Rate Testing Program.

See ITS 3.6.1.1

*See Special Test Exception 3.10.1

Required Action A.2 and SR 3.6.1.3.3

**Except valves, blind flanges, and deactivated automatic valves which are located inside the containment, and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except such verification need not be performed when the primary containment has not been deinerted since the last verification or more often than once per 92 days.

Not — L.11

A.1

ITS 3.6.1.3

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER PURGE SYSTEM

LIMITING CONDITION FOR OPERATION

A.7

LCO 3.6.1.3 3.6.1.8 The drywell and suppression chamber purge system may be in operation with the drywell or suppression chamber purge supply and exhaust butterfly isolation valves open for inerting, de-inerting and pressure control. Purging through the Standby Gas Treatment System shall be restricted to less than or equal to 90 hours per 365 days. L.12

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 AND 3 L.5

ACTION:

add proposed ACTIONS Note 1 A.2

add proposed ACTIONS Note 2

ACTIONS A and C: With any drywell or suppression chamber purge supply or exhaust butterfly isolation valve open for other than inerting, de-inerting or pressure control, close the butterfly valve(s) within one hour L.1

ACTION E: or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.8.1 The cumulative time that the drywell and suppression chamber purge system has been in operation purging through the Standby Gas Treatment System shall be verified to be less than or equal to 90 hours per 365 days prior to use in this mode of operation. L.12

add proposed SR 3.6.1.3.1 M.3

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LIMITING CONDITION FOR OPERATION

LCO 3.6.1.3 3.6.3 Each primary containment isolation valve and reactor instrumentation line excess flow check valve shall be OPERABLE**. [add proposed Applicability — M.1]

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3. [add proposed Note 2 to ACTIONS — A.2]

ACTION: [add proposed Notes 3 and 4 to ACTIONS — A.3]

ACTIONS A and C a. With one or more of the primary containment isolation valves, except the reactor instrumentation line excess flow check valves, inoperable:

1. Maintain at least one isolation valve OPERABLE in each affected penetration that is open and within 4 hours either; [A.4] [L.1]

a) Restore the inoperable valve(s) to OPERABLE status, or [A.5]

b) Isolate each affected penetration by use of at least one deactivated automatic valve secured in the isolated position,* or

c) Isolate each affected penetration by use of at least one closed manual valve or blind flange.* [or check valve with flow secured] [L.2 Required Action A.1 only]

ACTION E 2. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. [add proposed ACTION B — L.3]

ACTION C b. With one or more of the reactor instrumentation line excess flow check valves inoperable:

1. Operation may continue and the provisions of Specification 3.0.3 are not applicable provided that within 4 [72] hours either: [A.6] [L.4]

a) The inoperable valve is returned to OPERABLE status, or [A.5]

Note 3 to ACTIONS b) The instrument line is isolated and the associated instrument is declared inoperable.

ACTION E 2. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

[add proposed ACTION D — L.13]

[add proposed ACTION F — M.1]

Note 1 to ACTIONS *Isolation valves closed to satify these requirements may be reopened on an intermittent basis under administrative control. [L.5]

Note 2 to SR 3.6.1.3.2 and SR 3.6.1.3.3 **Locked or sealed closed valves may be opened on an intermittent basis under administrative control.

A.1

ITS 3.6.1.3

SURVEILLANCE REQUIREMENTS

4.6.3.1 Each primary containment isolation valve shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by cycling the valve through at least one complete cycle of full travel and verifying the specified isolation time. L.6 L.7

SR 3.6.1.3.7 4.6.3.2 Each primary containment automatic isolation valve shall be demonstrated OPERABLE during COLD SHUTDOWN or REFUELING at least once per 18 (24) months by verifying that on a containment isolation test signal (or actual) each automatic isolation valve actuates to its isolation position. LD.1 L.8

SR 3.6.1.3.5 4.6.3.3 The isolation time of each primary containment power operated or automatic isolation valve shall be determined to be within its limit when tested pursuant to Specification 4.0.5. LA.1 LD.1

SR 3.6.1.3.8 4.6.3.4 Each reactor instrumentation line excess flow check valve shall be demonstrated OPERABLE at least once per 18 (24) months by verifying that the valve checks flow (actuates to the isolation position). L.9

4.6.3.5 Each traversing in-core probe system explosive isolation valve shall be demonstrated OPERABLE:

SR 3.6.1.3.4 a. At least once per 31 days by verifying the continuity of the explosive charge. LD.1

SR 3.6.1.3.9 b. At least once per 18 (24) months by removing the explosive squib from at least one explosive valve such that the explosive squib in each explosive valve will be tested at least once per 90 (120) months, and initiating the explosive squib. The replacement charge for the exploded squib shall be from the same manufactured batch as the one fired or from another batch which has been certified by having at least one of that batch successfully fired. No explosive squib shall remain in use beyond the expiration of its shelf-life and operating-life. definition of STAGGERED TEST BASIS LD.1 LA.2

4.6.3.6 At the frequency specified by the Primary Containment Leakage Rate Testing Program:

SR 3.6.1.3.10 a. Verify leakage rate for any one main steamline through the isolation valves is ≤ 100 scfh, not to exceed 400 scfh for all four main steamlines when tested at ≥ 25.0 psig.

SR 3.6.1.3.11 b. Verify combined leakage rate through hydrostatically tested lines that penetrate the primary containment is within limits.

ITS 3.6.1.3

A.1

REACTOR COOLANT SYSTEM

3/4.4.7 MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.3 3.4.7 Two main steam line isolation valves (MSIVs) per main steam line shall be OPERABLE with closing times greater than or equal to 3 and less than or equal to 5 seconds. A.7

SR 3.6.1.3.6

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3. L.5

add proposed Note 1 to ACTIONS

ACTION: add proposed Note 2 to ACTIONS A.2

With one or more MSIVs inoperable:

ACTION A 1. Maintain at least one MSIV OPERABLE in each affected main steam line that is open and within 8 hours either: A.4

a) Restore the inoperable valve(s) to OPERABLE status, or A.5

b) Isolate the affected main steam line by use of a deactivated MSIV in the closed position. L.2

ACTION E 2. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

add proposed ACTION B L.3

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.6 4.4.7 Each of the above required MSIVs shall be demonstrated OPERABLE by verifying full closure between 3 and 5 seconds when tested pursuant to Specification 4.0.5.

A.1

ITS 3.6.1.3

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

PRIMARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 PRIMARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2,* and 3.

ACTION:

Without PRIMARY CONTAINMENT INTEGRITY, restore PRIMARY CONTAINMENT INTEGRITY within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

<See ITS 3.6.1.1>

L.10

add proposed Notes 1 and 2 to Required Actions A.2 and C.2 and SR 3.6.1.3.2 and SR 3.6.1.3.3

SURVEILLANCE REQUIREMENTS

4.6.1.1 PRIMARY CONTAINMENT INTEGRITY shall be demonstrated:

Required Actions A.2 and C.2 and SR 3.6.1.3.2

a. At least once per 31 days by verifying that all primary containment penetrations** not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in position, except for valves that are open under administrative control as permitted by Specification 3.6.3.

SR 3.6.1.3.2

Required Actions A.2 and C.2

and not locked, sealed, or secured

L.11

or check valves with flow secured

L.2

Note 1 to Actions, Note 2 to SR 3.6.1.3.2, and Note 2 to SR 3.6.1.3.3

L.5

b. Perform required visual examinations and leakage rate testing except for primary containment air lock testing and main steam lines through the isolation valves, in accordance with and at the frequency specified by the Primary Containment Leakage Rate Testing Program.

<See ITS 3.6.1.1>

*See Special Test Exception 3.10.1.

Required Action A.2 and SR 3.6.1.3.3

**Except valves, blind flanges, and deactivated automatic valves which are located inside the containment, and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except such verification need not be performed when the primary containment has not been deinerted since the last verification or more often than once per 92 days.

Not

L.11

A.1

ITS 3.6.1.3

DRYWELL AND SUPPRESSION CHAMBER PURGE SYSTEM

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.3 3.6.1.8 The drywell and suppression chamber purge system may be in operation with the drywell or suppression chamber purge supply and exhaust butterfly isolation valves open for inerting, deinerting, and pressure control. Purging through the Standby Gas Treatment System shall be restricted to less than or equal to 90 hours per 365 days. A.7 L.12

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

add proposed ACTIONS Note 1 — L.5

add proposed ACTIONS Note 2 — A.2

ACTIONS A and C — With any drywell or suppression chamber purge supply or exhaust butterfly isolation valve open for other than inerting, deinerting, or pressure control, close the butterfly valve(s) within 1 hour or L.1

ACTION E — be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.8.1 The cumulative time that the drywell and suppression chamber purge system has been in operation purging through the Standby Gas Treatment System shall be verified to be less than or equal to 90 hours per 365 days prior to use in this mode of operation. L.12

add proposed SR 3.6.1.3.1 — M.3

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 This proposed change to the CTS 3.6.3, 3.4.7, and 3.6.1.8 Actions provides more explicit instructions for proper application of the Actions for Technical Specification compliance. In conjunction with the proposed Specification 1.3, "Completion Times," the ITS 3.6.1.3 ACTIONS Note 2 ("Separate Condition entry is allowed for each penetration flow path") provides direction consistent with the intent of the existing Actions for inoperable isolation valves. It is intended that each inoperable penetration flow path is allowed a certain time to complete the Required Actions. Since this change only provides more explicit direction of the current interpretation of the existing specification, this change is considered administrative.

A.3 The ITS 3.6.1.3 ACTIONS include Notes 3 and 4. These Notes facilitate the use and understanding of the intent for a system made inoperable by inoperable PCIVs, that the applicable ACTIONS for that system also apply. This requirement is currently located in CTS 3.6.3 Action b.1.b), but it does not cover all situations. Therefore, ITS 3.6.1.3 ACTIONS Note 3 has been added to cover all situations. ITS 3.6.1.3 ACTIONS Note 4 clarifies that these "systems" include the primary containment. With ITS LCO 3.0.6, this intent would not necessarily apply. The clarification is consistent with the intent and interpretation of the existing Technical Specifications, and is therefore considered administrative.

A.4 CTS 3.6.3 Action a and CTS 3.4.7 Action 1 do not specify penetrations with one or two isolation valves, except for reactor instrumentation line excess flow check valves. However, ITS 3.6.1.3 Condition A applies if the affected penetration has two valves, and only one is inoperable. This inherently ensures maintaining "at least one isolation valve OPERABLE." In the case of containment penetrations designed with only one isolation valve, the system boundary is considered an adequate barrier and the penetration is not considered "open" when the single isolation valve is open. This change is a presentation preference and is administrative in nature.

ADMINISTRATIVE (continued)

A.5 The revised presentation of CTS 3.6.1.3 Actions a.1.a) and b.1.a) and CTS 3.4.7 Action 1.a) (based on the BWR ISTS, NUREG-1434, Rev. 1) does not explicitly detail options to "restore...to OPERABLE status." This action is always an option, and is implied in all Actions. Omitting these actions from the ITS is editorial.

A.6 The LCO 3.0.3 statement in CTS 3.6.3 Action b.1 has been deleted since it is redundant to the "Otherwise..." action. That is, LCO 3.0.3 is not applicable anyway since a shutdown action has been provided. Therefore, deletion of these allowances is administrative.

A.7 CTS 3.4.7 and 3.6.1.8 repeat most of the requirements, provisions, and actions for MSIVs and purge valves, respectively, separate from all other primary containment isolation valves in CTS 3.6.3. The ITS incorporate these requirements and associated restoration times into ITS 3.6.1.3, the primary containment isolation valve Specification. This is a presentation preference, except as noted by other Discussion of Changes for ITS: 3.6.1.3.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 An additional Applicability has been added to ITS 3.6.1.3 (i.e., when associated instrumentation is required to be OPERABLE per LCO 3.3.6.1, "Primary Containment Isolation Instrumentation"), which effectively adds a MODE 4 and 5 requirement to the RHR Shutdown Cooling System isolation valves. Operability of these valves is necessary to preclude an inadvertent draindown of the reactor vessel through the shutdown cooling isolation valves from lowering reactor vessel water level to the top of the fuel. Appropriate ACTIONS have been added (ITS 3.6.1.3 ACTION F) for when the valves cannot be isolated or restored within the current 4 hour limit. Since the unit is already in MODE 4 or 5, the CTS 3.6.3 shutdown action would not provide any restriction. This change is an additional restriction on plant operation.

M.2 Not used.

M.3 A new Surveillance Requirement has been added. This Surveillance Requirement (SR 3.6.1.3.1) verifies the 8 and 26 inch purge valves are closed every 31 days (except when allowed to be open, as described in Discussion of Change L.12 below). This will ensure the valves are in their accident position, thus helping to ensure the offsite releases are within the limits if a LOCA were to occur. This SR is an additional restriction on plant operation.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 CTS 4.6.3.3 requires the isolation time of power operated and automatic PCIVs to be verified within limits when tested pursuant to Specification 4.0.5 (the Inservice Test (IST) Program requirements). The requirement to stroke time test the power operated, non-automatic, PCIVs has been relocated to the IST Program. The ISTS Bases for SR 3.6.1.3.5 state that the "isolation time test ensures that the valve will isolate in a time period less than or equal to that assumed in the safety analysis." Certain power operated PCIVs do not receive an automatic isolation signal, and their time is not assumed in the safety analysis, since it requires operator action to close the valves. Due to this, in the LaSalle 1 and 2 PCIV table (which is located outside of Technical Specifications), the isolation time for the power operated, non-automatic valves are listed as "NA." However, the IST Program, required by 10 CFR 50.55a, provides requirements for the testing of all ASME Code Class 1, 2, and 3 valves in accordance with applicable codes, standards, and relief requests, endorsed by the NRC for LaSalle 1 and 2. Testing of the power operated, non-automatic valves includes applicable stroke times. Compliance with 10 CFR 50.55a, and as a result the IST Program and implementing procedures, is required by the LaSalle 1 and 2 Operating Licenses. These controls are adequate to ensure the required testing to demonstrate OPERABILITY is performed. Therefore, the relocated requirements are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the relocated requirements in the IST Program will be controlled by the provisions of 10 CFR 50.59 and 10 CFR 50.55a.

LA.2 Requirements in CTS 4.6.3.5.b concerning the replacement charges for the traversing in-core probe (TIP) explosive valves are proposed to be relocated to the Bases. These details are not necessary to ensure that the TIP System explosive isolation valves are maintained OPERABLE. The requirements of ITS 3.6.1.3, SR 3.6.1.3.4, and SR 3.6.1.3.9 are adequate to ensure the OPERABILITY of the TIP system explosive isolation valves. Therefore, the relocated requirements are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

LD.1 The Frequencies for performing CTS 4.6.3.2, 4.6.3.4, and 4.6.3.5.b have been extended from 18 months to 24 months in proposed SRs 3.6.1.3.7, 3.6.1.3.8, and 3.6.1.3.9 to facilitate a change to the LaSalle 1 and 2 refuel cycle from 18 months to 24 months. The proposed change will allow these Surveillances to extend their Surveillance Frequency from the current 18 month Surveillance Frequency (90 months for CTS 4.6.3.5.b) (i.e., a maximum of 22.5 months (112.5 months for CTS 4.6.3.5.b) accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to a 24 month Surveillance Frequency (120 months for SR 3.6.1.3.9) (i.e., a maximum of 30 months (150 months for SR 3.6.1.3.9) accounting for the allowable grace period specified in CTS 4.0.2 and proposed Specification 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

SR 3.6.1.3.7 ensures that each automatic PCIV will actuate to its isolation position on a primary containment isolation signal. During the operating cycle, PCIVs are either exercised (closed or open), partially stroked (open or close) or, in accordance with the IST program, justifications exist to document less frequent testing. The exercise or partial stroke testing of these PCIVs tests a significant portion of the PCIV's circuitry and will detect failures of this circuitry or failures with valve movement. The PCIVs, including the actuating logic, are designed to be single failure proof and therefore are highly reliable. Furthermore, as stated in the NRC Safety Evaluation Report (dated August 2, 1993) relating to extension of the Peach Bottom Atomic Power Station, Unit Numbers 2 and 3 surveillance intervals from 18 to 24 months:

> "Industry reliability studies for boiling water reactors (BWRs), prepared by the BWR Owners Group (NEDC-30936P) show that the overall safety systems' reliabilities are not dominated by the reliabilities of the logic system, but by that of the mechanical components, (e.g., pumps and valves), which are consequently tested on a more frequent basis. Since the probability of a relay or contact failure is small relative to the probability of mechanical component failure, increasing the logic system functional test interval represents no significant change in the overall safety system unavailability."

Extension of the LOGIC SYSTEM FUNCTIONAL TEST has been previously justified (refer to ITS 3.3.6.1, Primary Containment Isolation Instrumentation, Discussion of Change LD.1). Based on the testing of the valves, the reliability of the PCIVs and the redundant nature of containment isolation, the impact, if any, of this change on system availability is minimal.

TECHNICAL CHANGES - LESS RESTRICTIVE

LD.1 (cont'd)

SR 3.6.1.3.8 requires a demonstration that each excess flow check valve (EFCV) actuates to the isolation position on an actual or simulated instrument line break condition. This SR provides assurance that the instrumentation line EFCVs will perform as designed. 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. Furthermore the design basis for the Containment Isolation System states that a failure of an individual excess flow check valve combined with a break in the associated instrument line are mitigated since dead-end instrument sensing lines that are in communication with the reactor pressure boundary and penetrate the primary containment are equipped with 1/4 inch orifice as close to the process as possible inside the drywell. Instrument lines have been designed to meet the requirements of Regulatory Guide 1.11. These lines are Seismic Category I and terminate in instruments that are Seismic Category I. They are provided with flow-restricting orifices, manual isolation valves, and excess flow check valves. The flow restricting orifice is sized to assure that in the event of a postulated failure of the piping or component, the potential offsite exposure would be substantially below the guideline of 10 CFR 100.

SR 3.6.1.3.9 requires that the explosive squib be removed and tested for the shear isolation valve of the TIP System. An in place functional test is not possible with this design. The replacement charge for the explosive squib is from the same manufactured batch as the one fired or from another batch that has been certified by having one of the batch successfully fired. Other administrative controls, such as those that limit the shelf life and operating life, as applicable, of the explosive charges, are followed. The Frequency of 24 months on a STAGGERED TEST BASIS is considered adequate given the administrative controls on replacement charges and the more frequent checks on a 31 day basis of circuit continuity per SR 3.6.1.3.4.

Reviews of historical maintenance and surveillance data have shown that these tests normally pass their Surveillances at the current Frequency. An evaluation has been performed using this data, and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. In addition, the proposed 24 month Surveillance Frequencies (120 months for SR 3.6.1.3.9), if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months or 150 months, as applicable) do not invalidate any assumptions in the plant licensing basis.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

"Specific"

L.1 CTS 3.6.3 Action a requires an inoperable PCIV to be restored or the affected penetration isolated in 4 hours. CTS 3.4.7 Action 1 also requires an inoperable MSIV (which is a PCIV) to be restored or the affected penetration isolated in 8 hours. CTS 3.6.1.8 Action requires an open (i.e., inoperable) purge valve to be closed within 1 hour. ITS 3.6.1.3 Required Action A.1 allows 4 hours to isolate the affected penetration when a purge valve is inoperable and 8 hours to isolate the affected penetration when an MSIV is inoperable, and ITS Required Action C.1 (second Completion Time) allows 72 hours to isolate the affected penetration when a PCIV is inoperable in a penetration with a closed system and only one PCIV. For the purge valves, the proposed time is consistent with other PCIVs (except MSIVs) in penetrations with two PCIVs. The 4 hours is only allowed when one of the two purge valves in a penetration is inoperable. If both are inoperable, ACTION B would apply (1 hour) consistent with the current requirements. For the MSIVs, the additional 4 hours provides more time to restore the inoperable MSIV given the fact that MSIV closure will result in isolation of the affected main steam line and potential for a plant shutdown. The additional time is reasonable since the penetration can still be isolated using the other MSIV and the low probability of a main steam line break. For PCIVs in a penetration with a closed system and only one PCIV, they are either in a closed system, as specifically defined in NUREG-0800 (the Standard Review Plan), section 6.2.4, or they are in a penetration whose system piping communicates with the suppression pool and is expected to remain submerged during the accident (i.e., a closed system as defined in the UFSAR). The NRC has allowed this design for LaSalle 1 and 2 and other BWRs and, while the reason these types of penetrations meet the requirements of the General Design Criteria (GDC) is not specifically described in the Standard Review Plan, they meet the GDC requirements for being classified as a closed system inside the containment because they satisfy "other defined bases" established by the NRC to meet the GDC requirements. The additional time is reasonable for the closed system valves since the intact piping or the water seal acts as the penetration isolation barrier and ensures that the primary containment boundary is maintained intact until another barrier can be established to isolate the penetration. This additional time also avoids the potential for a plant shutdown and provides time to repair the inoperable PCIV in lieu of isolating the penetration (which could result in an inoperable ECCS subsystem, since the water sealed PCIVs are only in ECCS penetrations).

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.2 CTS 3.6.3 Action a, CTS 3.4.7 Action 1, and CTS 4.6.1.1.a list some, but not all, of the possible acceptable isolation devices that may be used to satisfy the need to isolate a penetration with an inoperable isolation valve. ITS 3.6.1.3 ACTIONS provide a complete list of acceptable isolation devices. Since the result of the ACTIONS continues to be an acceptably isolated penetration for continued operation, the proposed change does not adversely affect safe operation. Many penetrations are designed with check valves as acceptable isolation barriers. With forward flow in the line secured, a check valve is essentially equivalent to a closed manual valve. For those penetrations designed with check valves as acceptable isolation devices, the ITS provides an equivalent level of safety. For penetrations not designed with check valves for isolation, the ITS does not affect the requirements to isolate with a closed deactivated automatic valve, closed manual valve, or blind flange. ITS ACTIONS allowing closed manual valves or check valves with flow secured also apply to isolating main steam lines, even though the design does not provide for these type of isolation devices. This change is simply a result of simplicity in providing a consistent presentation for all penetrations. While this apparent flexibility does not result in any actual technical change in the Technical Specifications, it is listed here for completeness.

L.3 In the event two or more valves in a penetration are inoperable, CTS 3.6.3 Action a and CTS 3.4.7 Action 1, which requires maintaining one isolation valve OPERABLE, would not be met and an immediate shutdown would be required. ITS 3.6.1.3 ACTION B provides 1 hour prior to commencing a required shutdown. This proposed 1 hour period is consistent with the existing time allowed for conditions when the primary containment is inoperable. The proposed change will provide consistency in ACTIONS for these various primary containment degradations. This change to CTS 3.6.3 and CTS 3.4.7 is acceptable due to the low probability of an event that could pressurize the primary containment during the short time in which continued operation is allowed and the capability to isolate a primary containment penetration is lost.

L.4 CTS 3.6.3 Action b.1 allows 4 hours to either repair the inoperable excess flow check valve or isolate the associated instrument. ITS 3.6.1.3 Required Action C.1 has extended this time to 72 hours. In this event, a limiting event would still be assumed to be within the bounds of the safety analysis (the excess flow lines contain orifices that are approximately ¼ inch in diameter.) Allowing an extended restoration time, to potentially avoid a plant transient caused by the forced shutdown, is reasonable based on the probability of a EFCV line break event and does not represent a significant decrease in safety.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.5 An allowance is proposed for intermittently opening, under administrative control, closed primary containment isolation valves, other than those currently allowed to be opened using CTS 3.6.3 LCO footnote ** and Action footnote *. The allowance is presented in ITS 3.6.1.3 ACTIONS Note 1, and in Note 2 to SR 3.6.1.3.2 and SR 3.6.1.3.3. Opening of primary containment penetrations on an intermittent basis is required for performing surveillances, repairs, routine evolutions, etc. Intermittently opening closed PCIVs is acceptable due to the low probability of an event that could pressurize the primary containment during the short time in which the PCIV is open and the administrative controls established to ensure the affected penetration can be isolated when a need for primary containment isolation is indicated.

L.6 CTS 4.6.3.1 is proposed to be deleted. Any time the OPERABILITY of a system or component has been affected by repair, maintenance, or replacement of a component, post maintenance testing is required to demonstrate OPERABILITY of the system or component. After restoration of a component that caused a required SR to be failed, ITS SR 3.0.1 requires the appropriate SRs (in this case SR 3.6.1.3.5 and SR 3.6.1.3.6, as applicable) to be performed to demonstrate OPERABILITY of the affected components. Therefore, explicit post maintenance Surveillance Requirements are not required and have been deleted from the Technical Specifications.

L.7 The requirement to perform CTS 4.6.3.2 during COLD SHUTDOWN or REFUELING has not been included in proposed SR 3.6.1.3.7. The proposed Surveillance (for a functional test of each primary containment isolation valve) does not include the restriction on plant conditions. Some isolation valves could be adequately tested in other than Cold Shutdown or Refueling, without jeopardizing safe plant operations. The control of the plant conditions appropriate to perform the test is an issue for procedures and scheduling, and has been determined by the NRC Staff to be unnecessary as a Technical Specification restriction. As indicated in Generic Letter 91-04, allowing this control is consistent with the vast majority of other Technical Specification Surveillances that do not dictate plant conditions for the Surveillance.

L.8 The phrase "actual or," in reference to the isolation test signal in CTS 4.6.3.2, has been added to proposed SR 3.6.1.3.7, which verifies that each PCIV actuates on an automatic isolation signal. This allows satisfactory automatic PCIV isolations for other than Surveillance purposes to be used to fulfill the Surveillance Requirement. Operability is adequately demonstrated in either case since the PCIV itself cannot discriminate between "actual" or "test" signals.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.9 The requirement in CTS 4.6.3.4 that each excess flow check valve must check flow has been deleted. Proposed SR 3.6.1.3.9 now requires the EFCVs to actuate to their isolation position (i.e., closed) on an actual or simulated instrument line break signal. The requirements for the EFCVs are provided in 10 CFR 50 Appendix A, GDCs 55 and 56, and as further detailed in Regulatory Guide 1.11. These requirements state that there should be a high degree of assurance that the EFCVs will close or be closed if the instrument line outside containment is lost during normal reactor operation, or under accident conditions. The Instrument Line Break Analysis in the LaSalle 1 and 2 UFSAR, Section 15.6.2 assumes both the EFCV and the manual block valve to be unavailable, i.e., fail to close; the accident is terminated by cooling down the plant. Therefore, since the actual leakage is not an assumption of the accident analysis (the leakage is assumed to be the maximum allowed through the broken line), the leakage limit (i.e., check flow) has been deleted. This change has also been recently approved at Nine Mile Point Unit 2 (Amendment 91, the ITS Amendment).

L.10 CTS 4.6.1.1.a requires verification that certain primary containment penetrations are isolated. An allowance is proposed to allow the verification of the isolation devices used to isolate the penetrations in high radiation areas to be verified by use of administrative means. The allowance is presented in Note 1 to ITS Required Actions A.2 and C.2, SR 3.6.1.3.2, and SR 3.6.1.3.3. This allowance is considered acceptable since access to these areas is typically restricted in MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment once they have been verified to be in the proper position is low. If for some reason these devices are opened (e.g., maintenance), the associated procedure or work package would require their closure after the work is completed. The Required Action or Surveillance may be performed by reviewing that no work was performed in the associated radiation area since the isolation device was closed or if work was performed in the area that closure was verified upon completion of the work if the valve was opened.

In addition, an allowance is proposed to allow verification of isolation devices that are locked, sealed, or otherwise secured to also be performed using administrative means. The allowance is presented in Note 2 to ITS Required Actions A.2 and C.2. Plant procedures control the operation of locked, sealed, or otherwise secured isolation devices; thus the potential for inadvertent misalignment of these devices after locking, sealing, or otherwise securing is low. In addition, the isolation devices were verified to be in the correct position prior to locking, sealing, or otherwise securing.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.11 The requirements of CTS 4.6.1.1.a, including footnote **, related to verification of the position of primary containment isolation manual valves and blind flanges, are revised in proposed SR 3.6.1.3.2 and SR 3.6.1.3.3 to exclude verification of manual valves and blind flanges that are locked, sealed, or otherwise secured in the correct position. The purpose of CTS 4.6.1.1.b is to ensure that manual primary containment isolation devices that may be misaligned are in the correct position to help ensure that post accident leakage of radioactive fluids or gases outside the primary containment boundary is within design and analysis limits. For manual valves or blind flanges that are locked, sealed, or otherwise secured in the correct position, the potential of these devices to be inadvertently misaligned is low. In addition, manual valves and blind flanges that are locked, sealed, or otherwise secured in the correct position are verified to be in the correct position prior to locking, sealing, or securing. As a result of this control of the position of these manual primary containment isolation devices, the periodic Surveillance of these devices in CTS 4.6.1.1.b is not required to help ensure that post accident leakage of radioactive fluids or gases outside the primary containment boundary is maintained within design and analysis limits. This change also provides the benefit of reduced radiation exposure to plant personnel through the elimination of the requirement to check the position of manual valves and blind flanges, located in radiation areas, that are locked, sealed, or otherwise secured in the correct position.

L.12 CTS 3.6.1.8 limits the reason (inerting, deinerting, and pressure control) and the time (90 hours per 365 days) the 8 inch and 26 inch purge valves can be open for purging operations through the Standby Gas Treatment System. CTS 4.6.1.8.1 also requires a verification that the time limit has not been exceeded prior to opening the valves. The ITS does not include the time limitations, and replaces them with specific criteria for opening. The time limits were based on engineering judgement and/or early plant operating experience, and not based on any analytical requirement. The proposed limits on when the purge valves are permitted to be open, provided in the Note to proposed SR 3.6.1.3.1, will ensure appropriate controls. The Note will continue to allow the purge valves to be open for inerting, deinerting, and pressure control, and will now allow the purge valves to also be open for ALARA or air quality considerations for personnel entry, as well as for Surveillances that require the purge valves to be open. Thus, use of the purge valves will continue to be minimized and limited to safety related reasons. The operating history indicates that these valves are only opened for the specified reasons and for cumulative periods that are generally less than the current allowed cumulative times. In addition, these valves are fully qualified to close in the required time under accident conditions to isolate the affected penetrations.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.13 When MSIV leakage rate (CTS 4.6.3.6.a) or hydrostatically tested line leakage rate (CTS 4.6.3.6.b) is not within the limit, one or more PCIVs would be considered inoperable. In this condition, CTS 3.6.3 Action a would require restoration of the inoperable PCIV or isolation of the penetration within 4 hours provided there is at least one Operable PCIV in the affected penetration. Otherwise, CTS 3.6.3 Action a would require the unit to be in Hot Shutdown within the next 12 hours and in Cold Shutdown in the following 24 hours. The times to restore leakage have been modified in ITS 3.6.1.3 ACTION D to be 4 hours for hydrostatically tested line leakage not on a closed system (ITS 3.6.1.3 Required Action D.1, first Completion Time), 8 hours for MSIV leakage (ITS 3.6.1.3 Required Action D.1, second Completion Time), and 72 hours for valves in hydrostatically tested lines on a closed system (ITS 3.6.1.3 Required Action D.1, third Completion Time). In addition, the 4 hour and 8 hour times are consistent with existing times allowed for other conditions when valves with hydrostatically tested lines or MSIVs are inoperable. With one of the leakages not within limit, the risk associated with continued operation for a short period of time could be less than that associated with a shutdown, since the change provides more time to restore leakage within limits. This change is acceptable due to the low probability of an event that would require the leakage to be within limits during the short time in which continued operation is allowed with leakage outside limits. In addition, for hydrostatically tested lines on a closed system, the valves are either in a closed system as specifically defined in NUREG-0800, section 6.2.4, or are water sealed, and would not be expected to leak after an accident (i.e., a closed system as defined in the UFSAR). ITS 3.6.1.3 ACTIONS Note 4 will also require immediately taking the ACTIONS of ITS 3.6.1.1 (which reduces the time allowed to restore the leakage to within limits to 1 hour) if leakage results in the overall primary containment leakage rate acceptance criteria being exceeded. Therefore, assurance is provided that the above described leakage will not adversely impact primary containment Operability during the extended time allowed to restore leakage.

RELOCATED SPECIFICATIONS

None

A.1

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER INTERNAL PRESSURE

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.4
3.6.1.6 Drywell and suppression chamber internal pressure shall be maintained between - 0.5 and +2.0 psig. +0.75 M.1

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

Action A: With the drywell and suppression chamber internal pressure outside of the specified limits, restore the internal pressure to within the limits within 1 hour

Action B: or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.4.1
4.6.1.6 The drywell and suppression chamber internal pressure shall be determined to be within the limits at least once per 12 hours.

A.1

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER INTERNAL PRESSURE

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.4

3.6.1.6 Drywell and suppression chamber internal pressure shall be maintained between - 0.5 and +2.0 psig. +0.75 M.1

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

Action A: With the drywell and suppression chamber internal pressure outside of the specified limits, restore the internal pressure to within the limits within 1 hour

Action B: or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.4.1

4.6.1.6 The drywell and suppression chamber internal pressure shall be determined to be within the limits at least once per 12 hours.

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 The maximum allowable pressure in the drywell and suppression chamber has been reduced in the LCO for ITS 3.6.1.4. The initial conditions employed for analyzing containment response assume that the drywell and suppression pool pressures are less than or equal to +0.75 psig. The initial conditions for containment analysis are described in UFSAR Table 6.2-3. The maximum allowable pressure in the drywell and suppression chamber that is reflected in ITS LCO 3.6.1.4 has therefore been reduced to reflect the analysis basis for LaSalle 1 and 2. This change represents an additional restriction on plant operation necessary to ensure operation is maintained within the bounds of the containment analysis.

TECHNICAL CHANGES - LESS RESTRICTIVE

None

RELOCATED SPECIFICATIONS

None

A.1

ITS 3.6.1.5

CONTAINMENT SYSTEMS

DRYWELL AVERAGE AIR TEMPERATURE

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.5

3.6.1.7 Drywell average air temperature shall not exceed 135°F.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

Action A: With the drywell average air temperature greater than 135°F, reduce the average air temperature to within the limit within 8 hours or be in at least HOT SHUTDOWN Action B: within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.5.1

4.6.1.7 The drywell average air temperature shall be the average temperature of the operating return air plenum upstream of the primary containment ventilation heat exchanger coil and cabinet at the following locations and shall be determined to be within the limit at least once per 24 hours:

LA-1

	Elevation	Azimuth
a.	740'0"	248°
b.	740'0"	76°

A.1

ITS 3.6.1.5

CONTAINMENT SYSTEMS

DRYWELL AVERAGE AIR TEMPERATURE

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.5

3.6.1.7 Drywell average air temperature shall not exceed 135°F.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

ACTION A With the drywell average air temperature greater than 135°F, reduce the average air temperature to within the limit within 8 hours or be in at least HOT SHUTDOWN

ACTION B within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.5.1

4.6.1.7 The drywell average air temperature shall be the average temperature of the operating return air plenum upstream of the primary containment ventilation heat exchanger coil and cabinet at the following locations and shall be determined to be within the limit at least once per 24 hours:

LA.1

	Elevation	Azimuth
a.	740'0"	248°
b.	740'0"	76°

Page 2 of 2

DISCUSSION OF CHANGES
ITS: 3.6.1.5 - DRYWELL AIR TEMPERATURE

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The details in CTS 4.6.1.7 of the method for performing the drywell average air temperature Surveillance are proposed to be relocated to the Bases. These details are not necessary to ensure that the drywell average air temperature is maintained within limits. The requirements of ITS 3.6.1.5 and SR 3.6.1.5.1 are adequate to ensure the drywell average air temperature is maintained within the limits. Therefore, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

"Specific"

None

RELOCATED SPECIFICATIONS

None

A.1

CONTAINMENT SYSTEMS

3/4.6.4 VACUUM RELIEF

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.6 3.6.4 All suppression chamber - drywell vacuum breakers shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

ACTION A — a. With one suppression chamber - drywell vacuum breaker inoperable for opening, restore the inoperable vacuum breaker to OPERABLE status within 72 hours or be

ACTION C — in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION B — b. With one suppression chamber -drywell vacuum breaker inoperable and open, within 4 hours close the manual isolation valves on both sides of the inoperable and open vacuum breaker. Restore the inoperable vacuum breaker to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours

ACTION C — and in COLD SHUTDOWN within the following 24 hours.

add proposed ACTION D — M.1

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each suppression chamber - drywell vacuum breaker shall be:

SR 3.6.1.6.1 a. Verified closed at least once per 14 days*.

b. Demonstrated OPERABLE: — L.1

SR 3.6.1.6.2 1. At least once per ~~31~~ 92 days and within 12 hours after any discharge of steam to the suppression chamber from the safety-relief valves, by cycling each vacuum breaker through at least one complete cycle of full travel. — LD.1

SR 3.6.1.6.3 2. At least once per ~~18~~ 24 months by verifying the force required to open the vacuum breaker ~~from the closed position~~ to be less than or equal to 0.5 psid, — LA.1

SR 3.6.1.6.1 Notes 1 and 2 — *Surveillance Requirement 4.6.4.1.a is not required to be met for suppression chamber - drywell vacuum breakers that are open during Surveillances or for suppression chamber - drywell vacuum breakers that are functioning for pressure relief during normal and off-normal plant operations.

A.1

CONTAINMENT SYSTEMS

3/4.6.4 VACUUM RELIEF

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.6 3.6.4 All suppression chamber - drywell vacuum breakers shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

ACTION A a. With one suppression chamber - drywell vacuum breaker inoperable for opening, restore the inoperable vacuum breaker to OPERABLE status within 72 hours or be

ACTION C in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION B b. With one suppression chamber -drywell vacuum breaker inoperable and open, within 4 hours close the manual isolation valves on both sides of the inoperable and open vacuum breaker. Restore the inoperable vacuum breaker to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours

ACTION C and in COLD SHUTDOWN within the following 24 hours.

add proposed ACTION D — M.1

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each suppression chamber - drywell vacuum breaker shall be:

SR 3.6.1.6.1 a. Verified closed at least once per 14 days*.

b. Demonstrated OPERABLE: — L.1

SR 3.6.1.6.2 1. At least once per ~~31~~ 92 days and within 12 hours after any discharge of steam to the suppression chamber from the safety-relief valves, by cycling each vacuum breaker through at least one complete cycle of full travel.

SR 3.6.1.6.3 2. At least once per ~~18~~ 24 months by verifying the force required to open the vacuum breaker from the closed position to be less than or equal to 0.5 psid. — LD.1 — LA.1

SR 3.6.1.6.1 Notes 1 and 2 *Surveillance Requirement 4.6.4.1.a is not required to be met for suppression chamber - drywell vacuum breakers that are open during Surveillances or for suppression chamber - drywell vacuum breakers that are functioning for pressure relief during normal and off-normal plant operations.

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1433, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 CTS 3.6.4 Actions a and b provide actions for the situations when one vacuum breaker is inoperable for opening or stuck open. The Actions are proposed to be maintained as ITS 3.6.1.6, proposed ACTIONS A, B, and C. ITS 3.6.1.6 ACTION A provides the requirements for the situation when a vacuum breaker is inoperable for opening, and ITS 3.6.1.6 ACTION B provides requirements for the situation when a vacuum breaker is stuck open. ITS 3.6.1.6 ACTION C provides the default actions if ACTIONS A or B are not met. In addition, CTS 3.6.4 Action a only allows one of the four vacuum breakers to be inoperable for opening, but CTS 3.6.4 Action b could allow a separate vacuum braker to be inoperable due to being open. The current accident analysis does not allow two vacuum breakers to be inoperable. When more than one vacuum breaker is inoperable, CTS LCO 3.0.3 must be entered. Therefore, ITS 3.6.1.6 ACTION D has been added to ensure that when two or more vacuum breakers are inoperable, ITS LCO 3.0.3 will continue to be entered.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The detail in CTS 4.6.4.1.b.2) that the opening setpoint is verified from the closed position is proposed to be relocated to the Bases. This detail is not necessary to ensure OPERABILITY of the suppression chamber-to-drywell vacuum breakers is maintained. The requirements of ITS 3.6.1.6 and SR 3.6.1.6.3 are adequate to ensure the suppression chamber-to-drywell vacuum breakers are maintained OPERABLE. Therefore, the relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

LD.1 The Frequency for performing CTS 4.6.4.1.b.2 has been extended from 18 months to 24 months in proposed SR 3.6.1.6.3 to facilitate a change to the LaSalle 1 and 2 refuel cycle from 18 months to 24 months. The proposed change will allow this Surveillance to extend the Surveillance Frequency from the current 18 month Surveillance Frequency (i.e., a maximum of 22.5 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed Specification 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

SR 3.6.1.6.3 verifies the opening setpoint of each suppression chamber-to-drywell vacuum breaker is less than or equal to the specified differential pressure. 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. Furthermore other surveillances performed at shorter frequencies, such as a functional test of each vacuum breaker every 92 days and a requirement to verify each vacuum breaker is closed every 14 days, ensure the proper functioning status of each vacuum breaker.

Reviews of historical maintenance and surveillance data have shown that this test normally passes the Surveillance at the current Frequency. An evaluation has been performed using this data, and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. In addition, the proposed 24 month Surveillance Frequency, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) does not invalidate any assumptions in the plant licensing basis.

"Specific"

L.1 The Frequency for CTS 4.6.4.1.b.1, which requires cycling the vacuum breakers, has been extended from 31 days to 92 days in proposed SR 3.6.1.6.2. The vacuum breakers are not located in a harsh environment. They are located in the secondary containment, similar to many other PCIVs that are tested on a 92 day Frequency (per the IST Program). An historical review of the Surveillance data for 2 years has been performed and has shown that there were

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 (cont'd) no failures of the vacuum breaker to cycle. Therefore, based on this extended interval for similar requirements on PCIV valve cycling and the fact that the vacuum breakers are in a similar environment as many other PCIVs, the 92 day Frequency is considered adequate.

RELOCATED SPECIFICATIONS

None

A.1

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION SYSTEMS

SUPPRESSION CHAMBER# (See ITS 3.6.2.2)

LIMITING CONDITION FOR OPERATION

LCO 3.6.2.1
3.6.2.1 The suppression chamber shall be OPERABLE with:

a. The pool water:

1. Volume between 131,900 ft^3 and 128,800 ft^3, equivalent to a level between +3 inches** and -4 1/2 inches**, and a

LCO 3.6.2.1.a 2. Maximum average temperature of 105°F during OPERATIONAL CONDITION 1 or 2 except that the maximum average temperature may be permitted to increase to: A.2

LCO 3.6.2.1.b a) 110°F with THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

CONDITION D b) 120°F with the main steam line isolation valves closed following a scram. M.1

b. Drywell-to-suppression charmer bypass leakage less than or equal to 10% of the acceptable $A/\sqrt{k}$ design value of 0.03 ft^2. A.3 moved to ITS 3.6.1.1

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

a. With the suppression chamber water level outside the above limits, restore the water level to within the limits within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION A b. In OPERATIONAL CONDITION 1 or 2 with the suppression chamber average water temperature greater than or equal to 105°F, stop all testing which adds heat to the suppression pool, and restore the average temperature to less than or equal to 105°F within 24 hours or be in

ACTION B at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, except, as permitted above: A.2

ACTION C 1. With the suppression chamber average water temperature greater than 110°F, place the reactor mode switch in the Shutdown position and operate at least one residual heat removal loop in the suppression pool cooling mode. L.1

ACTION D 2. With the suppression chamber average water temperature greater than 120°F, depressurize the reactor pressure vessel to less than 200 psig within 12 hours and be in MODE 4 in 36 hours M.2

#See Specification 3.5.3 for ECCS requirements.
**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

A.1

ITS 3.6.2.1

CONTAINMENT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

c. Deleted.

d. Deleted.

e. With the drywell-to-suppression chamber bypass leakage in excess of the limit, restore the bypass leakage to within the limit prior to increasing reactor coolant temperature above 200°F. A.3 Moved to ITS 3.6.1.1

SURVEILLANCE REQUIREMENTS

4.6.2.1 The suppression chamber shall be demonstrated OPERABLE:

a. By verifying the suppression chamber water volume to be within the limits at least once per 24 hours. See ITS 3.6.2.2

SR 3.6.2.1.1 b. At least once per 24 hours in OPERATIONAL CONDITION 1 or 2 by verifying the suppression chamber average water temperature to be less than or equal to 105°F, except: A.2 M.3

1. At least once per 5 minutes during testing which adds heat to the suppression chamber, by verifying the suppression chamber average water temperature less than or equal to 105°F.

Required Action A.2 2. At least once per 60 minutes when suppression chamber average water temperature is greater than 105°F, by verifying suppression chamber average water temperature less than or equal to 110°F and THERMAL POWER less than or equal to 1% of RATED THERMAL POWER. L.2

Required Action C.2 3. At least once per 30 minutes following a scram with suppression chamber average water temperature greater than or equal to 105°F, by verifying suppression chamber average water temperature less than or equal to 120°F.

A.1

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

c. Deleted.

d. By conducting drywell-to-suppression chamber bypass leak tests at least once per 18 months at an initial differential pressure of 1.5 psi and verifying that the A/√k calculated from the measured leakage is within the specified limit.

If any 1.5 psi leak test results in a calculated A/√k >20% of the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission.

If two consecutive 1.5 psi leak tests result in a calculated A/√k greater than the specified limit, then:

1. A 1.5 psi leak test shall be performed at least once per 9 months until two consecutive 1.5 psi leak tests result in the calculated A/√k within the specified limits, and

2. A 5 psi leak test, performed with the second consecutive successful 1.5 psi leak test, results in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

If any required 5 psi leak test results in a calculated A/√k greater than the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission.

If two consecutive 5 psi leak tests result in a calculated A/√k greater than the specified limit, then a 5 psi leak test shall be performed at least once per 9 months until two consecutive 5 psi leak tests result in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

A.3 moved to ITS 3.6.1.1

ITS 3.6.2.1

A.1

3/4.6.2 DEPRESSURIZATION SYSTEMS

SUPPRESSION CHAMBER# — See ITS 3.6.2.2

LIMITING CONDITION FOR OPERATION

LCO 3.6.2.1
3.6.2.1 The suppression chamber shall be OPERABLE with:

a. The pool water:

1. Volume between 131,900 ft^3 and 128,800 ft^3, equivalent to a level between +3 inches** and -4 1/2 inches**, and a

LCO 3.6.2.1.a 2. Maximum average temperature of 105°F during OPERATIONAL CONDITION 1 or 2 except that the maximum average temperature may be permitted to increase to: A.2

LCO 3.6.2.1.b a) 110°F with THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

CONDITION D b) 120°F with the main steam line isolation valves closed following a scram. M.1

b. Drywell-to-suppression chamber bypass leakage less than or equal to 10% of the acceptable $A/\sqrt{k}$ design value of 0.03 ft^2. A.3 moved to ITS 3.6.1.1

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

a. With the suppression chamber water level outside the above limits, restore the water level to within the limits within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION A b. In OPERATIONAL CONDITION 1 or 2 with the suppression chamber average water temperature greater than or equal to 105°F, stop all testing which adds heat to the suppression pool, and restore the average temperature to less than or equal to 105°F within 24 hours or be in
ACTION B at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, except, as permitted above: A.2

ACTION C 1. With the suppression chamber average water temperature greater than 110°F, place the reactor mode switch in the Shutdown position and operate at least one residual heat removal loop in the suppression pool cooling mode. L.1

ACTION D 2. With the suppression chamber average water temperature greater than 120°F, depressurize the reactor pressure vessel to less than 200 psig within 12 hours. M.2 and be in MODE 4 in 36 hours

#See Specification 3.5.3 for ECCS requirements.
**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

ITS 3.6.2.1

A.1

CONTAINMENT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

c. Deleted.

d. Deleted.

e. With the drywell-to-suppression chamber bypass leakage in excess of the limit, restore the bypass leakage to within the limit prior to increasing reactor coolant temperature above 200°F. A.3 moved to ITS 3.6.1.1

SURVEILLANCE REQUIREMENTS

4.6.2.1 The suppression chamber shall be demonstrated OPERABLE:

a. By verifying the suppression chamber water volume to be within the limits at least once per 24 hours. see ITS 3.6.2.2

SR 3.6.2.1.1

b. At least once per 24 hours in OPERATIONAL CONDITION 1 or 2 by verifying the suppression chamber average water temperature to be less than or equal to 105°F, except: A.2 M.3

1. At least once per 5 minutes during testing which adds heat to the suppression chamber, by verifying the suppression chamber average water temperature less than or equal to 105°F.

Required Action A.2

2. At least once per 60 minutes when suppression chamber average water temperature is greater than 105°F, by verifying suppression chamber average water temperature less than or equal to 110°F and THERMAL POWER less than or equal to 1% of RATED THERMAL POWER. L.2

Required Action C.2

3. At least once per 30 minutes following a scram with suppression chamber average water temperature greater than or equal to 105°F, by verifying suppression chamber average water temperature less than or equal to 120°F.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

c. Deleted.

d. By conducting drywell-to-suppression chamber bypass leak tests at least once per 18 months at an initial differential pressure of 1.5 psi and verifying that the A/√k calculated from the measured leakage is within the specified limit.

If any 1.5 psi leak test results in a calculated A/√k >20% of the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission.

If two consecutive 1.5 psi leak tests result in a calculated A/√k greater than the specified limit, then:

1. A 1.5 psi leak test shall be performed at least once per 9 months until two consecutive 1.5 psi leak tests result in the calculated A/√k within the specified limits, and

2. A 5 psi leak test, performed with the second consecutive successful 1.5 psi leak test, results in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

If any required 5 psi leak test results in a calculated A/√k greater than the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission.

If two consecutive 5 psi leak tests result in a calculated A/√k greater than the specified limit, then a 5 psi leak test shall be performed at least once per 9 months until two consecutive 5 psi leak tests result in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

A.3 moved to ITS 3.6.1.1

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 CTS 3.6.2.1.a.2 appears to require the 105°F limit (shown in CTS 3.6.2.1.a.2) to apply at all times in Operational Mode 1 or 2 (ITS MODE 1 or 2). However, this limit actually only applies when THERMAL POWER is > 1% RTP. This is shown by CTS 3.6.2.1.a.2.a), which states that 110°F is the limit when ≤ 1% RTP. Therefore, the ITS LCO for this limit has been clarified to be at > 1% RTP (ITS LCO 3.6.2.1.a), and the ACTION has been modified to only require power to be decreased to ≤ 1% RTP (ITS 3.6.2.1 ACTION B) in lieu of the CTS 3.6.2.1 Action b) to shutdown the unit. Once THERMAL POWER is ≤ 1% RTP, the LCO is met if suppression pool temperature is ≤ 110°F. Thus, a shutdown to MODE 3 and MODE 4 is not required, as stated in CTS 3.0.2. As such, this change is considered a presentation preference, which is administrative.

A.3 These requirements (CTS 3.6.2.1.b, CTS 3.6.2.1 Action e, and CTS 4.6.2.1.d), relating to the drywell-to-suppression chamber bypass leakage limit, have been moved to ITS 3.6.1.1, in accordance with the format of the BWR ISTS, NUREG-1433, Rev. 1. Any technical changes to these requirements will be addressed in the Discussion of Changes for ITS: 3.6.1.1.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 CTS 3.6.2.1.a.2.b) allows the suppression pool temperature to be increased to 120°F with the main steam isolation valves (MSIVs) closed following a scram. ITS 3.6.2.1 ACTION D, which requires reactor vessel depressurization to < 200 psig when pool temperature exceeds 120°F, does not depend upon if the MSIVs are open or closed. If pool temperature reaches 120°F, significant heat could still be added to the suppression pool regardless of MSIV position and the Required Action is appropriate. Applying the ACTIONS regardless of the status of the MSIVs does not introduce any operation that is not analyzed. These changes are more restrictive on plant operations. In addition, the requirement in CTS 3.6.2.1.a.2.b) has been removed from the LCO and is now only in the ACTIONS. This is a human factors consideration.

TECHNICAL CHANGES - MORE RESTRICTIVE (continued)

M.2 The CTS Applicability for the 110°F limit (CTS 3.6.2.1.a.2.a)) is MODES 1, 2, and 3 with THERMAL POWER ≤ 1% RTP. The CTS Applicability for the 120°F limit (CTS 3.6.2.1.a.2.b)) is MODES 1, 2, and 3. However, the current ACTIONS for when temperature exceeds 110°F require scramming the reactor (CTS 3.6.2.1 Action b.1), and for when temperature exceeds 120°F only requires a depressurization to < 200 psig (CTS 3.6.2.1 Action b.2), both of which are still MODE 3. In ITS 3.6.2.1 ACTIONS C and D, when temperature exceeds 110°F or 120°F, the unit must also be placed in MODE 4 within 36 hours. This is consistent with the BWR ISTS, NUREG-1434, Rev. 1, and is an additional restriction on plant operation necessary to ensure the reactor is placed outside the MODES and specified conditions of Applicability when these suppression pool average temperature limitations are exceeded.

M.3 CTS 4.6.2.1.b requires the suppression chamber average water temperature to be verified to be within limits once per 24 hours in Operational Condition 1 or 2 (ITS MODE 1 or 2). As a result, with the plant in MODE 3, verification of suppression chamber average water temperature is not required by the CTS. ITS SR 3.6.2.1.1 requires suppression pool average temperature to be verified to be within applicable limits once per 24 hours. The Applicability of ITS 3.6.2.1 is MODES 1, 2, and 3 and ITS SR 3.0.1 requires SRs to be met during MODES or other specified conditions in the Applicability for the individual LCO. Therefore, ITS SR 3.6.2.1.1 is required to be verified in MODES 1, 2, and 3. Expanding the applicability for performance of the suppression pool average temperature verification represents an additional restriction on plant operation necessary to help ensure containment conditions assumed in the safety analyses are satisfied.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

None

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

"Specific"

L.1 The CTS 3.6.2.1 Action b.1 details of how to reduce suppression pool temperature to within the limits (by operating at least one residual heat removal loop in the suppression pool cooling mode) are to be removed from the Technical Specifications. Methods for reducing suppression pool temperature to within limits are part of a coordinated response to an unplanned event governed by plant procedures. This detail of how to reduce suppression pool temperature to within limits is not necessary to ensure restoration of suppression pool temperature in a timely manner. The Required Actions of Condition C of ITS 3.6.2.1 ensure the unit is placed in a non-applicable MODE if the suppression pool temperature is not reduced to within limits. In addition, with the unit in a non-applicable MODE, the requirements of ITS LCO 3.0.4 ensure that suppression pool temperature is reduced to within limits prior to entering an applicable MODE.

L.2 When suppression pool temperature is > 105°F and ≤ 110°F, and power is > 1% RTP, ITS LCO 3.6.2.1.a is not being met. ITS 3.6.2.1 Required Action A.2 requires verification of suppression pool temperature once per hour in this condition. In the event power is < 1% RTP, the LCO is being met (ITS LCO 3.6.2.1.b) and proposed SR 3.6.2.1.1 verification of temperature every 24 hours is sufficient. When power is ≤ 1% RTP, the plant is essentially shut down, which is the action required should suppression pool temperature increase to > 110°F. Knowledge of current power level is an inherent requirement for the operator at all times, and having a requirement to periodically document power level is unnecessary. Consequently, there is minimal significance to removing the 30 minute suppression pool verification when > 105°F but ≤ 110°F (in CTS 4.6.2.1.b.3) and hourly power level verification (in CTS 4.6.2.1.b.2) in those conditions.

RELOCATED SPECIFICATIONS

None

A.1

ITS 3.6.2.2

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION SYSTEMS

SUPPRESSION CHAMBER(#) — A.2

LIMITING CONDITION FOR OPERATION

LCO 3.6.2.2 3.6.2.1 The suppression chamber shall be OPERABLE with:

a. The pool water:

1. Volume between 131,900 ft^3 and 128,800 ft^3, equivalent to a level between +3 inches** and -4 1/2 inches**, and a — LA.1

2. Maximum average temperature of 105°F during OPERATIONAL CONDITION 1 or 2, except that the maximum average temperature may be permitted to increase to:

a) 110°F with THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

b) 120°F with the main steam line isolation valves closed following a scram.

b. Drywell-to-suppression charmer bypass leakage less than or equal to 10% of the acceptable $A/\sqrt{k}$ design value of 0.03 ft^2.

See ITS 3.6.2.1

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

Action A — a. With the suppression chamber water level outside the above limits, restore the water level to within the limits within 1 2 hour or be in — L.1

Action B — at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. In OPERATIONAL CONDITION 1 or 2 with the suppression chamber average water temperature greater than or equal to 105°F, stop all testing which adds heat to the suppression pool, and restore the average temperature to less than or equal to 105°F within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, except, as permitted above:

1. With the suppression chamber average water temperature greater than 110°F, place the reactor mode switch in the Shutdown position and operate at least one residual heat removal loop in the suppression pool cooling mode.

2. With the suppression chamber average water temperature greater than 120°F, depressurize the reactor pressure vessel to less than 200 psig within 12 hours.

#See Specification 3.5.3 for ECCS requirements. — A.2

**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1) — LA.1

ITS 3.6.2.2

A.1

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

c. Deleted.

d. Deleted.

e. With the drywell-to-suppression chamber bypass leakage in excess of the limit, restore the bypass leakage to within the limit prior to increasing reactor coolant temperature above 200°F.

See ITS 3.6.2.1

SURVEILLANCE REQUIREMENTS

4.6.2.1 The suppression chamber shall be demonstrated OPERABLE:

SR 3.6.2.2.1 a. By verifying the suppression chamber water volume to be within the limits at least once per 24 hours.

b. At least once per 24 hours in OPERATIONAL CONDITION 1 or 2 by verifying the suppression chamber average water temperature to be less than or equal to 105°F, except:

1. At least once per 5 minutes during testing which adds heat to the suppression chamber, by verifying the suppression chamber average water temperature less than or equal to 105°F.

2. At least once per 60 minutes when suppression chamber average water temperature is greater than 105°F, by verifying suppression chamber average water temperature less than or equal to 110°F and THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

3. At least once per 30 minutes following a scram with suppression chamber average water temperature greater than or equal to 105°F, by verifying suppression chamber average water temperature less than or equal to 120°F.

A.1

ITS 3.6.2.2

EMERGENCY CORE COOLING SYSTEMS

3/4.5.3 SUPPRESSION CHAMBER# — A.2

LIMITING CONDITION FOR OPERATION

LCO 3.6.2.2

3.5.3 The suppression chamber shall be OPERABLE:

a. In OPERATIONAL CONDITION 1, 2, or 3 with a contained water volume of at least 128,800 ft^3, equivalent to a level of -4 1/2 inches.** — LA.1

b. In OPERATIONAL CONDITION 4 or 5* with a contained water volume of at least 70,000 ft^3, equivalent to a level of -12 feet 7 inches.** — A.3 Moved to ITS 3.5.2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, and 5*.

ACTION:

a. (Action A) In OPERATIONAL CONDITION 1, 2, or 3 with the suppression chamber water level less than the above limit, restore the water level to within the limit within ~~1~~ 2 hour — L.1 — (Action B) or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. In OPERATIONAL CONDITION 4 or 5* with the suppression chamber water level less than the above limit, suspend CORE ALTERATIONS and all operations that have a potential for draining the reactor vessel and lock the reactor mode switch in the Shutdown position. Establish SECONDARY CONTAINMENT INTEGRITY within 8 hours.

~~#See Specification 3.6.2.1 for pressure suppression requirements.~~ — A.2

~~*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.~~ — A.3 Moved to ITS 3.5.2

~~**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).~~ — LA.1

A.1 ITS 3.6.2.2

SURVEILLANCE REQUIREMENTS

4.5.3.1 The suppression chamber shall be determined OPERABLE by verifying:

SR 3.6.2.2 a. The water level to be greater than or equal to, as applicable: LA.1

1. -4 1/2 inches** at least once per 24 hours.

2. -12 feet 7 inches** at least once per 12 hours.

4.5.3.2 With the suppression chamber level less than the above limit in OPERATIONAL CONDITION 5*, at least once per 12 hours verify footnote conditions* to be satisfied.

A.3 moved to ITS 3.5.2

*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.

A.3 Moved to ITS 3.5.2

**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1). LA.1

ITS 3.6.2.2

A.1

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION SYSTEMS

SUPPRESSION CHAMBER# — A.2

LIMITING CONDITION FOR OPERATION

LCO 3.6.2.2
3.6.2.1 The suppression chamber shall be OPERABLE with:

a. The pool water:

1. Volume between 131,900 ft^3 and 128,800 ft^3, equivalent to a level between +3 inches** and -4 1/2 inches**, and a — LA.1

2. Maximum average temperature of 105°F during OPERATIONAL CONDITION 1 or 2, except that the maximum average temperature may be permitted to increase to:

a) 110°F with THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

b) 120°F with the main steam line isolation valves closed following a scram.

b. Drywell-to-suppression chamber bypass leakage less than or equal to 10% of the acceptable $A/\sqrt{k}$ design value of 0.03 ft^2.

(See ITS 3.6.2.1)

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

ACTION A a. With the suppression chamber water level outside the above limits, restore the water level to within the limits within 1 2 hour or be in
ACTION B at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. — L.1

b. In OPERATIONAL CONDITION 1 or 2 with the suppression chamber average water temperature greater than or equal to 105°F, stop all testing which adds heat to the suppression pool, and restore the average temperature to less than or equal to 105°F within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours, except, as permitted above:

1. With the suppression chamber average water temperature greater than 110°F, place the reactor mode switch in the Shutdown position and operate at least one residual heat removal loop in the suppression pool cooling mode.

2. With the suppression chamber average water temperature greater than 120°F, depressurize the reactor pressure vessel to less than 200 psig within 12 hours.

#See Specification 3.5.3 for ECCS requirements. — A.2

**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1). — LA.1

ITS 3.6.2.2

A.1

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

c. Deleted.

d. Deleted.

e. With the drywell-to-suppression chamber bypass leakage in excess of the limit, restore the bypass leakage to within the limit prior to increasing reactor coolant temperature above 200°F.

<See ITS 3.6.2.1>

SURVEILLANCE REQUIREMENTS

4.6.2.1 The suppression chamber shall be demonstrated OPERABLE:

SR 3.6.2.2.1 a. By verifying the suppression chamber water volume to be within the limits at least once per 24 hours.

b. At least once per 24 hours in OPERATIONAL CONDITION 1 or 2 by verifying the suppression chamber average water temperature to be less than or equal to 105°F, except:

1. At least once per 5 minutes during testing which adds heat to the suppression chamber, by verifying the suppression chamber average water temperature less than or equal to 105°F.

2. At least once per 60 minutes when suppression chamber average water temperature is greater than 105°F, by verifying suppression chamber average water temperature less than or equal to 110°F and THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.

3. At least once per 30 minutes following a scram with suppression chamber average water temperature greater than or equal to 105°F, by verifying suppression chamber average water temperature less than or equal to 120°F.

A.1

ITS 3.6.2.2

3/4.5.3 SUPPRESSION CHAMBER# A.2

LIMITING CONDITION FOR OPERATION

LCO 3.6.2.2
3.5.3 The suppression chamber shall be OPERABLE:

a. In OPERATIONAL CONDITION 1, 2, or 3 with a contained water volume of at least 128,800 ft³, equivalent to a level of -4 1/2 inches.** LA.1

b. In OPERATIONAL CONDITION 4 or 5* with a contained water volume of at least 70,000 ft³, equivalent to a level of -12 feet 7 inches.** A.3 moved to ITS 3.5.2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, and 5*.

ACTION:

a. Action A — In OPERATIONAL CONDITION 1, 2, or 3 with the suppression chamber water level less than the above limit, restore the water level to within the limit within 1 (2) hours or be in at least HOT SHUTDOWN within (L.1) Action B — the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. In OPERATIONAL CONDITION 4 or 5* with the suppression chamber water level less than the above limit, suspend CORE ALTERATIONS and all operations that have a potential for draining the reactor vessel and lock the reactor mode switch in the Shutdown position. Establish SECONDARY CONTAINMENT INTEGRITY within 8 hours.

#See Specification 3.6.2.1 for pressure suppression requirements. A.2

*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9. A.3 moved to ITS 3.5.2

**Level is referenced to a plant elevation of 699 feet 11 inches (see Figure B 3/4.6.2-1). LA.1

SURVEILLANCE REQUIREMENTS

4.5.3.1 The suppression chamber shall be determined OPERABLE by verifying:

SR 3.6.2.2.1 a. The water level to be greater than or equal to, as applicable: LA.1

1. -4 1/2 inches** at least once per 24 hours.

2. -12 feet 7 inches** at least once per 12 hours.

4.5.3.2 With the suppression chamber level less than the above limit in OPERATIONAL CONDITION 5*, at least once per 12 hours verify footnote conditions* to be satisfied. A.3 moved to ITS 3.5.2

*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9. A.3 moved to ITS 3.5.2

**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1). LA.1

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 CTS 3/4.5.3 footnote # and CTS 3/4.6.2.1 footnote #, which reference each other, have been deleted. These footnotes only serve as cross references and are not needed. This is consistent with the BWR ISTS, NUREG-1434, Rev. 1.

A.3 The CTS LCO 3.5.3.b, CTS 3.5.3 Action b, CTS 4.5.3.1.a.2, and CTS 4.5.3.2, requirements, relating to the suppression pool level requirements while in MODES 4 and 5, have been moved to ITS 3.5.2, "ECCS — Shutdown," in accordance with the format of the BWR ISTS, NUREG-1434, Rev. 1. Any technical changes to these requirements will be addressed in the Discussion of Changes for ITS: 3.5.2.

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The suppression pool volumes in CTS 3.6.2.1.a.1 and 3.5.3.a, which correspond to the level limits, and the reference in CTS 3.6.2.1.a footnote ** and CTS 3.5.3.a and 4.5.3.1.a.1 footnote ** as to how the level limits of CTS 3.6.2.1.a.1, CTS 3.5.3.a, and CTS 4.5.3.1.a.1 correspond to plant elevation are proposed to be relocated to the Bases. The level limits are retained since this is the information available to the operator regarding the suppression pool. These volume and level limits are equivalent and interchangeable. Therefore, moving one of them to the Bases does not change the requirement and is only a change in the presentation. Also, moving the reference point to plant elevation is a design detail that is not necessary to ensure the proper limit is maintained, since the instrumentation readout in the control room is consistent with the ITS LCO level limit. As such, the relocated suppression pool volumes and reference

TECHNICAL CHANGES - LESS RESTRICTIVE

LA.1 (cont'd) to plant elevation are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

"Specific"

L.1 CTS 3.6.2.1 Action a and CTS 3.5.3 Action a allow 1 hour to restore level when the suppression pool water level is outside the limits. An unanticipated change in suppression pool level would require addressing the cause and aligning the appropriate system to raise or lower the pool level. These activities may require longer than 1 hour to accomplish. ITS 3.6.2.2 Required Action A.1 will allow 2 hours to restore the suppression pool water level to within limits. The proposed out of service time is based on engineering judgement of the relative risks associated with: 1) the safety significance of the system; 2) the probability of an event requiring the safety function of the system; and 3) the relative risks associated with the plant transient and potential challenge of safety systems experienced by requiring a plant shutdown.

RELOCATED SPECIFICATIONS

None

ITS 3.6.2.3

A.1

CONTAINMENT SYSTEMS

SUPPRESSION POOL COOLING

LIMITING CONDITION FOR OPERATION

LCO 3.6.2.3

3.6.2.3 The suppression pool cooling mode of the residual heat removal (RHR) system shall be OPERABLE with two independent loops, each loop consisting of: LA.1

a. One OPERABLE RHR pump; and

b. An OPERABLE flow path capable of recirculating water from the suppression chamber through an RHRSW heat exchanger.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

Action A — a. With one suppression pool cooling loop inoperable, restore the inoperable loop to OPERABLE status within 72 hours 7 days L.1 or be in at least

Action C — HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Action B — b. With both suppression pool cooling loops inoperable, restore one subsystem to OPERABLE status within 8 hours be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN* within the next

Action C — 24 hours. A.2

SURVEILLANCE REQUIREMENTS

4.6.2.3 The suppression pool cooling mode of the RHR system shall be demonstrated OPERABLE:

SR 3.6.2.3.1 a. At least once per 31 days by verifying that each valve (manual, power operated or automatic), in the flow path that is not locked, sealed or otherwise secured in position, is in its correct position or can be aligned to the correct position. A.3

SR 3.6.2.3.2 b. By verifying that each of the required RHR pumps develops a flow of at least 7200 gpm on recirculation flow through the RHR heat exchanger and the suppression pool when tested pursuant to Specification 4.0.5.

*Whenever both RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods. A.2

A.1

CONTAINMENT SYSTEMS

SUPPRESSION POOL COOLING

LIMITING CONDITION FOR OPERATION

LCO 3.6.2.3

3.6.2.3 The suppression pool cooling mode of the residual heat removal (RHR) system shall be OPERABLE with two independent loops, each loop consisting of: LA.1

a. One OPERABLE RHR pump; and

b. An OPERABLE flow path capable of recirculating water from the suppression chamber through an RHRSW heat exchanger.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

ACTION A a. With one suppression pool cooling loop inoperable, restore the inoperable loop to OPERABLE status within 72 hours [7 days] L.1 or be in at least

ACTION C HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

restore one subsystem to OPERABLE status within 8 hours

ACTION B b. With both suppression pool cooling loops inoperable, be in at least

ACTION C HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN* within the next 24 hours. A.2

SURVEILLANCE REQUIREMENTS

4.6.2.3 The suppression pool cooling mode of the RHR system shall be demonstrated OPERABLE:

SR 3.6.2.3.1 a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic), in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position. A.3 or can be aligned to the correct position

SR 3.6.2.3.2 b. By verifying that each of the required RHR pumps develops a flow of at least 7200 gpm on recirculation flow through the RHR heat exchanger and the suppression pool when tested pursuant to Specification 4.0.5.

*Whenever both RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods. A.2

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 The CTS 3.6.2.3 Action b, footnote * requirement that if unable to attain Cold Shutdown when both RHR subsystems are inoperable, then maintain reactor coolant temperature as low as practical by use of alternate heat removal methods is deleted since it provides unnecessary duplication of the ACTIONS, contains no additional restrictions on the operation of the plant, and in fact, could be interpreted as a relaxation of the requirements to achieve MODE 4. The Action to be in MODE 4, which is modified by the footnote, adequately prescribes the requirement to make efforts to "maintain reactor coolant temperature as low as practical" (i.e., the duplicative requirement of the footnote). If conditions are such that MODE 4 cannot be attained, the Action remains in effect, essentially requiring efforts to reach MODE 4 to continue. Elimination of the footnote reflects an administrative presentation preference.

A.3 CTS 4.6.2.3.b requires verification that each suppression pool cooling valve in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position. The suppression pool cooling function is manually actuated (requiring reposition of valves and starting of the RHR pump by the operator). In the CTS, this is recognized and interpreted that "in the correct position" allows the valves to be in a non-accident position provided they can be realigned to the correct position. In the ITS, the words "in the correct position" mean that the valves must be in the accident position, unless they can be automatically aligned on an accident signal. If so, then they can be in the non-accident position. Thus, for RHR suppression pool cooling, the additional words "or can be aligned to the correct position" have been added to clarify that it is permissible for this systems' valves to be in the non-accident position and still be considered OPERABLE. In addition, since there are no automatic valves for the suppression pool cooling mode, the reference to check automatic valves has been deleted. Since these are the current requirements, these changes are considered administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The details relating to system OPERABILITY in CTS 3.6.2.3 (in this case the suppression pool cooling function is designated as two "independent" loops, each with a pump and flow path) are proposed to be relocated to the Bases. These details for system OPERABILITY are not necessary in the LCO. The definition of OPERABILITY suffices. Therefore, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

"Specific"

L.1 The restoration time of CTS 3.6.2.3 Action a when one subsystem is inoperable has been extended from 72 hours to 7 days in ITS 3.6.2.3 ACTION A. This time is consistent with the current restoration time for an inoperable LPCI subsystem. The redundancy and diversity of the ECCS design has justified a generic 7 day Completion Time for one subsystem being inoperable. The components of the LPCI subsystem also are required OPERABLE for various other functions (e.g., suppression pool cooling and suppression pool spray, etc.) and the ITS presents ACTIONS for one inoperable subsystem in each of these non-ECCS functions with the same 7 day Completion Time. These functions (containment cooling and decay heat removal) have designed diversity and redundancy in various suppression pool cooling, suppression pool spray, and containment cooling functions, supporting the engineering judgement that a 7 day AOT for one inoperable suppression pool cooling loop is sufficient. In addition, a restoration time when both suppression pool cooling subsystems are inoperable has been provided in ITS 3.6.2.3 ACTION B. Currently, no time is provided; CTS 3.6.2.3 Action b requires a unit shutdown. The proposed 8 hour Completion Time is consistent with the current time provided when both drywell spray subsystems or both suppression pool spray subsystems are inoperable (CTS 3.6.2.2). The time is considered appropriate since an immediate shutdown has the potential for resulting in a unit scram and discharge of steam to the suppression pool, when both suppression pool cooling subsystems are inoperable and incapable of removing the generated heat. The 8 hours provides some time to restore one of the subsystems prior to requiring a shutdown (thus precluding the potential problem described above), yet is short enough that it does not significantly increase the probability of an accident to occur during this additional time.

RELOCATED SPECIFICATIONS

None

A.1 ITS 3.6.2.4

CONTAINMENT SYSTEMS

SUPPRESSION POOL SPRAY

LIMITING CONDITION FOR OPERATION

LCO3.6.2.4

3.6.2.2 The suppression pool spray mode of the residual heat removal (RHR) system shall be OPERABLE with two independent loops, each loop consisting of: LA.1

a. One OPERABLE RHR pump, and

b. An OPERABLE flow path capable of recirculating water from the suppression chamber.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

Action A a. With one suppression pool spray loop inoperable, restore the inoperable loop to OPERABLE status within 7 days or be in at least HOT SHUTDOWN

Action C within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Action B b. With both suppression pool spray loops inoperable, restore at least one loop to OPERABLE status within 8 hours or be in at least HOT

Action C SHUTDOWN within the next 12 hours and in COLD SHUTDOWN* within the following 24 hours. A.2

SURVEILLANCE REQUIREMENTS

4.6.2.2 The suppression pool spray mode of the RHR system shall be demonstrated OPERABLE:

SR3.6.2.4.1 a. At least once per 31 days by verifying that each valve (manual, power operated or automatic), in the flow path that is not locked, sealed or otherwise secured in position, is in its correct position. A.3 or can be aligned to the correct position

SR 3.6.2.4.2 b. By verifying that each of the required RHR pumps develops a flow of at least 450 gpm on recirculation flow through the suppression pool spray sparger when tested pursuant to Specification 4.0.5.

*Whenever both RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods. A.2

A.1

ITS 3.6.2.4

CONTAINMENT SYSTEMS

SUPPRESSION POOL SPRAY

LIMITING CONDITION FOR OPERATION

LCO 3.6.2.4

3.6.2.2 The suppression pool spray mode of the residual heat removal (RHR) system shall be OPERABLE with two independent loops, each loop consisting of: LA.1

a. One OPERABLE RHR pump, and

b. An OPERABLE flow path capable of recirculating water from the suppression chamber.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

Action A a. With one suppression pool spray loop inoperable, restore the inoperable loop to OPERABLE status within 7 days or be in at least HOT SHUTDOWN

Action C within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Action B b. With both suppression pool spray loops inoperable, restore at least one loop to OPERABLE status within 8 hours or be in at least HOT

Action C SHUTDOWN within the next 12 hours and in COLD SHUTDOWN* within the following 24 hours. A.2

SURVEILLANCE REQUIREMENTS

4.6.2.2 The suppression pool spray mode of the RHR system shall be demonstrated OPERABLE:

A.3

SR 3.6.2.4.1 a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic), in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position. or can be aligned to the correct position

SR 3.6.2.4.2 b. By verifying that each of the required RHR pumps develops a flow of at least 450 gpm on recirculation flow through the suppression pool spray sparger when tested pursuant to Specification 4.0.5.

*Whenever both RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods. A.2

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1433, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 The CTS 3.6.2.2 Action b, footnote * requirement that if unable to attain Cold Shutdown when both RHR subsystems are inoperable, then maintain reactor coolant temperature as low as practical by use of alternate heat removal methods is deleted since it provides unnecessary duplication of the ACTIONS, contains no additional restrictions on the operation of the plant, and in fact, could be interpreted as a relaxation of the requirements to achieve MODE 4. The Action to be in MODE 4, which is modified by the footnote, adequately prescribes the requirement to make efforts to "maintain reactor coolant temperature as low as practical" (i.e., the duplicative requirement of the footnote). If conditions are such that MODE 4 cannot be attained, the Action remains in effect, essentially requiring efforts to reach MODE 4 to continue. Elimination of the footnote reflects an administrative presentation preference.

A.3 CTS 4.6.2.2.a requires verification that each suppression pool spray valve in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position. The suppression pool spray function is manually actuated (requiring reposition of valves and starting of the RHR pump by the operator). In the CTS, this is recognized and interpreted that "in the correct position" allows the valves to be in a non-accident position provided they can be realigned to the correct position. In the ITS, the words "in the correct position" mean that the valves must be in the accident position, unless they can be automatically aligned on an accident signal. If so, then they can be in the non-accident position. Thus, for RHR suppression pool spray the additional words "or can be aligned to the correct position" have been added in proposed SR 3.6.2.4.1 to clarify that it is permissible for this systems' valves to be in the non-accident position and still be considered OPERABLE. In addition, since there are no automatic valves, for the suppression pool spray mode, the reference to check automatic valves has been deleted. Since these are the current requirements, these changes are considered administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The details in the CTS 3.6.2.2 LCO relating to system OPERABILITY (in this case the suppression pool spray function shall have two "independent" loops, each with a pump and flow path) is proposed to be relocated to the Bases. These details for system OPERABILITY are not necessary in the LCO. The definition of OPERABILITY suffices. Therefore, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

"Specific"

None

RELOCATED SPECIFICATIONS

None

A.1

ITS 3.6.3.1

CONTAINMENT SYSTEMS

3/4.6.6 PRIMARY CONTAINMENT ATMOSPHERE CONTROL

DRYWELL AND SUPPRESSION CHAMBER HYDROGEN RECOMBINER SYSTEMS

LIMITING CONDITION FOR OPERATION

LCO 3.6.3.1

3.6.6.1 Two independent drywell and suppression chamber hydrogen recombiner systems shall be OPERABLE. LA.1

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION: add proposed Note to Action A L.1

Action A: With one drywell and/or suppression chamber hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or

Action C: be in at least HOT SHUTDOWN within the next 12 hours.

add proposed Action B L.2

SURVEILLANCE REQUIREMENTS

4.6.6.1 Each drywell and suppression chamber hydrogen recombiner system shall be demonstrated OPERABLE:

a. At least once per 92 days by cycling each flow control valve and recirculation valve through at least one complete cycle of full travel. L.3

SR 3.6.3.1.1 b. At least once per 18 (24) months by verifying, during a recombiner system functional test: LD.1

1. That the heaters are OPERABLE by determining that the current in each phase differs by less than or equal to 5% from the other phases and is within 5% of the value observed in the original acceptance test, corrected for line voltage differences. LA.2

2. That the reaction chamber gas temperature increases to 1200 ± 25°F within 2 hours.

c. At least once per 18 (24) months by: LD.1

1. Performing a CHANNEL CALIBRATION of all recombiner operating instrumentation and control circuits. L.4

SR 3.6.3.1.2 2. Verifying the integrity of all heater electrical circuits by performing a resistance to ground test within 30 minutes following the above required functional test. The resistance to ground for any heater phase shall be greater than or equal to 100,000 ohms. LA.2

A.1

ITS 3.6.3.1

CONTAINMENT SYSTEMS

3/4.6.6 PRIMARY CONTAINMENT ATMOSPHERE CONTROL

DRYWELL AND SUPPRESSION CHAMBER HYDROGEN RECOMBINER SYSTEMS

LIMITING CONDITION FOR OPERATION

LCO 3.6.3.1 3.6.6.1 Two independent drywell and suppression chamber hydrogen recombiner systems shall be OPERABLE. LA.1

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION: add proposed Note to ACTION A L.1

Action A With one drywell and/or suppression chamber hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or
Action C be in at least HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS add proposed ACTION B L.2

4.6.6.1 Each drywell and suppression chamber hydrogen recombiner system shall be demonstrated OPERABLE:

a. At least once per 92 days by cycling each flow control valve and recirculation valve through at least one complete cycle of full travel. L.3

SR 3.6.3.1.1 b. At least once per 18 24 months by verifying, during a recombiner system functional test: LD.1

1. That the heaters are OPERABLE by determining that the current in each phase differs by less than or equal to 5% from the other phases and is within 5% of the value observed in the original acceptance test, corrected for line voltage differences. LA.2

2. That the reaction chamber gas temperature increases to 1200 ± 25°F within 2 hours.

c. At least once per 18 24 months by: LD.1

1. Performing a CHANNEL CALIBRATION of all recombiner operating instrumentation and control circuits. L.4

SR 3.6.3.1.2 2. Verifying the integrity of all heater electrical circuits by performing a resistance to ground test within 30 minutes following the above required functional test. The resistance to ground for any heater phase shall be greater than or equal to 100,000 ohms. LA.2

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The detail in CTS LCO 3.6.6.1 relating to system design (i.e., that the recombiners are "independent") is proposed to be relocated to the Bases. This is a design detail that is not necessary to be included in the Technical Specifications to ensure OPERABILITY of the hydrogen recombiners, since OPERABILITY requirements are adequately addressed in ITS 3.6.3.1. Therefore, the relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.2 Details of the methods for performing CTS 4.6.6.1.b and CTS 4.6.6.1.c.2 are proposed to be relocated to the Bases. These details are not necessary to ensure the OPERABILITY of the primary containment hydrogen recombiners. The requirements of ITS 3.6.3.1, SR 3.6.3.1.1, and SR 3.6.3.1.2 are adequate to ensure the primary containment hydrogen recombiners are maintained OPERABLE. Therefore, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LD.1 The Frequency for performing CTS 4.6.6.1.b and 4.6.6.1.c.2 has been extended from 18 months to 24 months in proposed SRs 3.6.3.1.1 and 3.6.3.1.2 to facilitate a change to the LaSalle 1 and 2 refuel cycle from 18 months to 24 months. The proposed change will allow this Surveillance to extend the

TECHNICAL CHANGES - LESS RESTRICTIVE

LD.1 (cont'd) Surveillance Frequency from the current 18 month Surveillance Frequency (i.e., a maximum of 22.5 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed Specification 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

SR 3.6.3.1.1 performs a system functional test for each primary containment hydrogen recombiner. The purpose of this test is to verify the ability of the recombiner system to actuate and prevent the hydrogen-oxygen level within the primary containment from reaching the flammability limit. SR 3.6.3.1.2 performs a resistance to ground test for each heater phase to ensure that there are not detectable grounds in any heater phase. This is accomplished by verifying that the resistance to ground for any heater phase is greater than the required resistance value when this SR is performed following the performance of the functional test. Extending the surveillance interval for these verifications of recombiner operability is acceptable because the increased surveillance interval is mitigated by the redundancy of the recombiner system and the availability of alternate hydrogen control systems. The Backup Hydrogen Purge System also functions in conjunction with the hydrogen recombiner and can filter purged air from the primary containment, post-LOCA, after the containment pressure has dropped below a predetermined value.

Reviews of historical maintenance and surveillance data have shown that these tests normally pass their Surveillances at the current Frequency. An evaluation has been performed using this data, and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. In addition, the proposed 24 month Surveillance Frequencies, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) do not invalidate any assumptions in the plant licensing basis.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

"Specific"

L.1 A statement that LCO 3.0.4 is not applicable for the condition of one hydrogen recombiner inoperable has been added as a Note to ITS 3.6.3.1 ACTION A. An OPERABLE recombiner remains available in this condition, and another hydrogen control method is available to back up the remaining recombiner. In addition, the hydrogen recombiners do not impact normal operation of the plant in any way, and hence, would not provide any additional initiators for plant transients during startup or MODE changes. Since 1) probabilities have determined a 30 day allowed out of service time for one recombiner is acceptable; 2) a redundant recombiner is still OPERABLE; 3) the backup hydrogen control method exists to perform the function; and 4) there is no impact on normal plant operations from the unavailability of the recombiner, the LCO 3.0.4 exception is considered to provide no significant impact on safety and is acceptable.

L.2 Currently, if both hydrogen recombiners are inoperable, LCO 3.0.3 would be required to be entered, since CTS 3.6.6.1 provides no actions for this condition. An additional ACTION is proposed in ITS 3.6.3.1 (ACTION B) for the condition of both containment hydrogen recombiners inoperable. The Primary Containment Vent and Purge System can also control hydrogen in a post-LOCA environment. However, redundancy for the hydrogen control function would be reduced. Therefore, a period of 7 days is proposed to restore at least one of the recombiners to OPERABLE status before requiring a shutdown provided the hydrogen control function is maintained. This new ACTION would possibly prevent an unnecessary shutdown and the increased potential for transients associated with each shutdown.

L.3 The CTS requires two functional tests of the hydrogen recombiners. One test, CTS 4.6.6.1.b, is conducted every 18 months and is a complete check of the recombiners, while the second test, CTS 4.6.6.1.a, is conducted every 92 days and only checks the flow control and recirculation valves of the recombiners. The second test is proposed to be deleted. The valves will continue to be tested in accordance with the IST program. Generic Letter 93-05, item 8.5 recommends that the complete functional test only needs to be performed on a refueling outage basis. That recommendation and this proposed Specification are based on the redundancy provided for the hydrogen control function, the system's high reliability, and the delayed nature of the requirements for the system. Since performance of the functional test usually confirms its OPERABILITY, the deletion of the redundant functional test does not have a significant impact on safety.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.4 The CHANNEL CALIBRATION surveillance of CTS 4.6.6.1.c.1 is deleted. The BWR ISTS, NUREG-1434, does not specify indication-only equipment to be OPERABLE to support OPERABILITY of a system or component. Control of the availability of, and necessary compensatory activities if not available, for indication instruments, monitoring instruments, and alarms are addressed by plant operational procedures and policies. In addition, the system functional test required by proposed SR 3.6.3.1.1 will ensure that necessary controls will function properly. If not, then the functional test of SR 3.6.3.1.1 would not be satisfactory, and the associated recombiner would be declared inoperable.

RELOCATED SPECIFICATIONS

None

A.1

ITS 3.6.3.2

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER OXYGEN CONCENTRATION

LIMITING CONDITION FOR OPERATION

LCO 3.6.3.2

3.6.6.2 The drywell and suppression chamber atomosphere oxygen concentration shall be less than 4% by volume.

APPLICABILITY: OPERATIONAL CONDITION 1*, during the time period: — A.2

a. Within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER, following startup, to

b. Within 24 hours prior to reducing THERMAL POWER to less than 15% of RATED THERMAL POWER, preliminary to a scheduled reactor shutdown.

ACTION:

ACTION A – With the oxygen concentration in the drywell and/or suppression chamber exceeding the limit, restore the oxygen concentration to within the limit within 24 hours ACTION B – or be in at least STARTUP within the next 8 hours.

≤ 15% RTP — A.3

SURVEILLANCE REQUIREMENTS

SR 3.6.3.2.1

4.6.6.2 The oxygen concentration in the drywell and suppression chamber shall be verified to be within the limit within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER and at least once per 7 days thereafter. — A.4

*See Special Test Exception 3.10.5. — A.2

A.1

ITS 3.6.3.2

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER OXYGEN CONCENTRATION

LIMITING CONDITION FOR OPERATION

LCO 3.6.3.2
3.6.6.2 The drywell and suppression chamber atomosphere oxygen concentration shall be less than 4% by volume.

APPLICABILITY: OPERATIONAL CONDITION 1*, during the time period: A.2

a. Within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER, following startup, to

b. Within 24 hours prior to reducing THERMAL POWER to less than 15% of RATED THERMAL POWER, preliminary to a scheduled reactor shutdown.

ACTION:

ACTION A — With the oxygen concentration in the drywell and/or suppression chamber exceeding the limit, restore the oxygen concentration to within the limit within 24 hours
ACTION B — or be in at least STARTUP within the next 8 hours.
≤15% RTP — A.3

SURVEILLANCE REQUIREMENTS

SR 3.6.3.2.1
4.6.6.2 The oxygen concentration in the drywell and suppression chamber shall be verified to be within the limit within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER and at least once per 7 days thereafter. A.4

*See Special Test Exception 3.10.5. A.2

DISCUSSION OF CHANGES
ITS: 3.6.3.2 - PRIMARY CONTAINMENT OXYGEN CONCENTRATION

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1433, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 CTS 3.6.6.2 Applicability footnote *, which provides a cross reference to CTS 3.10.5, has been deleted. The format of the proposed Technical Specifications does not include providing cross references. Proposed LCO 3.0.7 adequately prescribes the use of the Special Operations LCOs without such references. Therefore, the existing reference in the CTS 3.6.6.2 Applicability footnote * to the Special Test Exception of CTS 3.10.5 serves no functional purpose, and its removal is an administrative change. In addition, the exception was only permitted during the startup test program, which is now complete.

A.3 The CTS 3.6.6.2 Applicability and the Action for failing to meet the LCO are not consistent. ITS 3.6.3.2 revises the presentation of the ACTIONS to be consistent. The ITS 3.6.3.2 ACTION B only requires shutdown to 15% RTP. Below 15% RTP, the Applicability is exited and the ACTIONS are no longer required (in accordance with CTS and ITS LCO 3.0.1 and LCO 3.0.2). Since the CTS 3.6.6.2 Action can also be suspended at 15% RTP for the same reason, the change is considered administrative.

A.4 CTS 4.6.6.2 requires oxygen concentration in primary containment to be verified within limit prior to entering the Applicability of CTS 3.6.6.2 (within 24 hours after THERMAL POWER is greater than 15% of RTP). This redundant requirement is deleted. CTS 4.0.4 and ITS SR 3.0.4 require surveillances to be performed prior to entering the Applicability of an LCO. Therefore, this requirement does not need to be repeated as a separate Surveillance Frequency and its deletion is considered administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

None

RELOCATED SPECIFICATIONS

None

A.1

ITS 3.6.4.1

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

LCO 3.6.4.1 3.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be maintained. OPERABLE A.2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and *.

ACTION:

Without SECONDARY CONTAINMENT INTEGRITY: OPERABLE

to OPERABLE status

ACTION A a. In OPERATIONAL CONDITION 1, 2 or 3, restore SECONDARY CONTAINMENT INTEGRITY within 4 hours or be in at least HOT SHUTDOWN within the

ACTION B next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION C b. In Operational Condition *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS OPERABILITY A.2

4.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

SR 3.6.4.1.1 a. Verifying at least once per 24 hours that the pressure within the secondary containment is less than or equal to 0.25 inches of vacuum water gauge.# M.1

b. Verifying at least once per 31 days that:

SR 3.6.4.1.2 1. At least one door in each access to the secondary containment is closed. A.3

2. All secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic dampers secured in position. A.4 moved to ITS 3.6.4.2

c. At least once per 18 months: 24 LD.1 on a STAGGERED TEST BASIS M.2

SR 3.6.4.1.3 1. Verifying that one standby gas treatment subsystem will draw down the secondary containment to greater than or equal to 0.25 in. of vacuum water gauge in less than or equal to 300 seconds, and

SR 3.6.4.1.4 2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inches of vacuum water gauge in the secondary containment at a flow rate not exceeding 4000 CFM ± 10%.

Applicability *When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

#SECONDARY CONTAINMENT INTEGRITY is maintained when secondary containment vacuum is less than required for up to 1 hour solely due to Reactor Building ventilation system failure. M.1

A.1

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

LCO 3.6.4.1 3.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be maintained. OPERABLE — A.2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and *.

ACTION:

Without SECONDARY CONTAINMENT INTEGRITY: OPERABLE

Action A — a. In OPERATIONAL CONDITION 1, 2, or 3, restore SECONDARY CONTAINMENT INTEGRITY to OPERABLE status within 4 hours or be in at least HOT SHUTDOWN within the
Action B — next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Action C — b. In OPERATIONAL CONDITION *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.1 SECONDARY CONTAINMENT INTEGRITY OPERABILITY shall be demonstrated by: — A.2

SR 3.6.4.1.1 a. Verifying at least once per 24 hours that the pressure within the secondary containment is less than or equal to 0.25 inch of vacuum water gauge.# — M.1

b. Verifying at least once per 31 days that:

SR 3.6.4.1.2 1. At least one door in each access to the secondary containment is closed. — A.3

2. All secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic dampers secured in position. — A.4 moved to ITS 3.6.4.2 — LD.1

c. At least once per 18 24 months, on a STAGGERED TEST BASIS: — M.2

SR 3.6.4.1.3 1. Verifying that one standby gas treatment subsystem will draw down the secondary containment to greater than or equal to 0.25 inch of vacuum water gauge in less than or equal to 300 seconds, and

SR 3.6.4.1.4 2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inch of vacuum water gauge in the secondary containment at a flow rate not exceeding 4000 cfm ± 10%.

Applicability *When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

#SECONDARY CONTAINMENT INTEGRITY is maintained when secondary containment vacuum is less than required for up to 1 hour solely due to Reactor Building ventilation system failure. — M.1

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 The definition of SECONDARY CONTAINMENT INTEGRITY in CTS 1.0 has not been included in the ITS. This was done because of the confusion associated with these definitions compared to its use in the respective LCO. Therefore, the references in CTS 3/4.6.5.1 to SECONDARY CONTAINMENT INTEGRITY are replaced with the requirement for secondary containment to be OPERABLE. The change is editorial in that all the requirements of CTS 3/4.6.5.1 are specifically addressed in the ITS and associated Bases for the Secondary Containment (3.6.4.1), the Secondary Containment Isolation Valves (3.6.4.2), and Standby Gas Treatment System (3.6.4.3). Therefore, the change is a presentation preference adopted by the BWR ISTS, NUREG-1434, Rev. 1.

A.3 The CTS 4.6.5.1.b.1 requirement to verify that one door in each access is closed has been modified to require one door in each access opening to be closed in proposed SR 3.6.4.1.2. The LaSalle 1 and 2 design includes more than two doors on some of the accesses. The current LaSalle 1 and 2 interpretation of this requirement is that for these accesses, there are multiple doors, and that each access opening must have at least one door closed. Therefore, this change is a clarification of current practice, and as such, is administrative in nature.

A.4 CTS 4.6.5.1.b.2, relating to the position of secondary containment isolation valves, has been moved to ITS 3.6.4.2, "Secondary Containment Isolation Valves," in accordance with the format of the BWR ISTS, NUREG-1434, Rev. 1. Any technical changes to this requirement will be discussed in the Discussion of Changes for ITS: 3.6.4.2.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 CTS 4.6.5.1 footnote #, which provides a delay of 1 hour prior to declaring Secondary Containment inoperable when the Reactor Building Ventilation System fails (which could result in failure to meet CTS 4.6.5.1.a), has been

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 (cont'd) deleted. The existing and proposed 4 hour Completion Time in CTS 3.6.5.1 Action A and ITS 3.6.4.1 ACTION A, respectively, provides adequate time to re-establish secondary containment vacuum. If the secondary containment vacuum cannot be maintained due to loss of the Reactor Building Ventilation System, then the secondary containment is inoperable and the ACTIONS should be entered immediately, not delayed for an hour, consistent with the loss of secondary containment for any other reason. This is an additional restriction on plant operation.

M.2 CTS 4.6.5.1.c requires that one subsystem be tested every 18 months. However, the same SGT subsystem could be tested at each testing occurrence. Proposed SR 3.6.4.1.3 and SR 3.6.4.1.4 will now require both subsystems be tested in the course of 48 months, as represented by the Staggered Test Basis requirement of the 24 month Frequency. This will ensure each SGT subsystem can maintain the proper vacuum. This is an additional restriction on plant operation.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LD.1 The Frequencies for performing CTS 4.6.5.1.c.1 and 4.6.5.1.c.2 have been extended from 18 months to 24 months in proposed SR 3.6.4.1.3 and SR 3.6.4.1.4 to facilitate a change to the LaSalle 1 and 2 refuel cycle from 18 months to 24 months. These surveillances ensure that the Secondary Containment is OPERABLE to support the drawdown analysis. The proposed change will allow these Surveillances to extend the Surveillance Frequency from the current 18 month Surveillance Frequency (i.e., a maximum of 22.5 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed Specification 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

SR 3.6.4.1.3 verifies the secondary containment can be drawn down to the specified vacuum in the time required using one standby gas treatment (SGT) subsystem. SR 3.6.4.1.4 verifies the secondary containment can be maintained at the specified vacuum for the required time using one SGT subsystem at the

TECHNICAL CHANGES - LESS RESTRICTIVE

LD.1 (cont'd) specified flow rate. The purpose of these tests is to ensure secondary containment boundary integrity by demonstrating that secondary containment vacuum assumed in the safety analysis can be established and maintained under design basis conditions. Extending the Surveillance interval for this verification of secondary containment integrity is acceptable because secondary containment is maintained at a negative pressure during normal operation, and secondary containment structural integrity is maintained through administrative controls which ensure that no significant changes will be made to the secondary containment structure without proper evaluation. Furthermore, based on engineering judgement, any structural degradation which would result in impacting secondary containment OPERABILITY is not likely to occur during normal plant operation. Any event which would cause significant structural degradation, such as a seismic event, would require a plant evaluation.

Reviews of historical maintenance and surveillance data have shown that these tests normally pass their Surveillances at the current Frequency. An evaluation has been performed using this data, and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. In addition, the proposed 24 month Surveillance Frequencies, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) do not invalidate any assumptions in the plant licensing basis.

"Specific"

None

RELOCATED SPECIFICATIONS

None

A.1

ITS 3.6.4.2

CONTAINMENT SYSTEMS

SECONDARY CONTAINMENT AUTOMATIC ISOLATION DAMPERS

LIMITING CONDITION FOR OPERATION

LCO 3.6.4.2 3.6.5.2 The secondary containment ventilation system automatic isolation dampers shown in Table 3.6.5.2-1 shall be OPERABLE with isolation times equal to or less than shown in Table 3.6.5.2-1. LA.1

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and *. L.1

ACTION: add proposed Note 1 to ACTIONS; add proposed Notes 2 and 3 to ACTIONS A.2

Action A: With one or more of the secondary containment ventilation system automatic isolation dampers shown in Table 3.6.5.2-1 inoperable: LA.1

a. Maintain at least one isolation damper OPERABLE in each affected penetration that is open and within 8 hours, either: A.3

1. Restore the inoperable damper to OPERABLE status, or A.4

2. Isolate each affected penetration by use of at least one deactivated automatic damper secured in the isolation position, or

3. Isolate each affected penetration by use of at least one closed manual valve or blind flange. add proposed ACTION B L.2

Action C: b. Otherwise, in OPERATIONAL CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Action D: c. Otherwise, in Operational Condition *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.2 Each secondary containment ventilation system automatic isolation damper shown in Table 3.6.5.2-1 shall be demonstrated OPERABLE: LA.1

a. Prior to returning the damper to service after maintenance, repair or replacement work is performed on the damper or its associated actuator, control or power circuit by cycling the damper through at least one complete cycle of full travel and verifying the specified isolation time. L.3

SR 3.6.4.2.3 b. During COLD SHUTDOWN or REFUELING at least once per 18 (24) months by verifying that on a containment isolation (actual or) test signal each isolation damper actuates to its isolation position. L.4 LD.1 L.5

SR 3.6.4.2.2 c. By verifying the isolation time to be within the limit when tested pursuant to Specification 4.0.5 (every 92 days) A.1

Applicability: *When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

TABLE 3.6.5.2-1

SECONDARY CONTAINMENT VENTILATION SYSTEM AUTOMATIC ISOLATION DAMPERS

DAMPER FUNCTION	ISOLATION TIME (Seconds)
1. Reactor Building Ventilation Supply Damper IVR-04YA	10
2. Reactor Building Ventilation Supply Damper IVR-04YB	10
3. Reactor Building Ventilation Exhaust Damper IVR-05YA	10
4. Reactor Building Ventilation Exhaust Damper IVR-05YB	10
5. Reactor Building Purge Train Isolation Damper IVQ-037	90
6. Reactor Building Purge Train Isolation Damper IVQ-038	90

LA.1

A.1

ITS 3.6.4.2

A.1

ITS 3.6.4.2

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and *.

ACTION:

Without SECONDARY CONTAINMENT INTEGRITY:

a. In OPERATIONAL CONDITION 1, 2 or 3, restore SECONDARY CONTAINMENT INTEGRITY within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. In Operational Condition *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

a. Verifying at least once per 24 hours that the pressure within the secondary containment is less than or equal to 0.25 inches of vacuum water gauge.#

See ITS 3.6.4.1

Required Action A.2 and SR 3.6.4.2.1

b. Verifying at least once per 31 days that:

1. At least one door in each access to the secondary containment is closed.

add proposed Required Action A.2 Note and SR 3.6.4.2.1 Note 1 — L.6

SR 3.6.4.2.1

2. All secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic dampers secured in position.

Required Action A.2

add proposed SR 3.6.4.2.1 Note 2 — L.1

not locked, sealed, or otherwise secured — L.7

c. At least once per 18 months:

1. Verifying that one standby gas treatment subsystem will draw down the secondary containment to greater than or equal to 0.25 in. of vacuum water gauge in less than or equal to 300 seconds, and

2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inches of vacuum water gauge in the secondary containment at a flow rate not exceeding 4000 CFM ± 10%.

*When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

#SECONDARY CONTAINMENT INTEGRITY is maintained when secondary containment vacuum is less than required for up to 1 hour solely due to Reactor Building ventilation system failure.

See ITS 3.6.4.1

A.1

ITS 3.6.4.2

CONTAINMENT SYSTEMS

SECONDARY CONTAINMENT AUTOMATIC ISOLATION DAMPERS

LIMITING CONDITION FOR OPERATION

LCO 3.6.4.2

3.6.5.2 The secondary containment ventilation system automatic isolation dampers shown in Table 3.6.5.2-1 shall be OPERABLE with isolation times equal to or less than shown in Table 3.6.5.2-1. LA.1

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and *. L.1

ACTION: add proposed Note 1 to ACTIONS A.2 / add proposed Notes 2 and 3 to ACTIONS

ACTION A

With one or more of the secondary containment ventilation system automatic isolation dampers shown in Table 3.6.5.2-1 inoperable: LA.1

a. Maintain at least one isolation damper OPERABLE in each affected penetration that is open and within 8 hours, either: A.3

1. Restore the inoperable damper to OPERABLE status, or A.4

2. Isolate each affected penetration by use of at least one deactivated automatic damper secured in the isolation position, or

3. Isolate each affected penetration by use of at least one closed manual valve or blind flange. add proposed ACTION B L.2

ACTION C

b. Otherwise, in OPERATIONAL CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION D

c. Otherwise, in OPERATIONAL CONDITION *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.2 Each secondary containment ventilation system automatic isolation damper shown in Table 3.6.5.2-1 shall be demonstrated OPERABLE: LA.1

a. Prior to returning the damper to service after maintenance, repair or replacement work is performed on the damper or its associated actuator, control or power circuit by cycling the damper through at least one complete cycle of full travel and verifying the specified isolation time. L.3

SR 3.6.4.2.3 b. During COLD SHUTDOWN or REFUELING at least once per 18 months by verifying that on a containment isolation actual or test signal each isolation damper actuates to its isolation position. L.4 24 LD.1 L.5

SR 3.6.4.2.2 c. By verifying the isolation time to be within the limit when tested pursuant to Specification 4.0.5. every 92 days A.1

*When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

Applicability

A.1

TABLE 3.6.5.2-1

SECONDARY CONTAINMENT VENTILATION SYSTEM AUTOMATIC ISOLATION DAMPERS

DAMPER FUNCTION	ISOLATION TIME (Seconds)
1. Reactor Building Ventilation Supply Damper 2VR-04YA	10
2. Reactor Building Ventilation Supply Damper 2VR-04YB	10
3. Reactor Building Ventilation Exhaust Damper 2VR-05YA	10
4. Reactor Building Ventilation Exhaust Damper 2VR-05YB	10
5. Reactor Building Purge Train Isolation Damper 2VQ-037	90
6. Reactor Building Purge Train Isolation Damper 2VQ-038	90

LA.1

A.1

ITS 3.6.4.2

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and *.

ACTION:

Without SECONDARY CONTAINMENT INTEGRITY:

a. In OPERATIONAL CONDITION 1, 2, or 3, restore SECONDARY CONTAINMENT INTEGRITY within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. In OPERATIONAL CONDITION *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

a. Verifying at least once per 24 hours that the pressure within the secondary containment is less than or equal to 0.25 inch of vacuum water gauge.#

b. Verifying at least once per 31 days that:

1. At least one door in each access to the secondary containment is closed.

2. All secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic dampers secured in position.

c. At least once per 18 months:

1. Verifying that one standby gas treatment subsystem will draw down the secondary containment to greater than or equal to 0.25 inch of vacuum water gauge in less than or equal to 300 seconds, and

2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inch of vacuum water gauge in the secondary containment at a flow rate not exceeding 4000 cfm ± 10%.

*When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

#SECONDARY CONTAINMENT INTEGRITY is maintained when secondary containment vacuum is less than required for up to 1 hour solely due to Reactor Building ventilation system failure.

- See ITS 3.6.4.1 (4.6.5.1.a) L.6
- Required Action A.2 and SR 3.6.4.2.1 (4.6.5.1.b)
- add proposed Required Action A.2 Note and SR 3.6.4.2.1 Note 1
- SR 3.6.4.2.1 (4.6.5.1.b.2)
- Required Action A.2 (4.6.5.1.b.2)
- add proposed SR 3.6.4.2.1 Note 2 — L.1
- not locked, sealed, or otherwise secured — L.7
- See ITS 3.6.4.1 (4.6.5.1.c and footnotes)

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 ITS 3.6.4.2 ACTIONS Note 2 ("Separate Condition entry is allowed for each penetration flow path") provides explicit instructions for proper application of the ACTIONS for Technical Specification compliance. In conjunction with the proposed Specification 1.3, "Completion Times," this ACTIONS Note provides direction consistent with the intent of the existing ACTIONS for inoperable isolation valves. It is intended that each inoperable penetration flow path is allowed a certain time to complete the Required Actions. Since this change only provides more explicit direction of the current interpretation of the existing specification, this change is considered administrative. Similarly, ISTS 3.6.4.2 ACTIONS Note 3 facilitates the use and understanding of the intent to consider the affect of inoperable isolation valves on other systems. For a system made inoperable by inoperable SCIVs the applicable ACTIONS for that system also apply. With ITS LCO 3.0.6, this intent would not necessarily apply. This clarification is consistent with the intent and interpretation of the existing Technical Specifications, and is therefore considered administrative.

A.3 The CTS 3.6.5.2 Action does not specify penetrations with one or two isolation valves. However, ITS 3.6.4.2 Condition A only applies if one valve in a penetration is inoperable. This inherently ensures maintaining "at least one isolation valve OPERABLE." This change is a presentation preference and is administrative in nature.

A.4 The revised presentation of the CTS 3.6.5.2 Action (based on the BWR ISTS, NUREG-1434, Rev. 1) does not explicitly detail options to "restore...to OPERABLE status." This action is always an option, and is implied in all Actions. Omitting this action from the ITS is editorial.

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The list of secondary containment isolation dampers referenced in CTS 3/4.6.5.2 and appearing in CTS Table 3.6.5.2-1 with their isolation times, are proposed to be relocated to the Technical Requirements Manual consistent with Generic Letter 91-08. In addition, due to the relocation, the name of the isolation dampers has been generically changed to Secondary Containment Isolation Valves (SCIV). The listing of valves which are subject to the Secondary Containment Isolation Valve Specification are related to design and are not necessary for ensuring the secondary containment isolation valves are maintained OPERABLE. ITS 3.6.4.2 requires each SCIV to be OPERABLE and SR 3.6.4.2.2 requires verification that the isolation times are within limits. These requirements are adequate for ensuring each required SCIV is maintained OPERABLE. As such, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. The TRM will be incorporated by reference into the LaSalle 1 and 2 UFSAR at ITS implementation. Changes to the Technical Requirements Manual will be controlled by the provisions of 10 CFR 50.59.

LD.1 The Frequency for performing CTS 4.6.5.2.b has been extended from 18 months to 24 months in proposed SR 3.6.4.2.3 to facilitate a change to the LaSalle 1 and 2 refuel cycle from 18 months to 24 months. The proposed change will allow this Surveillance to extend the Surveillance Frequency from the current 18 month Surveillance Frequency (i.e., a maximum of 22.5 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed Specification 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

SR 3.6.4.2.3 verifies each automatic secondary containment isolation valve (SCIV) actuates to the isolation position on an actual or simulated automatic isolation signal. This is required to prevent leakage of radioactive material from secondary containment following a DBA or other accidents. Extending the Surveillance interval for this verification is acceptable in part because the valves are operated more frequently every 92 days to satisfy the requirements of SR 3.6.4.2.2, which verifies isolation times are within limits. These tests will detect significant failures affecting valve operation that would be detected by conducting the 24 month surveillance test. In addition, the Secondary

TECHNICAL CHANGES - LESS RESTRICTIVE

LD.1 (cont'd) Containment Isolation system active components and power supplies are designed with redundancy to meet the single active failure criteria, which will ensure system availability in the event of a failure of one of the system components. Also the actual or simulated isolation signal overlaps Logic System Functional Testing performed in SR 3.3.6.2.4 of Secondary Containment Isolation Instrumentation. As stated in the NRC Safety Evaluation Report (dated August 2, 1993) relating to extension of the Peach Bottom Atomic Power Station, Unit Numbers 2 and 3 surveillance intervals from 18 to 24 months:

> "Industry reliability studies for boiling water reactors (BWRs), prepared by the BWR Owners Group (NEDC-30936P) show that the overall safety systems' reliabilities are not dominated by the reliabilities of the logic system, but by that of the mechanical components, (e.g., pumps and valves), which are consequently tested on a more frequent basis. Since the probability of a relay or contact failure is small relative to the probability of mechanical component failure, increasing the Logic System Functional Test interval represents no significant change in the overall safety system unavailability."

Based on the redundancy and the above discussion, it is concluded that the impact, if any, on system availability is minimal as a result of the change to the SCIV test intervals.

Reviews of historical maintenance and surveillance data have shown that this test normally passes the Surveillance at the current Frequency. An evaluation has been performed using this data, and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. In addition, the proposed 24 month Surveillance Frequency, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) does not invalidate any assumptions in the plant licensing basis.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

"Specific"

L.1 An allowance is proposed for intermittently opening closed secondary containment isolation valves under administrative control as is allowed in the existing primary containment Technical Specifications (CTS 3.6.3) and in ITS 3.6.1.3. The administrative controls consist of stationing a dedicated operator, who is in continuous communication with the control room, at the controls of the isolation device. The allowance is presented in ITS 3.6.4.2 ACTIONS Note 1 and SR 3.6.4.2.1 Note 2. Opening of secondary containment penetrations on a intermittent basis is required for many of the same reasons as primary containment penetrations and the potential impact on consequences is less significant. The proposed allowance is acceptable due to the low probability of an event that would release radioactivity in the secondary containment during the short time in which the SCIV is open and the administrative controls established to ensure the affected penetration can be isolated when a need for secondary containment isolation is indicated.

L.2 In the event both valves in a penetration are inoperable in an open penetration, the CTS 3.6.5.2 Action, which requires maintaining one isolation valve OPERABLE, would not be met and an immediate shutdown would be required. ITS 3.6.4.2 ACTION B provides 4 hours prior to commencing a required shutdown. This proposed 4 hour period is consistent with the existing time allowed for conditions when the secondary containment is inoperable. The proposed change will provide consistency in ACTIONS for these various secondary containment degradations. This change to CTS 3.6.5.2 is acceptable due to the low probability of an event requiring the secondary containment during the short time in which continued operation is allowed and the capability to isolate a secondary containment penetration is lost.

L.3 CTS 4.6.5.2.a is proposed to be deleted. Any time the OPERABILITY of a system or component has been affected by repair, maintenance, or replacement of a component, post maintenance testing is required to demonstrate OPERABILITY of the system or component. After restoration of a component that caused a required SR to be failed, ITS SR 3.0.1 requires the appropriate SRs (in this case SR 3.6.4.2.2) to be performed to demonstrate the OPERABILITY of the affected components. Therefore, explicit post maintenance Surveillance Requirements in CTS 4.6.5.2 are not required and have been deleted from the Technical Specifications.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.4 The requirement to perform CTS 4.6.5.2.b during COLD SHUTDOWN or REFUELING has not been included in proposed SR 3.6.4.2.3. The proposed Surveillance (for a functional test of each secondary containment isolation valve) does not include the restriction on plant conditions. All isolation valves can be adequately tested in other than Cold Shutdown or Refueling, without jeopardizing safe plant operations. The control of the plant conditions appropriate to perform the test is an issue for procedures and scheduling, and has been determined by the NRC Staff to be unnecessary as a Technical Specification restriction. As indicated in Generic Letter 91-04, allowing this control is consistent with the vast majority of other Technical Specification Surveillances that do not dictate plant conditions for the Surveillance.

L.5 The phrase "actual or," in reference to the isolation test signal in CTS 4.6.5.2.b, has been added to proposed SR 3.6.4.2.3, which verifies that each SCIV actuates on an automatic isolation signal. This allows satisfactory automatic SCIV isolations for other than Surveillance purposes to be used to fulfill the Surveillance Requirement. Operability is adequately demonstrated in either case since the SCIV itself cannot discriminate between "actual" or "test" signals.

L.6 CTS 4.6.5.1.b.2 requires verification that certain secondary containment penetrations are isolated. An allowance is proposed to allow the verification of the isolation devices used to isolate the penetrations in high radiation areas to be verified by use of administrative controls. The allowance is presented in ITS 3.6.4.2 Required Action A.2 Note and SR 3.6.4.2.1 Note 1. This is acceptable since the isolation devices are initially verified to be in the proper position and access to them is restricted during operation due to the high levels of radiation in the area. Therefore, the probability of misalignment of the isolation devices is acceptably small. If for some reason these devices are opened (e.g., maintenance), the associated procedure or work package would require their closure after work is completed. The Required Action or Surveillance may be performed by reviewing that no work was performed in the associated radiation area since the isolation device was closed or if work was performed in that area that the closure was verified upon completion of the work if the valve was opened.

L.7 The requirements of CTS 4.6.5.1.b.2, related to verification of the position of secondary containment isolation penetrations not capable of being closed by OPERABLE secondary containment isolation valves (SCIVs), are revised in proposed SR 3.6.4.2.1 and ITS 3.6.4.2 Required Action A.2 (Note 2) to exclude verification of manual valves and blind flanges that are locked, sealed, or

TECHNICAL CHANGES - LESS RESTRICTIVE

L.7 (cont'd) otherwise secured in the correct position. The purpose of CTS 4.6.5.1.b.2 is to ensure that manual secondary containment isolation devices that may be misaligned are in the correct position to help ensure that post accident leakage of radioactive fluids or gases outside the secondary containment boundary is within design and analysis limits. For manual valves or blind flanges that are locked, sealed or otherwise secured in the correct position, the potential of these devices to be inadvertently misaligned is low. In addition, manual valves and blind flanges that are locked, sealed or otherwise secured in the correct position are verified to be in the correct position prior to locking, sealing, or securing. As a result of this control of the position of these manual secondary containment isolation devices, the periodic Surveillance of these devices in CTS 4.6.5.1.b.2 is not required to help ensure that post accident leakage of radioactive fluids or gases outside the secondary containment boundary is maintained within design and analysis limits. This change also provides the benefit of reduced radiation exposure to plant personnel through the elimination of the requirement to check the position of manual values and blind flanges, located in radiation areas, that are locked, sealed or otherwise secured in the correct position.

RELOCATED SPECIFICATIONS

None

A.1

CONTAINMENT SYSTEMS

STANDBY GAS TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

LA.1

LCO 3.6.4.3

3.6.5.3 Two independent standby gas treatment subsystems shall be OPERABLE.# A.2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and *.

ACTION:

ACTION A a. With one standby gas treatment subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 7 days, or:

ACTION B 1. In OPERABLE CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

add proposed Required Action C.1 L.1

ACTION C 2. In Operational Condition*, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

ACTION E b. With both standby gas treatment subsystems inoperable in Operational Condition *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

add proposed ACTION D A.3

SURVEILLANCE REQUIREMENTS

4.6.5.3 Each standby gas treatment subsystem shall be demonstrated OPERABLE:

SR 3.6.4.3.1 a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 hours with the heaters OPERABLE. LA.2

operating A.4

Applicability

*When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

#The normal or emergency power source may be inoperable in Operational Condition *. A.2

SURVEILLANCE REQUIREMENTS (Continued)

SR 3.6.4.3.2 b. Perform required standby gas treatment filter testing in accordance with, and at the frequency specified by, the Ventilation Filter Testing Program.

c. Deleted.

d. At least once per 18 24 months by: LD.1

1. Deleted.

SR 3.6.4.3.3 2. Verifying that the filter train starts and isolation dampers open on each of the following test signals: or actual L.2 A.5

a. Reactor Building exhaust plenum radiation - high,

b. Drywell pressure - high,

c. Reactor vessel water level - low low, level 2, and

d. Fuel pool vent exhaust radiation - high.

3. Deleted.

SURVEILLANCE REQUIREMENTS (Continued)

e. Deleted.

f. Deleted.

A.1

CONTAINMENT SYSTEMS

STANDBY GAS TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

LCO 3.6.4.3

3.6.5.3 Two independent standby gas treatment subsystems shall be OPERABLE.# LA.1 A.2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and *.

ACTION:

Action A a. With one standby gas treatment subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 7 days, or:

Action B 1. In OPERABLE CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

add proposed Required Action C.1 L.1

Action C 2. In OPERATIONAL CONDITION *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

Action E b. With both standby gas treatment subsystems inoperable in OPERATIONAL CONDITION *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

add proposed Action D A.3

SURVEILLANCE REQUIREMENTS

4.6.5.3 Each standby gas treatment subsystem shall be demonstrated OPERABLE:

SR 3.6.4.3.1 a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 hours with the heaters OPERABLE. LA.2

operating A.4

Applicability

*When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

#The normal or emergency power source may be inoperable in OPERATIONAL CONDITION *. A.2

A.1 ITS 3.6.4.3

SURVEILLANCE REQUIREMENTS (Continued)

SR 3.6.4.3.2 b. Perform required standby gas treatment filter testing in accordance with, and at the frequency specified by, the Ventilation Filter Testing Program.

c. Deleted.

d. At least once per (18) (24) months by: LD.1

1. Deleted.

SR 3.6.4.3.3 2. Verifying that the filter train starts and isolation dampers open on (each) of the following test (or actual) signals: L.2 A.5

a. Reactor Building exhaust plenum radiation - high,

b. Drywell pressure - high,

c. Reactor vessel water level - low low, level 2, and

d. Fuel pool vent exhaust radiation - high.

3. Deleted.

SURVEILLANCE REQUIREMENTS (Continued)

e. Deleted.

f. Deleted.

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 CTS 3.6.5.3 footnote # allows an SGT subsystem to be considered OPERABLE when one of its two power sources is inoperable. This allowance is not needed since it is now covered by the definition of OPERABLE — OPERABILITY in ITS Chapter 1.0. Therefore, its definition is considered administrative.

A.3 A new ACTION, ITS 3.6.4.3 ACTION D, is added that directs entry into LCO 3.0.3 if both SGT subsystems are inoperable in MODE 1, 2, or 3. This avoids confusion as to the proper ACTION if in MODE 1, 2, or 3 and simultaneously in a special condition, such as handling irradiated fuel assemblies in the secondary containment. Since this ACTION results in the same ACTION as the current Technical Specifications, this change is administrative.

A.4 The terminology in CTS 4.6.5.3.a associated with the heater status has been revised from "OPERABLE" to "operating" in proposed SR 3.6.4.3.1. It is necessary for the heaters to actually operate (cycle properly when required) to reduce moisture from the adsorbers and HEPA filters. No change in actual operating practice is intended. Therefore, this change is administrative.

A.5 CTS 4.6.5.3.d.2, which verifies each SGT subsystem starts on the appropriate automatic initiation signals, is being divided into two Surveillances. The majority of the instrumentation testing will be performed in SR 3.3.6.2.4 of ITS 3.3.6.2. The actual system functional test portion, which will ensure the SGT System starts on an initiation signal, will be performed as SR 3.6.4.3.3. This ensures the entire system is tested with proper overlap. Since the ITS results in the same CTS requirements for testing, this change is considered administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The detail in CTS LCO 3.6.5.3 relating to system design (i.e., that the SGT subsystems are "independent") is proposed to be relocated to the Bases. This is a design detail that is not necessary to be included in the Technical Specifications to ensure the OPERABILITY of the SGT subsystems, since OPERABILITY requirements are adequately addressed in ITS 3.6.4.3. Therefore, the relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.2 Details in CTS 4.6.5.3.a of the methods for performing the standby gas treatment subsystem 31 day operating Surveillance (by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers) are proposed to be relocated to the Bases. These details are not necessary to ensure the OPERABILITY of the standby gas treatment subsystems. The requirements of ITS 3.6.4.3 and SR 3.6.4.3.1 are adequate to ensure the standby gas treatment subsystems are maintained OPERABLE. Therefore, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LD.1 The Frequency for performing CTS 4.6.5.3.d.2 has been extended from 18 months to 24 months in proposed SR 3.6.4.3.3 to facilitate a change to the LaSalle 1 and 2 refuel cycle from 18 months to 24 months. The proposed change will allow this Surveillance to extend the Surveillance Frequency from the current 18 month Surveillance Frequency (i.e., a maximum of 22.5 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed Specification 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

SR 3.6.4.3.3 verifies each SGT subsystem actuates on an actual or simulated initiation signal. Extending the Surveillance interval for this verification is acceptable in part because the system is operated every 31 days to satisfy the requirements of SR 3.6.4.3.1 which operates each SGT subsystem for a specified period of time that ensures both subsystems are OPERABLE and that all

TECHNICAL CHANGES - LESS RESTRICTIVE

LD.1 (cont'd) associated controls are functioning properly. This test will detect significant failures affecting system operation that would be detected by conducting the 24 month Surveillance test. In addition, the SGT system is designed with redundancy to meet the single active failure criteria, which will ensure system availability in the event of a failure of one of the subsystems. The actual or simulated initiation signals test overlaps the LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.6.2.4 of Secondary Containment Isolation Instrumentation. As stated in the NRC Safety Evaluation Report (dated August 2, 1993) relating to extension of the Peach Bottom Atomic Power Station, Unit Numbers 2 and 3 surveillance intervals from 18 to 24 months:

> "Industry reliability studies for boiling water reactors (BWRs), prepared by the BWR Owners Group (NEDC-30936P) show that the overall safety systems' reliabilities are not dominated by the reliabilities of the logic system, but by that of the mechanical components, (e.g., pumps and valves), which are consequently tested on a more frequent basis. Since the probability of a relay or contact failure is small relative to the probability of mechanical component failure, increasing the Logic System Functional Test interval represents no significant change in the overall safety system unavailability."

Reviews of historical maintenance and surveillance data have shown that these tests normally pass their Surveillances at the current Frequency. An evaluation has been performed using this data, and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. In addition, the proposed 24 month Surveillance Frequencies, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) do not invalidate any assumptions in the plant licensing basis.

"Specific"

L.1 An alternative is proposed in the LaSalle ITS to suspending operations if an SGT subsystem cannot be returned to OPERABLE status within 7 days, and movement of irradiated fuel assemblies, CORE ALTERATIONS, or OPDRVs are being conducted. The alternative, ITS 3.6.4.3 Required Action C.1, is to place the OPERABLE SGT subsystem in operation and continue to conduct operations (e.g., OPDRVs). Since one subsystem is sufficient for any accident, the risk of failure of the subsystem to perform its intended function is significantly reduced if it is operating.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.2 The phrase "actual or," in reference to the initiation test signal in CTS 4.6.5.3.d.2, has been added to proposed SR 3.6.4.3.3, which verifies that each subsystem actuates on an automatic initiation signal. This allows satisfactory automatic SGT System initiations for other than Surveillance purposes to be used to fulfill the Surveillance Requirement. Operability is adequately demonstrated in either case since the SGT subsystem itself cannot discriminate between "actual" or "test" signals.

RELOCATED SPECIFICATIONS

None

The Bases of the current Technical Specifications for this section (pages B 3/4 6-1 through B 3/4 6-5) have been completely replaced by revised Bases that reflect the format and applicable content of the LaSalle 1 and 2 ITS Section 3.6, consistent with the BWR ISTS, NUREG-1433, Rev. 1 and NUREG-1434, Rev. 1. The revised Bases are shown in the LaSalle 1 and 2 ITS Bases. In addition, pages 3/4 6-3, 3/4 6-4, 3/4 6-7 through 3/4 6-12 (Unit 1) and 3/4 6-7 through 3/4 6-15 (Unit 2), 3/4 6-19 (Unit 1) and 3/4 6-22 (Unit 2), and 3/4 6-24 through 3/4 6-34 (Unit 1) and 3/4 6-27 through 3/4 6-37 (Unit 2), which are blank pages, have been removed.