

Amendment Number	Additional Condition	Implementation Date
167	WCNOC will revise the WCGS containment isolation fault tree model prior to utilization of the requested containment isolation valve Completion Time extensions by either: 1) modeling containment isolation valves for at least one of each WCAP-15791 penetration type applicable to WCGS, including penetrations to the containment atmosphere greater than 2 inches in diameter or 2) modeling all containment isolation valves associated with this license amendment request, including penetrations to the containment atmosphere greater than 2 inches in diameter. A peer review of the changes to the containment isolation fault tree model, including addressing Category A and Category B findings, will be completed following revision to the containment isolation fault tree model.	Prior to the start of Refueling Outage 16
167	Prior to implementation of the amendment WCNOC will implement in its procedures the requirement to confirm that the remaining containment isolation valve(s) in the affected penetration(s) are in their correct position(s) prior to performing maintenance on a containment isolation valve.	Prior to the start of Refueling Outage 16

Amendment Number	Additional Condition	Implementation Date
123	For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of this amendment.	This amendment shall be implemented by December 31, 1999.
163	The licensee will perform a one-time load acceptance test of the Sharpe Station prior to the first use of the 7-day Completion Time of Required Action B.4.2.2 of TS 3.8.1. The test shall utilize a nearby large motor for the purposes of simulating a large plant load. This test will be performed in conjunction with a dynamic voltage flow analysis.	Prior to the first use of the 7-day Completion Time of Required Action B.4.2.2 of TS 3.8.1.
163	The licensee will coordinate with KEPCo to ensure the load capability testing/verification is performed within 8 months prior to utilization of the 7-day Completion Time of Required Action B.4.2.2 in TS 3.8.1. The load capability testing/verification will consist of either crediting a running of the gensets for load for commercial reasons for greater than 1 hour or tested by loading of the gensets for greater than 1 hour to a load equal to or greater than required to supply safety related loads in the event of a station blackout.	Prior to the use of the 7-day Completion Time of Required Action B.4.2.2 of TS 3.8.1.
163	The licensee will ensure the RCP seal model from WCAP-15603, Rev. 1-A, "WOG 2000 Reactor Coolant Pump Seal Leakage Model for Westinghouse PWRs" is utilized in the 2002 WCGS PSA Model. The licensee will verify that the utilization of the Sharpe Station for supporting an extended DG Completion Time in the 2002 WCGS PSA Model meets the risk acceptance guidelines of Regulatory Guide 1.174 and Regulatory Guide 1.177. Additionally, the licensee will include the risk impact of the Sharpe Station in the Safety Monitor, including adding an activity to the Activity Table that will account for the impact of the plant configuration associated with crediting the Sharpe Station during the use of an extended Completion Time for pre-planned maintenance activities.	Prior to the first use of the 7-day Completion Time of Required Action B.4.2.2 of TS 3.8.1.

TABLE OF CONTENTS

3.3	INSTRUMENTATION (continued)	
3.3.6	Containment Purge Isolation Instrumentation	3.3-46
3.3.7	Control Room Emergency Ventilation System (CREVS) Actuation Instrumentation	3.3-50
3.3.8	Emergency Exhaust System (EES) Actuation Instrumentation	3.3-55
3.4	REACTOR COOLANT SYSTEM (RCS)	3.4-1
3.4.1	RCS Pressure, Temperature, and Flow Departure from Nucleate Boiling (DNB) Limits	3.4-1
3.4.2	RCS Minimum Temperature for Criticality	3.4-5
3.4.3	RCS Pressure and Temperature (P/T) Limits	3.4-6
3.4.4	RCS Loops - MODES 1 and 2	3.4-8
3.4.5	RCS Loops - MODE 3	3.4-9
3.4.6	RCS Loops - MODE 4	3.4-12
3.4.7	RCS Loops - MODE 5, Loops Filled	3.4-14
3.4.8	RCS Loops - MODE 5, Loops Not Filled	3.4-17
3.4.9	Pressurizer	3.4-19
3.4.10	Pressurizer Safety Valves	3.4-21
3.4.11	Pressurizer Power Operated Relief Valves (PORVs)	3.4-23
3.4.12	Low Temperature Overpressure Protection (LTOP) System	3.4-26
3.4.13	RCS Operational LEAKAGE	3.4-31
3.4.14	RCS Pressure Isolation Valve (PIV) Leakage	3.4-33
3.4.15	RCS Leakage Detection Instrumentation	3.4-37
3.4.16	RCS Specific Activity	3.4-41
3.4.17	Steam Generator (SG) Tube Integrity	3.4-45
3.5	EMERGENCY CORE COOLING SYSTEMS (ECCS)	3.5-1
3.5.1	Accumulators	3.5-1
3.5.2	ECCS - Operating	3.5-3
3.5.3	ECCS - Shutdown	3.5-6
3.5.4	Refueling Water Storage Tank (RWST)	3.5-8
3.5.5	Seal Injection Flow	3.5-10
3.6	CONTAINMENT SYSTEMS	3.6-1
3.6.1	Containment	3.6-1
3.6.2	Containment Air Locks	3.6-2
3.6.3	Containment Isolation Valves	3.6-7
3.6.4	Containment Pressure	3.6-14
3.6.5	Containment Air Temperature	3.6-15
3.6.6	Containment Spray and Cooling Systems	3.6-16
3.6.7	Spray Additive System	3.6-19

TABLE OF CONTENTS

1.0	USE AND APPLICATION	1.1-1
1.1	Definitions	1.1-1
1.2	Logical Connectors	1.2-1
1.3	Completion Times	1.3-1
1.4	Frequency	1.4-1
2.0	SAFETY LIMITS (SLs)	2.0-1
2.1	SLs	2.0-1
2.2	SL Violations	2.0-1
3.0	LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY	3.0-1
3.0	SURVEILLANCE REQUIREMENT (SR) APPLICABILITY	3.0-3
3.1	REACTIVITY CONTROL SYSTEMS	3.1-1
3.1.1	SHUTDOWN MARGIN (SDM)	3.1-1
3.1.2	Core Reactivity	3.1-2
3.1.3	Moderator Temperature Coefficient (MTC)	3.1-4
3.1.4	Rod Group Alignment Limits	3.1-7
3.1.5	Shutdown Bank Insertion Limits	3.1-11
3.1.6	Control Bank Insertion Limits	3.1-13
3.1.7	Rod Position Indication	3.1-16
3.1.8	PHYSICS TESTS Exceptions - MODE 2	3.1-19
3.2	POWER DISTRIBUTION LIMITS	3.2-1
3.2.1	Heat Flux Hot Channel Factor ($F_Q(Z)$) (F_Q Methodology)	3.2-1
3.2.2	Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta H}^N$)	3.2-6
3.2.3	AXIAL FLUX DIFFERENCE (AFD) (Relaxed Axial Offset Control (RAOC) Methodology)	3.2-9
3.2.4	QUADRANT POWER TILT RATIO (QPTR)	3.2-10
3.3	INSTRUMENTATION	3.3-1
3.3.1	Reactor Trip System (RTS) Instrumentation	3.3-1
3.3.2	Engineered Safety Feature Actuation System (ESFAS) Instrumentation	3.3-21
3.3.3	Post Accident Monitoring (PAM) Instrumentation	3.3-37
3.3.4	Remote Shutdown System	3.3-41
3.3.5	Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation	3.3-44

3.6 CONTAINMENT SYSTEMS

3.6.3 Containment Isolation Valves

LCO 3.6.3 Each containment isolation valve shall be OPERABLE.

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

ACTIONS

NOTES

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

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more penetration flow paths with one containment isolation valve (CIV) inoperable except for purge valve leakage not within limit.	<p>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.</p> <p><u>AND</u></p>	<p>4 hours for Category 1 CIVs</p> <p><u>AND</u></p> <p>8 hours for Category 2 CIVs</p> <p><u>AND</u></p> <p>12 hours for Category 3 CIVs</p> <p><u>AND</u></p> <p>(continued)</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)		<p>24 hours for Category 4 CIVs</p> <p><u>AND</u></p> <p>48 hours for Category 5 CIVs</p> <p><u>AND</u></p> <p>72 hours for Category 6 CIVs</p> <p><u>AND</u></p> <p>7 days for Category 7 CIVs</p>
	<p>A.2</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> 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. <p>-----</p> <p>Verify the affected penetration flow path is isolated.</p>	<p>Once per 31 days for isolation devices outside containment</p> <p><u>AND</u></p> <p>(continued)</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)		Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment
<p>B. -----NOTE----- Only applicable to penetration flow paths with two containment isolation valves. -----</p> <p>One or more penetration flow paths with two containment isolation valves inoperable except for containment purge valve leakage not within limit.</p>	<p>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.</p>	1 hour
<p>C. Two or more penetration flow paths with one containment isolation valve inoperable for reasons other than Condition D.</p>	<p>C.1 Isolate all but one penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.</p>	4 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more penetration flow paths with one or more containment purge valves not within leakage limits.	D.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.	24 hours
	<u>AND</u>	
	<p>D.2</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> 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. <p>Verify the affected penetration flow path is isolated.</p>	<p>Once per 31 days for isolation devices outside containment</p> <p><u>AND</u></p> <p>Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment</p>
	<u>AND</u>	(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. (continued)	D.3 Perform SR 3.6.3.6 or SR 3.6.3.7 for the resilient seal purge valves closed to comply with Required Action D.1.	Once per 92 days
E. Required Action and associated Completion Time not met.	E.1 Be in MODE 3.	6 hours
	<u>AND</u> E.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.3.1 Verify each containment shutdown purge valve is sealed closed or closed and blind flange installed except for one purge valve in a penetration flow path while in Condition D of this LCO.	Once per 31 days for isolation devices outside containment <u>AND</u> Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.3.2	Verify each containment mini-purge valve is closed, except when the containment mini-purge valves are open for pressure control, ALARA or air quality considerations for personnel entry, or for Surveillances that require the valves to be open.	31 days
SR 3.6.3.3	<p>-----NOTE-----</p> <p>Valves and blind flanges in high radiation areas may be verified by use of administrative controls.</p> <p>-----</p> <p>Verify each containment isolation manual valve and blind flange that is located outside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.</p>	31 days
SR 3.6.3.4	<p>-----NOTE-----</p> <p>Valves and blind flanges in high radiation areas may be verified by use of administrative means.</p> <p>-----</p> <p>Verify each containment isolation manual valve and blind flange that is located inside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.</p>	Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days
SR 3.6.3.5	Verify the isolation time of each automatic power operated containment isolation valve is within limits.	In accordance with the Inservice Testing Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.6.3.6</p> <p style="text-align: center;">NOTE</p> <p>Only required to be performed when containment shutdown purge valve blind flanges are installed.</p> <hr/> <p>Perform leakage rate testing for containment shutdown purge valves with resilient seals and associated blind flanges.</p>	<p>24 months</p> <p><u>AND</u></p> <p>Following each reinstallation of the blind flange</p>
<p>SR 3.6.3.7</p> <p style="text-align: center;">NOTE</p> <p>Only required to be performed for the containment shutdown purge valves when associated blind flanges are removed.</p> <hr/> <p>Perform leakage rate testing for containment mini-purge and shutdown purge valves with resilient seals.</p>	<p>184 days</p> <p><u>AND</u></p> <p>Within 92 days after opening the valve</p>
<p>SR 3.6.3.8</p> <p>Verify each automatic containment isolation valve that is not locked, sealed or otherwise secured in position, actuates to the isolation position on an actual or simulated actuation signal.</p>	<p>18 months</p>

3.6 CONTAINMENT SYSTEMS

3.6.4 Containment Pressure

LCO 3.6.4 Containment pressure shall be ≥ -0.3 psig and $\leq +1.5$ psig.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment pressure not within limits.	A.1 Restore containment pressure to within limits.	1 hour
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4.1 Verify containment pressure is within limits.	12 hours

3.6 CONTAINMENT SYSTEMS

3.6.5 Containment Air Temperature

LCO 3.6.5 Containment average air temperature shall be $\leq 120^{\circ}\text{F}$.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment average air temperature not within limit.	A.1 Restore containment average air temperature to within limit.	8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.5.1 Verify containment average air temperature is within limit.	24 hours

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Spray and Cooling Systems

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

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

ACTIONS

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

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Two containment cooling trains inoperable.	D.1 Restore one containment cooling train to OPERABLE status.	72 hours
E. Required Action and associated Completion Time of Condition C or D not met.	E.1 Be in MODE 3. <u>AND</u> E.2 Be in MODE 5.	6 hours 36 hours
F. Two containment spray trains inoperable. <u>OR</u> Any combination of three or more trains inoperable.	F.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.6.1 Verify each containment spray manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 day
SR 3.6.6.2 Operate each containment cooling train fan unit for ≥ 15 minutes.	31 days

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.6.3	Not Used.	
SR 3.6.6.4	Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.6.6.5	Verify each automatic containment spray valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	18 months
SR 3.6.6.6	Verify each containment spray pump starts automatically on an actual or simulated actuation signal.	18 months
SR 3.6.6.7	Verify each containment cooling train starts automatically and minimum cooling water flow rate is established on an actual or simulated actuation signal.	18 months
SR 3.6.6.8	Verify each spray nozzle is unobstructed.	10 years

3.6 CONTAINMENT SYSTEMS

3.6.7 Spray Additive System

LCO 3.6.7 The Spray Additive System shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spray Additive System inoperable.	A.1 Restore Spray Additive System to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	84 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.7.1 Verify each spray additive manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.7.2	Verify spray additive tank solution volume is ≥ 4340 gal and ≤ 4540 gal.	184 days
SR 3.6.7.3	Verify spray additive tank solution concentration is $\geq 28\%$ and $\leq 31\%$ by weight.	184 days
SR 3.6.7.4	Verify each spray additive automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	18 months
SR 3.6.7.5	Verify spray additive flow rate from each solution's flow path.	5 years