



Alex L. Javorik
Vice President, Engineering
P.O. Box 968, Mail Drop PE04
Richland, WA 99352-0968
Ph. 509-377-8555 F. 509-377-2354
aljavorik@energy-northwest.com

10 CFR 50.90
10 CFR 50.55a

July 5, 2017
GO2-17-124

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

**SUBJECT: COLUMBIA GENERATING STATION, DOCKET NO. 50-397
FINAL TECHNICAL SPECIFICATION MARKUP AND CLEAN PAGES
FOR APPLICATION TO REVISE TECHNICAL SPECIFICATIONS TO
ADOPT TSTF-545, REVISION 3**

Reference: Letter A.L. Javorik, Energy Northwest to NRC, "Application To Revise Technical Specifications To Adopt TSTF-545, Revision 3," GO2-16-076, (ADAMS Accession No. ML16196A419), Dated July 14, 2016.

Dear Sir or Madam:

By the referenced letter, Energy Northwest submitted for approval the License Amendment Request (LAR) to adopt TSTF-545, Revision 3.

This letter transmits the final markup and clean pages of the Technical Specifications (TS) for the LAR referenced above. This final set of markup and clean TS pages supersedes all other previously submitted markup and clean TS pages for this LAR. Attachment 1 contains the markup pages of the TS. Attachment 2 contains the clean pages of the TS.

All TS pages made obsolete by implementation of License Amendment 226 remain retained in the Columbia TS. These obsolete pages will be deleted under a separate LAR with a projected submission date of November 30, 2017.

The No Significant Hazards Consideration Determination (NSHCD) provided in the original submittal is not altered by this submittal. This letter and its attachment contain no regulatory commitments.

If you should have any questions regarding this submittal, please contact Ms. L. L. Williams, Licensing Supervisor, at 509-377-8148.

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Page 2 of 2

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

Executed on this 5th day of July, 2017.

Respectfully,



A. L. Javorik
Vice President, Engineering

Attachments: As stated

cc: NRC Region IV Administrator
NRC NRR Project Manager
NRC Sr. Resident Inspector - 988C
CD Sonoda - BPA - 1399 (w/o enclosures)
WA Horin - Winston & Strawn (email)
RR Cowley - WDOH (email)
EFSECutc.wa.gov-- EFSEC (email)

TECHNICAL SPECIFICATIONS CHANGES (MARK-UPS)

1.1 Definitions

END OF CYCLE
RECIRCULATION PUMP
TRIP (EOC-RPT) SYSTEM
RESPONSE TIME

The EOC-RPT SYSTEM RESPONSE TIME shall be that time interval from initial signal generation by the associated turbine throttle valve limit switch or from when the turbine governor valve hydraulic control oil pressure drops below the pressure switch setpoint to complete suppression of the electric arc between the fully open contacts of the recirculation pump circuit breaker. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

INSERVICE TESTING
PROGRAM

The [INSERVICE TESTING PROGRAM](#) is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).

ISOLATION SYSTEM
RESPONSE TIME

The ISOLATION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its isolation initiation setpoint at the channel sensor until the isolation valves travel to their required positions. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

LEAKAGE

LEAKAGE shall be:

a. Identified LEAKAGE

1. LEAKAGE into the drywell such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or
2. LEAKAGE into the drywell atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary LEAKAGE;

b. Unidentified LEAKAGE

All LEAKAGE into the drywell that is not identified LEAKAGE;

c. Total LEAKAGE

Sum of the identified and unidentified LEAKAGE; and

d. Pressure Boundary LEAKAGE

LEAKAGE through a nonisolable fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.7.6	Verify each pump develops a flow rate ≥ 41.2 gpm at a discharge pressure ≥ 1220 psig.	In accordance with the Inservice Testing Program INSERVICE TESTING PROGRAM
SR 3.1.7.7	Verify flow through one SLC subsystem from pump into reactor pressure vessel.	In accordance with the Surveillance Frequency Control Program
SR 3.1.7.8	Verify all heat traced piping between storage tank and pump suction valve is unblocked.	In accordance with the Surveillance Frequency Control Program <u>AND</u> Once within 24 hours after solution temperature is restored within the limits of Figure 3.1.7-1
SR 3.1.7.9	Verify sodium pentaborate enrichment is ≥ 44.0 atom percent B-10.	Prior to addition to SLC Tank

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.3 Safety/Relief Valves (SRVs) - ≥ 25% RTP

LCO 3.4.3 The safety function of 12 SRVs shall be OPERABLE, with two SRVs in the lowest two lift setpoint groups OPERABLE.

APPLICABILITY: THERMAL POWER ≥ 25% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required SRVs inoperable.	A.1 Reduce THERMAL POWER to < 25% RTP.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY												
SR 3.4.3.1	<p>Verify the safety function lift setpoints of the required SRVs are as follows:</p> <table border="1"> <thead> <tr> <th>Number of SRVs</th> <th>Setpoint (psig)</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>1165 + 34.9 - 58.2</td> </tr> <tr> <td>4</td> <td>1175 + 35.2 - 58.7</td> </tr> <tr> <td>4</td> <td>1185 + 35.5 - 59.2</td> </tr> <tr> <td>4</td> <td>1195 + 35.8 - 59.7</td> </tr> <tr> <td>4</td> <td>1205 ± 36.1 - 60.2</td> </tr> </tbody> </table> <p>Following testing, lift settings shall be within ±3%.</p>	Number of SRVs	Setpoint (psig)	2	1165 + 34.9 - 58.2	4	1175 + 35.2 - 58.7	4	1185 + 35.5 - 59.2	4	1195 + 35.8 - 59.7	4	1205 ± 36.1 - 60.2	<p>In accordance with the Inservice Testing Program INSERVICE TESTING PROGRAM</p>
Number of SRVs	Setpoint (psig)													
2	1165 + 34.9 - 58.2													
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SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY												
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4	1185 + 35.5 - 59.2													
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4	1205 ± 36.1 - 60.2													
SR 3.4.4.2	<p>-----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify each required SRV opens when manually actuated.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>												

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
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 3.4.6.1 -----NOTE----- Only required to be performed in MODES 1 and 2. ----- Verify equivalent leakage of each RCS PIV is ≤ 0.5 gpm per nominal inch of valve size up to a maximum of 5 gpm, at an RCS pressure of 1035 psig. The actual test pressure shall be ≥ 935 psig.	In accordance with Inservice Testing Program the INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY												
SR 3.5.1.1	Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.	In accordance with the Surveillance Frequency Control Program												
SR 3.5.1.2	<p>-----NOTE-----</p> <p>Low pressure coolant injection (LPCI) subsystems may be considered OPERABLE during alignment and operation for decay heat removal with reactor steam dome pressure less than 48 psig in MODE 3, if capable of being manually realigned and not otherwise inoperable.</p> <p>-----</p> <p>Verify each ECCS injection/spray subsystem 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.</p>	In accordance with the Surveillance Frequency Control Program												
SR 3.5.1.3	Verify ADS accumulator backup compressed gas system average pressure in the required bottles is ≥ 2200 psig.	In accordance with the Surveillance Frequency Control Program												
SR 3.5.1.4	<p>Verify each ECCS pump develops the specified flow rate with the specified differential pressure between reactor and suction source.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><u>SYSTEM</u></th> <th><u>FLOW RATE</u></th> <th><u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u></th> </tr> </thead> <tbody> <tr> <td>LPCS</td> <td>≥ 6200 gpm</td> <td>≥ 128 psid</td> </tr> <tr> <td>LPCI</td> <td>≥ 7200 gpm</td> <td>≥ 26 psid</td> </tr> <tr> <td>HPCS</td> <td>≥ 6350 gpm</td> <td>≥ 200 psid</td> </tr> </tbody> </table>	<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u>	LPCS	≥ 6200 gpm	≥ 128 psid	LPCI	≥ 7200 gpm	≥ 26 psid	HPCS	≥ 6350 gpm	≥ 200 psid	In accordance with the Inservice Testing Program INSERVICE TESTING PROGRAM
<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u>												
LPCS	≥ 6200 gpm	≥ 128 psid												
LPCI	≥ 7200 gpm	≥ 26 psid												
HPCS	≥ 6350 gpm	≥ 200 psid												

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY												
SR 3.5.2.3	Verify, for each required ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.	In accordance with the Surveillance Frequency Control Program												
SR 3.5.2.4	<p>-----NOTE-----</p> <p>One low pressure coolant injection (LPCI) subsystem may be considered OPERABLE during alignment and operation for decay heat removal, if capable of being manually realigned and not otherwise inoperable.</p> <p>-----</p> <p>Verify each required ECCS injection/spray subsystem 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.</p>	In accordance with the Surveillance Frequency Control Program												
SR 3.5.2.5	<p>Verify each required ECCS pump develops the specified flow rate with the specified differential pressure between reactor and suction source.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><u>SYSTEM</u></th> <th><u>FLOW RATE</u></th> <th><u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u></th> </tr> </thead> <tbody> <tr> <td>LPCS</td> <td>≥ 6200 gpm</td> <td>≥ 128 psid</td> </tr> <tr> <td>LPCI</td> <td>≥ 7200 gpm</td> <td>≥ 26 psid</td> </tr> <tr> <td>HPCS</td> <td>≥ 6350 gpm</td> <td>≥ 200 psid</td> </tr> </tbody> </table>	<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u>	LPCS	≥ 6200 gpm	≥ 128 psid	LPCI	≥ 7200 gpm	≥ 26 psid	HPCS	≥ 6350 gpm	≥ 200 psid	In accordance with the Inservice Testing Program INSERVICE TESTING PROGRAM
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HPCS	≥ 6350 gpm	≥ 200 psid												

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.3	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 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. <p>-----</p> <p>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.</p>	<p>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</p>
SR 3.6.1.3.4	<p>Verify continuity of the traversing incore probe (TIP) shear isolation valve explosive charge.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
SR 3.6.1.3.5	<p>Verify the isolation time of each power operated, automatic PCIV, except for MSIVs, is within limits.</p>	<p>In accordance with the Inservice Testing Program INSERVICE TESTING PROGRAM</p>
SR 3.6.1.3.6	<p>Verify the isolation time of each MSIV is ≥ 3 seconds and ≤ 5 seconds.</p>	<p>In accordance with the Inservice Testing Program INSERVICE TESTING PROGRAM</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.7	Verify each automatic PCIV actuates to the isolation position on an actual or simulated isolation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.8	Verify a representative sample of reactor instrument line EFCVs actuate to the isolation position on an actual or simulated instrument line break signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.9	Remove and test the explosive squib from each shear isolation valve of the TIP System.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.10	Verify the combined leakage rate for all secondary containment bypass leakage paths is $\leq 0.04\%$ primary containment volume/day when pressurized to $\geq P_a$.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.11	Verify leakage rate through each MSIV is ≤ 16.0 scfh when tested at ≥ 25.0 psig.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.12	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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two or more lines with one or more reactor building-to-suppression chamber vacuum breakers inoperable for opening.	E.1 Restore all vacuum breakers in two lines to OPERABLE status.	1 hour
F. Required Action and associated Completion Time of Condition A, B or E not met.	F.1 Be in MODE 3.	12 hours
	<u>AND</u> F.2 Be in MODE 4.	36 hours

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.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.6.2 Perform a functional test of each vacuum breaker.	In accordance with the Inservice Testing Program INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.3.1	Verify each RHR suppression pool cooling subsystem 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 or can be aligned to the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.2.3.2	Verify each RHR pump develops a flow rate ≥ 7100 gpm through the associated heat exchanger while operating in the suppression pool cooling mode.	In accordance with the Inservice Testing Program INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.4.2.1 -----NOTES-----</p> <ol style="list-style-type: none"> 1. Valves and blind flanges in high radiation areas may be verified by use of administrative controls. 2. Not required to be met for SCIVs that are open under administrative controls. <p>-----</p> <p>Verify 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.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.6.4.2.2 Verify the isolation time of each power operated, automatic SCIV is within limits.</p>	<p>In accordance with the Inservice Testing Program INSERVICE TESTING PROGRAM</p>
<p>SR 3.6.4.2.3 Verify each automatic SCIV actuates to the isolation position on an actual or simulated automatic isolation signal.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

5.5 Programs and Manuals

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the FSAR, Table 3.9-1, Note 1, cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.5.6 Deleted Inservice Testing Program

~~This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves.~~

~~a. Testing Frequencies applicable to the ASME Code for Operations and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as follows:~~

ASME OM Code and applicable Addenda terminology for inservice testing activities	Required Frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

~~b. The provisions of SR 3.0.2 are applicable to the above required Frequencies and to other normal and accelerated Frequencies specified as 2 years or less in the Inservice Testing Program for performing inservice testing activities;~~

~~c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and~~

~~d. Nothing in the ASME OM Code shall be construed to supersede the requirements of any TS.~~

TECHNICAL SPECIFICATIONS CLEAN PAGES

1.1 Definitions

END OF CYCLE
RECIRCULATION PUMP
TRIP (EOC-RPT) SYSTEM
RESPONSE TIME

The EOC-RPT SYSTEM RESPONSE TIME shall be that time interval from initial signal generation by the associated turbine throttle valve limit switch or from when the turbine governor valve hydraulic control oil pressure drops below the pressure switch setpoint to complete suppression of the electric arc between the fully open contacts of the recirculation pump circuit breaker. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

INSERVICE TESTING
PROGRAM

The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).

ISOLATION SYSTEM
RESPONSE TIME

The ISOLATION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its isolation initiation setpoint at the channel sensor until the isolation valves travel to their required positions. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

LEAKAGE

LEAKAGE shall be:

a. Identified LEAKAGE

1. LEAKAGE into the drywell such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or
2. LEAKAGE into the drywell atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary LEAKAGE;

b. Unidentified LEAKAGE

All LEAKAGE into the drywell that is not identified LEAKAGE;

c. Total LEAKAGE

Sum of the identified and unidentified LEAKAGE; and

d. Pressure Boundary LEAKAGE

LEAKAGE through a nonisolable fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall.

SURVEILLANCE REQUIREMENTS

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SR 3.1.7.6	Verify each pump develops a flow rate ≥ 41.2 gpm at a discharge pressure ≥ 1220 psig.	In accordance with the INSERVICE TESTING PROGRAM
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SR 3.1.7.8	Verify all heat traced piping between storage tank and pump suction valve is unblocked.	In accordance with the Surveillance Frequency Control Program <u>AND</u> Once within 24 hours after solution temperature is restored within the limits of Figure 3.1.7-1
SR 3.1.7.9	Verify sodium pentaborate enrichment is ≥ 44.0 atom percent B-10.	Prior to addition to SLC Tank

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.3 Safety/Relief Valves (SRVs) - ≥ 25% RTP

LCO 3.4.3 The safety function of 12 SRVs shall be OPERABLE, with two SRVs in the lowest two lift setpoint groups OPERABLE.

APPLICABILITY: THERMAL POWER ≥ 25% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required SRVs inoperable.	A.1 Reduce THERMAL POWER to < 25% RTP.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY												
SR 3.4.3.1	<p>Verify the safety function lift setpoints of the required SRVs are as follows:</p> <table border="1"> <thead> <tr> <th><u>Number of SRVs</u></th> <th><u>Setpoint (psig)</u></th> </tr> </thead> <tbody> <tr> <td>2</td> <td>1165 + 34.9 - 58.2</td> </tr> <tr> <td>4</td> <td>1175 + 35.2 - 58.7</td> </tr> <tr> <td>4</td> <td>1185 + 35.5 - 59.2</td> </tr> <tr> <td>4</td> <td>1195 + 35.8 - 59.7</td> </tr> <tr> <td>4</td> <td>1205 ± 36.1 - 60.2</td> </tr> </tbody> </table> <p>Following testing, lift settings shall be within ±3%.</p>	<u>Number of SRVs</u>	<u>Setpoint (psig)</u>	2	1165 + 34.9 - 58.2	4	1175 + 35.2 - 58.7	4	1185 + 35.5 - 59.2	4	1195 + 35.8 - 59.7	4	1205 ± 36.1 - 60.2	In accordance with the INSERVICE TESTING PROGRAM
<u>Number of SRVs</u>	<u>Setpoint (psig)</u>													
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SR 3.4.4.2	<p>-----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify each required SRV opens when manually actuated.</p>	In accordance with the Surveillance Frequency Control Program												

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
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 3.4.6.1 -----NOTE----- Only required to be performed in MODES 1 and 2. ----- Verify equivalent leakage of each RCS PIV is ≤ 0.5 gpm per nominal inch of valve size up to a maximum of 5 gpm, at an RCS pressure of 1035 psig. The actual test pressure shall be ≥ 935 psig.	In accordance with the INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY												
SR 3.5.1.1	Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.	In accordance with the Surveillance Frequency Control Program												
SR 3.5.1.2	<p>-----NOTE-----</p> <p>Low pressure coolant injection (LPCI) subsystems may be considered OPERABLE during alignment and operation for decay heat removal with reactor steam dome pressure less than 48 psig in MODE 3, if capable of being manually realigned and not otherwise inoperable.</p> <p>-----</p> <p>Verify each ECCS injection/spray subsystem 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.</p>	In accordance with the Surveillance Frequency Control Program												
SR 3.5.1.3	Verify ADS accumulator backup compressed gas system average pressure in the required bottles is ≥ 2200 psig.	In accordance with the Surveillance Frequency Control Program												
SR 3.5.1.4	<p>Verify each ECCS pump develops the specified flow rate with the specified differential pressure between reactor and suction source.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><u>SYSTEM</u></th> <th><u>FLOW RATE</u></th> <th><u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u></th> </tr> </thead> <tbody> <tr> <td>LPCS</td> <td>≥ 6200 gpm</td> <td>≥ 128 psid</td> </tr> <tr> <td>LPCI</td> <td>≥ 7200 gpm</td> <td>≥ 26 psid</td> </tr> <tr> <td>HPCS</td> <td>≥ 6350 gpm</td> <td>≥ 200 psid</td> </tr> </tbody> </table>	<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u>	LPCS	≥ 6200 gpm	≥ 128 psid	LPCI	≥ 7200 gpm	≥ 26 psid	HPCS	≥ 6350 gpm	≥ 200 psid	In accordance with the INSERVICE TESTING PROGRAM
<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u>												
LPCS	≥ 6200 gpm	≥ 128 psid												
LPCI	≥ 7200 gpm	≥ 26 psid												
HPCS	≥ 6350 gpm	≥ 200 psid												

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY												
SR 3.5.2.3	Verify, for each required ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.	In accordance with the Surveillance Frequency Control Program												
SR 3.5.2.4	<p>-----NOTE-----</p> <p>One low pressure coolant injection (LPCI) subsystem may be considered OPERABLE during alignment and operation for decay heat removal, if capable of being manually realigned and not otherwise inoperable.</p> <p>-----</p> <p>Verify each required ECCS injection/spray subsystem 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.</p>	In accordance with the Surveillance Frequency Control Program												
SR 3.5.2.5	<p>Verify each required ECCS pump develops the specified flow rate with the specified differential pressure between reactor and suction source.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><u>SYSTEM</u></th> <th><u>FLOW RATE</u></th> <th><u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u></th> </tr> </thead> <tbody> <tr> <td>LPCS</td> <td>≥ 6200 gpm</td> <td>≥ 128 psid</td> </tr> <tr> <td>LPCI</td> <td>≥ 7200 gpm</td> <td>≥ 26 psid</td> </tr> <tr> <td>HPCS</td> <td>≥ 6350 gpm</td> <td>≥ 200 psid</td> </tr> </tbody> </table>	<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>DIFFERENTIAL PRESSURE BETWEEN REACTOR AND SUCTION SOURCE</u>	LPCS	≥ 6200 gpm	≥ 128 psid	LPCI	≥ 7200 gpm	≥ 26 psid	HPCS	≥ 6350 gpm	≥ 200 psid	In accordance with the INSERVICE TESTING PROGRAM
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SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.3	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 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. <p>-----</p> <p>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.</p>	<p>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</p>
SR 3.6.1.3.4	<p>Verify continuity of the traversing incore probe (TIP) shear isolation valve explosive charge.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
SR 3.6.1.3.5	<p>Verify the isolation time of each power operated, automatic PCIV, except for MSIVs, is within limits.</p>	<p>In accordance with the INSERVICE TESTING PROGRAM</p>
SR 3.6.1.3.6	<p>Verify the isolation time of each MSIV is ≥ 3 seconds and ≤ 5 seconds.</p>	<p>In accordance with the INSERVICE TESTING PROGRAM</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.7	Verify each automatic PCIV actuates to the isolation position on an actual or simulated isolation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.8	Verify a representative sample of reactor instrument line EFCVs actuate to the isolation position on an actual or simulated instrument line break signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.9	Remove and test the explosive squib from each shear isolation valve of the TIP System.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.10	Verify the combined leakage rate for all secondary containment bypass leakage paths is $\leq 0.04\%$ primary containment volume/day when pressurized to $\geq P_a$.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.11	Verify leakage rate through each MSIV is ≤ 16.0 scfh when tested at ≥ 25.0 psig.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.12	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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two or more lines with one or more reactor building-to-suppression chamber vacuum breakers inoperable for opening.	E.1 Restore all vacuum breakers in two lines to OPERABLE status.	1 hour
F. Required Action and associated Completion Time of Condition A, B or E not met.	F.1 Be in MODE 3.	12 hours
	<u>AND</u> F.2 Be in MODE 4.	36 hours

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.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.6.2 Perform a functional test of each vacuum breaker.	In accordance with the INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.3.1	Verify each RHR suppression pool cooling subsystem 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 or can be aligned to the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.2.3.2	Verify each RHR pump develops a flow rate ≥ 7100 gpm through the associated heat exchanger while operating in the suppression pool cooling mode.	In accordance with the INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.4.2.1 -----NOTES-----</p> <ol style="list-style-type: none"> 1. Valves and blind flanges in high radiation areas may be verified by use of administrative controls. 2. Not required to be met for SCIVs that are open under administrative controls. <p>-----</p> <p>Verify 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.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.6.4.2.2 Verify the isolation time of each power operated, automatic SCIV is within limits.</p>	<p>In accordance with the INSERVICE TESTING PROGRAM</p>
<p>SR 3.6.4.2.3 Verify each automatic SCIV actuates to the isolation position on an actual or simulated automatic isolation signal.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

5.5 Programs and Manuals

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the FSAR, Table 3.9-1, Note 1, cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.5.6 Deleted