

February 19, 2018

Docket Nos.: 50-321  
50-366

NL-18-0206

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

Edwin I. Hatch Nuclear Plant, Units 1 and 2  
Supplement to Application to Adopt TSTF-542,  
"Reactor Pressure Vessel Water Inventory Control"

Ladies and Gentlemen:

By letter dated April 20, 2017, Southern Nuclear Operating Company (SNC) submitted an application to adopt TSTF-542, "Reactor Pressure Vessel Water Inventory Control" for Edwin I. Hatch Nuclear Plant (HNP), Units 1 and 2. The proposed change replaces existing Technical Specifications (TS) requirements related to "operations with a potential for draining the reactor vessel" (OPDRVs) with new requirements on Reactor Pressure Vessel Water Inventory Control (RPV WIC) to protect Safety Limit 2.1.1.3.

An issue related to TSTF-542 was subsequently identified that applies to the HNP Unit 1 and Unit 2 adoption of this Traveler. Specifically, in accordance with TSTF-542, TS Table 3.3.5.2-1, Function 1.a (Core Spray System Reactor Steam Dome Pressure - Low (Injection Permissive)), and Function 2.a (Low Pressure Coolant Injection (LPCI) Reactor Steam Dome Pressure - Low (Injection Permissive)) are required in Modes 4 and 5. Prior to TSTF-542, the analogous Functions 1.c and 2.c in TS Table 3.3.5.1-1 had a Mode 4 and 5 applicability modified by a footnote specifying that these functions were only required when the associated emergency core cooling system (ECCS) subsystem(s) were required to be operable per limiting condition for operation (LCO) 3.5.2, "ECCS Shutdown." The footnote was inadvertently omitted from Table 3.3.5.2-1 Functions 1.a and 2.a in TSTF-542. Without the footnote, the Reactor Steam Dome Pressure - Low functions would be required to be operable for all low pressure ECCS subsystems, regardless of whether they are credited for meeting LCO 3.5.2. Requiring the functions for all ECCS subsystems is unnecessary. In Modes 4 and 5 with the reactor steam dome at atmospheric pressure, these functions only serve to satisfy permissives for opening low pressure ECCS injection valves for manual actuation. Accordingly, a variation is proposed to affix Footnote (a) (i.e., "Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, 'Reactor Pressure Vessel Water Inventory Control'") to the "Required Channels Per Function" column of Functions 1.a and 2.a of TS Table 3.3.5.2-1. The TS markup reflecting this variation and the corresponding revised TS page are included in Attachments 1 and 2, respectively.

Additionally, an issue was identified regarding the "clean" TS pages 3.5-6 (Unit 1) and 3.5-7 (Unit 2) pertaining to the use of the word subsystems versus subsystem in LCO 3.5.2 provided in the April 20, 2017 submittal. The "marked-up" pages provided for these TS pages were correct. The corrected revised "clean" TS pages have been included in Attachment 2

Thirdly, the Unit 1 and Unit 2 TS 3.6.1.3 Applicability states:

MODES 1, 2, and 3,

When associated instrumentation is required to be OPERABLE per LCO 3.3.6.1, "Primary Containment Isolation Instrumentation."

TSTF-542 relocated all of the LCO 3.3.6.1 non-Mode 1, 2, or 3 instrumentation requirements to LCO 3.3.5.2. Therefore, the TS 3.6.1.3 Applicability statement related to LCO 3.3.6.1 is being deleted. Since there will no longer be any Applicability related to Modes 4 and 5, TS 3.6.1.3 Condition F (which is only applicable in Modes 4 and 5) is being deleted in its entirety. This is considered to be an administrative variation. The TS markup reflecting this variation and the corresponding revised TS page are included in Attachments 1 and 2, respectively.

In addition, some changes were needed to the "clean" pages based on HNP receiving Amendments 286/231, 287/232, and 289/234. Amendment 287/232 resulted in former Unit 1 and Unit 2 TS 3.8.5 Condition A being split into Conditions C and D. Therefore, the required action to "Initiate action to suspend operations with a potential for draining the reactor vessel" is removed from TS 3.8.5 Conditions C and D, which is consistent with the intent of removing this required action from Condition A of the original submittal. The table below lists resultant changes from these recently received amendments affecting TSTF-542 pages:

TS Section	Previous TS Amendment No.	Previous TS Amendment Change
1.1 Definitions	286/231	Added "INSERVICE TESTING PROGRAM" definition. [Note: This page was resubmitted as part of the TSTF-542 submittal due to the page number changing.]
3.6.4.1 Secondary Containment	289/234	Modified requirements for SR 3.6.4.1.2
3.8.5 DC Sources – Shutdown	287/232	Split former Condition A into Conditions C and D
3.8.8 Distribution Systems – Shutdown	287/232	Changed page number

Lastly, SNC originally requested approval by December 31, 2017, with an implementation period of 120 days. SNC instead requests approval by April 20, 2018. SNC will implement the amendment prior to the commencement of Unit 2 refueling outage 25 (U2R25), which is currently scheduled to begin in February 2019.

SNC has reviewed the information supporting a finding of no significant hazards consideration, and the environmental consideration, that were previously provided to the April 20, 2017 amendment request. The additional information provided in this letter does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration. In addition, the information provided in this letter does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

This letter contains no NRC commitments. If you have any questions, please contact Ken McElroy at 205.992.7369.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 19<sup>th</sup> day of February 2018.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Justin T. Wheat". The signature is stylized with a large, looping initial "J" and a cursive "Wheat".

Justin T. Wheat  
Nuclear Licensing Manager  
Southern Nuclear Operating Company

JTW/RMJ/cg

Attachments: 1. Revised TS Marked-up Pages  
2. Clean Typed TS Pages

cc: Regional Administrator, Region II  
NRR Project Manager – Hatch  
Senior Resident Inspector – Hatch  
Director, Environmental Protection Division – State of Georgia  
RType: CHA02.004



**Edwin I. Hatch Nuclear Plant, Units 1 and 2  
Supplement to Application to Adopt TSTF-542,  
"Reactor Pressure Vessel Water Inventory Control"**

**Attachment 1**

**Revised TS Marked-up Pages**



RPV Water Inventory Control Instrumentation  
3.3.5.2

Table 3.3.5.2-1 (page 1 of 1)  
RPV Water Inventory Control Instrumentation

<u>FUNCTION</u>	<u>APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS</u>	<u>REQUIRED CHANNELS PER FUNCTION</u>	<u>CONDITIONS REFERENCED FROM REQUIRED ACTION A.1</u>	<u>SURVEILLANCE REQUIREMENTS</u>	<u>ALLOWABLE VALUE</u>
<u>1. Core Spray System</u>					
<u>a. Reactor Steam Dome Pressure - Low (Injection Permissive)</u>	<u>4, 5</u>	<u>4<sup>(a)</sup></u>	<u>C</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≤ 476 psig</u>
<u>b. Core Spray Pump Discharge Flow - Low (Bypass)</u>	<u>4, 5</u>	<u>1 per subsystem<sup>(a)</sup></u>	<u>D</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≥ 610 gpm and</u> <u>≤ 825 gpm</u>
<u>2. Low Pressure Coolant Injection (LPCI) System</u>					
<u>a. Reactor Steam Dome Pressure - Low (Injection Permissive)</u>	<u>4, 5</u>	<u>4<sup>(a)</sup></u>	<u>C</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≤ 476 psig</u>
<u>b. Low Pressure Coolant Injection Pump Discharge Flow - Low (Bypass)</u>	<u>4, 5</u>	<u>1 per subsystem<sup>(a), (c)</sup></u>	<u>D</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≥ 1670 gpm</u> <u>and</u> <u>≤ 2205 gpm</u>
<u>3. RHR System Isolation</u>					
<u>a. Reactor Vessel Water Level - Low, Level 3</u>	<u>(b)</u>	<u>2 in one trip system</u>	<u>B</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≥ 0 inches</u>
<u>4. Reactor Water Cleanup (RWCU) System Isolation</u>					
<u>a. Reactor Vessel Water Level - Low Low, Level 2</u>	<u>(b)</u>	<u>2 in one trip system</u>	<u>B</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≥ -47 inches</u>

(a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, "Reactor Pressure Vessel Water Inventory Control."

(b) When automatic isolation of the associated penetration flow path(s) is credited in calculating DRAIN TIME.

(c) Function not required to be OPERABLE while associated pump is operating in decay heat removal when minimum flow valve is closed and deactivated.

### 3.6 CONTAINMENT SYSTEMS

#### 3.6.1.3 Primary Containment Isolation Valves (PCIVs)

LCO 3.6.1.3 Each PCIV, except reactor building-to-suppression chamber vacuum breakers, 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 except for 18 inch purge valve 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
<p>A. -----NOTE----- Only applicable to penetration flow paths with two PCIVs. -----</p> <p>One or more penetration flow paths with one PCIV inoperable except due to leakage not within limit.</p>	<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 except for main steam line</p> <p><u>AND</u></p> <p>8 hours for main steam line</p> <p>(continued)</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
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.	Immediately
	<p><u>OR</u></p> <p><del>F.21</del> <del>NOTE</del></p> <p><del>Only applicable for inoperable RHR shutdown cooling valves.</del></p> <p>Initiate action to restore valve(s) to OPERABLE status.</p>	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.3.1</p> <p>-----NOTE-----</p> <p>Not required to be met when the 18 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.</p> <p>-----</p> <p>Verify each 18 inch primary containment purge valve is closed.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)



ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u> C.3 <del>Initiate action to suspend OPDRVs.</del>	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.3	<p>-----NOTE-----</p> <p>The number of standby gas treatment (SGT) subsystem(s) required for this Surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," for the given configuration.</p> <p>-----</p> <p>Verify secondary containment can be drawn down to <math>\geq 0.20</math> inch of vacuum water gauge in <math>\leq 10</math> minutes using required standby gas treatment (SGT) subsystem(s).</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	<p><del>C.2.3</del> <del>Initiate action to suspend operations with a potential for draining the reactor vessel.</del></p> <p><del>AND</del></p> <p>C.2.4<sup>3</sup> Initiate action to restore required DG DC electrical power subsystems to OPERABLE status.</p>	<p>Immediately</p> <p>Immediately</p>
<p>D. One or more required station service DC electrical power subsystems inoperable for reasons other than Condition B.</p> <p><u>OR</u></p> <p>Required Actions and associated Completion Times of Condition B not met.</p>	<p>D.1 Declare affected required feature(s) inoperable.</p> <p><u>OR</u></p> <p>D.2.1 Suspend CORE ALTERATIONS.</p> <p><u>AND</u></p> <p>D.2.2 Suspend movement of irradiated fuel assemblies in the secondary containment.</p> <p><u>AND</u></p> <p><del>D.2.3</del> <del>Initiate action to suspend operations with a potential for draining the reactor vessel.</del></p> <p><del>AND</del></p> <p>D.2.4<sup>3</sup> Initiate action to restore required station service DC electrical power subsystems to OPERABLE status.</p>	<p>Immediately</p> <p>Immediately</p> <p>Immediately</p> <p>Immediately</p>

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<del>A.2.3</del> <del>Initiate action to suspend operations with a potential for draining the reactor vessel.</del>	Immediately
	<del>AND</del>	
	A.2.4 <sup>3</sup> Initiate actions to restore required AC and DC electrical power distribution subsystem(s) to OPERABLE status.	Immediately
	<del>AND</del>	
	A.2.5 <sup>4</sup> Declare associated required shutdown cooling subsystem(s) inoperable and not in operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.8.1	Verify correct breaker alignments and voltage to required AC and DC electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program



RPV Water Inventory Control Instrumentation  
3.3.5.2

Table 3.3.5.2-1 (page 1 of 1)  
RPV Water Inventory Control Instrumentation

<u>FUNCTION</u>	<u>APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS</u>	<u>REQUIRED CHANNELS PER FUNCTION</u>	<u>CONDITIONS REFERENCED FROM REQUIRED ACTION A.1</u>	<u>SURVEILLANCE REQUIREMENTS</u>	<u>ALLOWABLE VALUE</u>
<u>1. Core Spray System</u>					
a. <u>Reactor Steam Dome Pressure - Low (Injection Permissive)</u>	<u>4, 5</u>	<u>4<sup>(a)</sup></u>	<u>C</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≤ 476 psig</u>
b. <u>Core Spray Pump Discharge Flow - Low (Bypass)</u>	<u>4, 5</u>	<u>1 per subsystem<sup>(a)</sup></u>	<u>D</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≥ 570 gpm and</u> <u>≤ 745 gpm</u>
<u>2. Low Pressure Coolant Injection (LPCI) System</u>					
a. <u>Reactor Steam Dome Pressure - Low (Injection Permissive)</u>	<u>4, 5</u>	<u>4<sup>(a)</sup></u>	<u>C</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≤ 476 psig</u>
b. <u>Low Pressure Coolant Injection Pump Discharge Flow - Low (Bypass)</u>	<u>4, 5</u>	<u>1 per subsystem<sup>(a), (c)</sup></u>	<u>D</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≥ 1675 gpm</u> <u>and</u> <u>≤ 2215 gpm</u>
<u>3. RHR System Isolation</u>					
a. <u>Reactor Vessel Water Level - Low, Level 3</u>	<u>(b)</u>	<u>2 in one trip system</u>	<u>B</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≥ 0 inches</u>
<u>4. Reactor Water Cleanup (RWCU) System Isolation</u>					
a. <u>Reactor Vessel Water Level - Low Low, Level 2</u>	<u>(b)</u>	<u>2 in one trip system</u>	<u>B</u>	<u>SR 3.3.5.2.1</u> <u>SR 3.3.5.2.2</u>	<u>≥ -47 inches</u>

(a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, "Reactor Pressure Vessel Water Inventory Control."

(b) When automatic isolation of the associated penetration flow path(s) is credited in calculating DRAIN TIME.

(c) Function not required to be OPERABLE while associated pump is operating in decay heat removal when minimum flow valve is closed and deactivated.

### 3.6 CONTAINMENT SYSTEMS

#### 3.6.1.3 Primary Containment Isolation Valves (PCIVs)

LCO 3.6.1.3 Each PCIV, except reactor building-to-suppression chamber vacuum breakers, 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 except for 18 inch purge valve 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
<p>A. -----NOTE-----  Only applicable to penetration flow paths with two PCIVs.</p> <p>One or more penetration flow paths with one PCIV inoperable except due to leakage not within limit.</p>	<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 except for main steam line</p> <p><u>AND</u></p> <p>8 hours for main steam line</p> <p>(continued)</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
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.	Immediately
	<u>OR</u>	
	<p>F.21 NOTE</p> <p>Only applicable for inoperable RHR shutdown cooling valves.</p> <hr/> <p>Initiate action to restore valve(s) to OPERABLE status.</p>	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.3.1</p> <p>-----NOTE-----</p> <p>Not required to be met when the 18 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.</p> <p>-----</p> <p>Verify each 18 inch primary containment purge valve is closed.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)



ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u> C.3 <del>Initiate action to suspend OPDRVs.</del>	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.3	<p>-----NOTE-----</p> <p>The number of standby gas treatment (SGT) subsystem(s) required for this Surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," for the given configuration.</p> <p>-----</p> <p>Verify secondary containment can be drawn down to <math>\geq 0.20</math> inch of vacuum water gauge in <math>\leq 10</math> minutes using required standby gas treatment (SGT) subsystem(s).</p>	In accordance with the Surveillance Frequency Control Program

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	<p><del>C.2.3</del> Initiate action to suspend operations with a potential for draining the reactor vessel.</p> <p><del>AND</del></p> <p>C.2.4<sup>3</sup> Initiate action to restore required DG DC electrical power subsystems to OPERABLE status.</p>	<p>Immediately</p> <p>Immediately</p>
<p>D. One or more required station service DC electrical power subsystems inoperable for reasons other than Condition B.</p> <p><u>OR</u></p> <p>Required Actions and associated Completion Times of Condition B not met.</p>	<p>D.1 Declare affected required feature(s) inoperable.</p> <p><u>OR</u></p> <p>D.2.1 Suspend CORE ALTERATIONS.</p> <p><u>AND</u></p> <p>D.2.2 Suspend movement of irradiated fuel assemblies in the secondary containment.</p> <p><u>AND</u></p> <p><del>D.2.3</del> Initiate action to suspend operations with a potential for draining the reactor vessel.</p> <p><del>AND</del></p> <p>D.2.4<sup>3</sup> Initiate action to restore required station service DC electrical power subsystems to OPERABLE status.</p>	<p>Immediately</p> <p>Immediately</p> <p>Immediately</p> <p>Immediately</p>

# ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<del>A.2.3</del> Initiate action to suspend operations with a potential for draining the reactor vessel.	Immediately
	<u>AND</u>	
	A.2.4 <del>3</del> Initiate actions to restore required AC and DC electrical power distribution subsystem(s) to OPERABLE status.	Immediately
	<u>AND</u>	
	A.2.5 <del>4</del> Declare associated required shutdown cooling subsystem(s) inoperable and not in operation.	Immediately

# SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.8.1	Verify correct breaker alignments and voltage to required AC and DC electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program



**Edwin I. Hatch Nuclear Plant, Units 1 and 2  
Supplement to Application to Adopt TSTF-542,  
"Reactor Pressure Vessel Water Inventory Control"**

**Attachment 2**

**Clean Typed TS Pages**

1.1 Definitions (continued)

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 stop valve limit switch or from when the turbine control 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).
LEAKAGE	<p>LEAKAGE shall be:</p> <ol style="list-style-type: none"> <li>a. <u>Identified LEAKAGE</u> <ol style="list-style-type: none"> <li>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</li> <li>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;</li> </ol> </li> <li>b. <u>Unidentified LEAKAGE</u> All LEAKAGE into the drywell that is not identified LEAKAGE;</li> <li>c. <u>Total LEAKAGE</u> Sum of the identified and unidentified LEAKAGE;</li> <li>d. <u>Pressure Boundary LEAKAGE</u> LEAKAGE through a nonisolable fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall.</li> </ol>
LINEAR HEAT GENERATION RATE	LINEAR HEAT GENERATION RATE (LHGR) shall be the power generation in an arbitrary length of fuel rod, usually six inches. It is the integral of the heat flux over the heat transfer area associated with the unit length.
LOGIC SYSTEM FUNCTIONAL TEST	A LOGIC SYSTEM FUNCTIONAL TEST shall be a test of all required logic components (i.e., all required relays and contacts, trip units, solid state logic elements, etc.) of a logic circuit, from as close to the sensor as practicable up to, but not including, the actuated device, to verify OPERABILITY. The LOGIC SYSTEM FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total system steps so that the entire logic system is tested.

(continued)

RPV Water Inventory Control Instrumentation  
3.3.5.2

Table 3.3.5.2-1 (page 1 of 1)  
RPV Water Inventory Control Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Steam Dome Pressure - Low (Injection Permissive)	4, 5	4 <sup>(a)</sup>	C	SR 3.3.5.2.1 SR 3.3.5.2.2	≤ 476 psig
b. Core Spray Pump Discharge Flow - Low (Bypass)	4, 5	1 per subsystem <sup>(a)</sup>	D	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 610 gpm and ≤ 825 gpm
2. Low Pressure Coolant Injection (LPCI) System					
a. Reactor Vessel Dome Pressure - Low (Injection Permissive)	4, 5	4 <sup>(a)</sup>	C	SR 3.3.5.2.1 SR 3.3.5.2.2	≤ 476 psig
b. Low Pressure Coolant Injection Pump Discharge Flow - Low (Bypass)	4, 5	1 per subsystem <sup>(a),(c)</sup>	C	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 1670 gpm and ≤ 2205 gpm
3. RHR System Isolation					
a. Reactor Vessel Water Level - Low, Level 3	(b)	2 in one trip system	B	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 0 inches
4. Reactor Water Cleanup (RWCU) System Isolation					
a. Reactor Vessel Water Level - Low Low, Level 2	(b)	2 in one trip system	B	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ -47 inches

(a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, "Reactor Pressure Vessel Water Inventory Control".

(b) When automatic isolation of the associated penetration flow path(s) is credited in calculating DRAIN TIME.

(c) Function not required to be OPERABLE while associated pump is operating in decay heat removal when minimum flow valve is closed and deactivated.

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS), RPV WATER INVENTORY CONTROL, AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

3.5.2 Reactor Pressure Vessel (RPV) Water Inventory Control

LCO 3.5.2 DRAIN TIME of RPV water inventory to the top of active fuel (TAF) shall be  $\geq 36$  hours.

AND

One low pressure ECCS injection/spray subsystem shall be OPERABLE.

APPLICABILITY: MODES 4 and 5

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required ECCS injection/spray subsystem inoperable.	A.1 Restore required ECCS injection/spray subsystem to OPERABLE status.	4 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to establish a method of water injection capable of operating without offsite electrical power.	Immediately
C. DRAIN TIME < 36 hours and $\geq 8$ hours.	C.1 Verify secondary containment boundary is capable of being established in less than the DRAIN TIME.	4 hours
	<u>AND</u>	
	C.2 Verify each secondary containment penetration flow path is capable of being isolated in less than the DRAIN TIME.	4 hours
	<u>AND</u>	

(continued)



### 3.6 CONTAINMENT SYSTEMS

#### 3.6.1.3 Primary Containment Isolation Valves (PCIVs)

LCO 3.6.1.3 Each PCIV, except reactor building-to-suppression chamber vacuum breakers, shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

#### ACTIONS

#### NOTES

1. Penetration flow paths except for 18 inch purge valve 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
<p>A. -----NOTE----- Only applicable to penetration flow paths with two PCIVs.</p> <p>One or more penetration flow paths with one PCIV inoperable except due to leakage not within limit.</p>	<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 except for main steam line</p> <p><u>AND</u></p> <p>8 hours for main steam line</p> <p>(continued)</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. -----NOTE----- Only applicable to penetration flow paths with only one PCIV. -----</p> <p>One or more penetration flow paths with one PCIV inoperable except due to leakage not within limits.</p>	<p>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.</p> <p><u>AND</u></p> <p>C.2 -----NOTES----- 1. Valves and blind flanges 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>Verify the affected penetration flow path is isolated.</p>	<p>4 hours except for excess flow check valve (EFCV) line and penetrations with a closed system</p> <p><u>AND</u></p> <p>72 hours for EFCV line and penetrations with a closed system</p> <p>Once per 31 days</p>
<p>D. One or more penetration flow paths with leakage not within limit.</p>	<p>D.1 Restore leakage to within limit.</p>	<p>4 hours</p>
<p>E. Required Action and associated Completion Time of Condition A, B, C, or D not met in MODE 1, 2, or 3.</p>	<p>E.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>E.2 Be in MODE 4.</p>	<p>12 hours</p> <p>36 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.3.1</p> <p>-----NOTE-----</p> <p>Not required to be met when the 18 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.</p> <p>-----</p> <p>Verify each 18 inch primary containment purge valve is closed.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.6.1.3.2</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>Valves and blind flanges in high radiation areas may be verified by use of administrative means.</li> <li>Not required to be met for PCIVs that are open under administrative controls.</li> </ol> <p>-----</p> <p>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.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.6.1.3.3</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>Valves and blind flanges in high radiation areas may be verified by use of administrative means.</li> <li>Not required to be met for PCIVs that are open under administrative controls.</li> </ol> <p>-----</p> <p>Verify each primary containment manual isolation 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>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.4	Verify continuity of the traversing incore probe (TIP) shear isolation valve explosive charge.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.5	Verify the isolation time of each power operated, automatic PCIV, except for MSIVs, is within limits.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.6.1.3.6	Verify the isolation time of each MSIV is $\geq 3$ seconds and $\leq 5$ seconds.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.6.1.3.7	Verify each automatic PCIV, excluding EFCVs, 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 each reactor instrumentation line EFCV (of a representative sample) actuates to restrict flow to within limits.	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 combined MSIV leakage rate for all four main steam lines is $\leq 100$ scfh when tested at $\geq 28.0$ psig and $< 50.8$ psig. <u>OR</u> Verify combined MSIV leakage rate for all four main steam lines is $\leq 144$ scfh when tested at $\geq 50.8$ psig.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.11	Deleted	

(continued)



SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.12	Cycle each 18 inch excess flow isolation damper to the fully closed and fully open position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.13	Verify the combined leakage rate for all secondary containment bypass leakage paths is $\leq 0.02 \text{ La}$ when pressurized to $\geq \text{Pa}$ .	In accordance with the Primary Containment Leakage Rate Testing Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2 Suspend CORE ALTERATIONS.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.3	<p>-----NOTE-----</p> <p>The number of standby gas treatment (SGT) subsystem(s) required for this Surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," for the given configuration.</p> <p>-----</p> <p>Verify secondary containment can be drawn down to <math>\geq 0.20</math> inch of vacuum water gauge in <math>\leq 10</math> minutes using required standby gas treatment (SGT) subsystem(s).</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.3 Initiate action to restore required DG DC electrical power subsystems to OPERABLE status.	Immediately
D. One or more required station service DC electrical power subsystems inoperable for reasons other than Condition B.  <u>OR</u>  Required Actions and associated Completion Times of Condition B not met.	D.1 Declare affected required feature(s) inoperable.  <u>OR</u> D.2.1 Suspend CORE ALTERATIONS.  <u>AND</u> D.2.2 Suspend movement of irradiated fuel assemblies in the secondary containment.  <u>AND</u> D.2.3 Initiate action to restore required station service DC electrical power subsystems to OPERABLE status.	Immediately   Immediately   Immediately   Immediately

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2.3 Initiate actions to restore required AC and DC electrical power distribution subsystem(s) to OPERABLE status.	Immediately
	<u>AND</u> A.2.4 Declare associated required shutdown cooling subsystem(s) inoperable and not in operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.8.1	Verify correct breaker alignments and voltage to required AC and DC electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program



1.1 Definitions (continued)

EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME	The ECCS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ECCS initiation setpoint at the channel sensor until the ECCS equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. 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.
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 stop valve limit switch or from when the turbine control 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. Times shall include diesel generator starting and sequence loading delays, where applicable. 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	<p>LEAKAGE shall be:</p> <p>a. <u>Identified LEAKAGE</u></p> <ol style="list-style-type: none"> <li>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</li> <li>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;</li> </ol> <p>b. <u>Unidentified LEAKAGE</u></p> <p>All LEAKAGE into the drywell that is not identified LEAKAGE;</p>

(continued)

RPV Water Inventory Control Instrumentation  
3.3.5.2

Table 3.3.5.2-1 (page 1 of 1)  
RPV Water Inventory Control Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Steam Dome Pressure - Low (Injection Permissive)	4, 5	4 <sup>(a)</sup>	C	SR 3.3.5.2.1 SR 3.3.5.2.2	≤ 476 psig
b. Core Spray Pump Discharge Flow - Low (Bypass)	4, 5	1 per subsystem <sup>(a)</sup>	D	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 570 gpm and ≤ 745 gpm
2. Low Pressure Coolant Injection (LPCI) System					
a. Reactor Steam Dome Pressure - Low (Injection Permissive)	4, 5	4 <sup>(a)</sup>	C	SR 3.3.5.2.1 SR 3.3.5.2.2	≤ 476 psig
b. Low Pressure Coolant Injection Pump Discharge Flow - Low (Bypass)	4, 5	1 per subsystem <sup>(a),(c)</sup>	C	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 1675 gpm and ≤ 2215 gpm
3. RHR System Isolation					
a. Reactor Vessel Water Level - Low Level 3	(b)	2 in one trip system	B	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 0 inches
4. Reactor Water Cleanup (RWCU) System Isolation					
a. Reactor Vessel Water Level - Low Low, Level 2	(b)	2 in one trip system	B	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ -47 inches

- (a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, "Reactor Pressure Vessel Water Inventory Control".
- (b) When automatic isolation of the associated penetration flow path(s) is credited in calculating DRAIN TIME.
- (c) Function not required to be OPERABLE while associated pump is operating in decay heat removal when minimum flow valve is closed and deactivated.

### 3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS), RPV WATER INVENTORY CONTROL, AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

#### 3.5.2 ECCS - Shutdown

LCO 3.5.2 DRAIN TIME of RPV water inventory to the top of active fuel (TAF) shall be  $\geq 36$  hours.

AND

One low pressure ECCS injection/spray subsystem shall be OPERABLE.

APPLICABILITY: MODES 4 and 5

#### ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required ECCS injection/spray subsystem inoperable.	A.1 Restore required ECCS injection/spray subsystem to OPERABLE status.	4 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to establish a method of water injection capable of operating without offsite electrical power.	Immediately
C. DRAIN TIME < 36 hours and $\geq 8$ hours.	C.1 Verify secondary containment boundary is capable of being established in less than the DRAIN TIME.	4 hours
	<u>AND</u> C.2 Verify each secondary containment penetration flow path is capable of being isolated in less than the DRAIN TIME.	4 hours

(continued)

### 3.6 CONTAINMENT SYSTEMS

#### 3.6.1.3 Primary Containment Isolation Valves (PCIVs)

LCO 3.6.1.3 Each PCIV, except reactor building-to-suppression chamber vacuum breakers, shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

#### ACTIONS

#### NOTES

1. Penetration flow paths except for 18 inch purge valve 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
<p>A. -----NOTE----- Only applicable to penetration flow paths with two PCIVs.</p> <p>One or more penetration flow paths with one PCIV inoperable except due to leakage not within limit.</p>	<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 except for main steam line</p> <p><u>AND</u></p> <p>8 hours for main steam line</p> <p>(continued)</p>



ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. -----NOTE----- Only applicable to penetration flow paths with only one PCIV. -----</p> <p>One or more penetration flow paths with one PCIV inoperable except due to leakage not within limits.</p>	<p>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.</p> <p><u>AND</u></p> <p>C.2 -----NOTES----- 1. Valves and blind flanges 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>Verify the affected penetration flow path is isolated.</p>	<p>4 hours except for excess flow check valve (EFCV) line and penetrations with a closed system</p> <p><u>AND</u></p> <p>72 hours for EFCV line and penetrations with a closed system</p> <p>Once per 31 days</p>
<p>D. One or more penetration flow paths with leakage not within limit.</p>	<p>D.1 Restore leakage to within limit.</p>	<p>4 hours</p>
<p>E. Required Action and associated Completion Time of Condition A, B, C, or D not met in MODE 1, 2, or 3.</p>	<p>E.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>E.2 Be in MODE 4.</p>	<p>12 hours</p> <p>36 hours</p>

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.3.1</p> <p>-----NOTE-----</p> <p>Not required to be met when the 18 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.</p> <p>-----</p> <p>Verify each 18 inch primary containment purge valve is closed.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.6.1.3.2</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>Valves and blind flanges in high radiation areas may be verified by use of administrative means.</li> <li>Not required to be met for PCIVs that are open under administrative controls.</li> </ol> <p>-----</p> <p>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.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.6.1.3.3</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>Valves and blind flanges in high radiation areas may be verified by use of administrative means.</li> <li>Not required to be met for PCIVs that are open under administrative controls.</li> </ol> <p>-----</p> <p>Verify each primary containment manual isolation 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>

(continued)

## SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.4	Verify continuity of the traversing incore probe (TIP) shear isolation valve explosive charge.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.5	Verify the isolation time of each power operated, automatic PCIV, except for MSIVs, is within limits.	In accordance with the Inservice Testing Program
SR 3.6.1.3.6	Verify the isolation time of each MSIV is $\geq 3$ seconds and $\leq 5$ seconds.	In accordance with the Inservice Testing Program
SR 3.6.1.3.7	Verify each automatic PCIV, excluding EFCVs, 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 each reactor instrumentation line EFCV (of a representative sample) actuates to restrict flow to within limits.	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 $\leq 0.02 L_a$ when pressurized to $\geq P_a$ .	In accordance with the Primary Containment Leakage Rate Testing Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.11	<p>Verify combined MSIV leakage rate for all four main steam lines is <math>\leq 100</math> scfh when tested at <math>\geq 28.8</math> psig and <math>&lt; 47.3</math> psig.</p> <p><u>OR</u></p> <p>Verify combined MSIV leakage rate for all four main steam lines is <math>\leq 144</math> scfh when tested at <math>\geq 47.3</math> psig.</p>	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.12	Deleted	
SR 3.6.1.3.13	Cycle each 18 inch excess flow isolation damper to the fully closed and fully open position.	In accordance with the Surveillance Frequency Control Program



ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2 Suspend CORE ALTERATIONS.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.3	<p>-----NOTE-----</p> <p>The number of standby gas treatment (SGT) subsystem(s) required for this Surveillance is dependent on the secondary containment configuration, and shall be one less than the number required to meet LCO 3.6.4.3, "Standby Gas Treatment (SGT) System," for the given configuration.</p> <p>-----</p> <p>Verify secondary containment can be drawn down to <math>\geq 0.20</math> inch of vacuum water gauge in <math>\leq 10</math> minutes using required standby gas treatment (SGT) subsystem(s).</p>	In accordance with the Surveillance Frequency Control Program

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.3 Initiate action to restore required DC electrical power subsystems to OPERABLE status.	Immediately
D. One or more required station service DC electrical power subsystems inoperable for reasons other than Condition B.  <u>OR</u>  Required Actions and associated Completion Times of Condition B not met.	D.1 Declare affected required feature(s) inoperable.  <u>OR</u> D.2.1 Suspend CORE ALTERATIONS.  <u>AND</u> D.2.2 Suspend movement of irradiated fuel assemblies in the secondary containment.  <u>AND</u> D.2.3 Initiate action to restore required station service DC electrical power subsystems to OPERABLE status.	Immediately   Immediately   Immediately   Immediately

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2.3 Initiate actions to restore required AC and DC electrical power distribution subsystem(s) to OPERABLE status.	Immediately
	<p><u>AND</u></p> <p>A.2.4 Declare associated required shutdown cooling subsystem(s) inoperable and not in operation.</p>	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.8.1 Verify correct breaker alignments and voltage to required AC and DC electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program