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United States Nuclear Regulatory Commission
Washington, D.C. 20555

Perry Nuclear Power Plant
Docket Number 50-440
License Number NPF-58

Subject: License Amendment Request to Revise Technical Specification 3.6.1, 3.6.4, and 3.6.5 for Containment and Drywell Isolation Device

Ladies and Gentlemen:

In accordance with the provisions of 10 CFR 50.90, FirstEnergy Nuclear Operating Company (FENOC) hereby requests Nuclear Regulatory Commission (NRC) review and approval of a license amendment to the Technical Specifications (TS) for the Perry Nuclear Power Plant (PNPP).

The proposed amendment would revise Technical Specifications 3.6.1, 3.6.4, and 3.6.5 to relax the position verification requirements for primary containment isolation devices, secondary containment isolation devices, and drywell isolation devices that are locked, sealed, or otherwise secured. These changes are based on TS Task Force (TSTF) change traveler TSTF-45 (Revision 2) and TSTF-269 (Revision 2), which have been approved generically for the Boiling Water Reactor (BWR) Standard Technical Specifications, NUREG-1434 (BWR/6). The enclosure provides the evaluation for the proposed amendment.

Approval of the license amendment is requested prior to August 29, 2008, with the amendment to be implemented within 120 days following its effective date.

There are no regulatory commitments included in this submittal. If there are any questions or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – FENOC Fleet Licensing, at (330) 761-6071.

A001
NRR

I declare under penalty of perjury that the foregoing is true and correct. Executed on September 5, 2007.

Barry S. Allen

Enclosure 1: Perry Nuclear Power Plant Evaluation for a Proposed License Amendment to Revise Technical Specification 3.6.1, 3.6.4, and 3.6.5 for Primary Containment, Secondary Containment, and Drywell Isolation Devices.

cc: NRC Project Manager
NRC Resident Inspector
NRC Region III
State of Ohio

Perry Nuclear Power Plant Evaluation for a Proposed License Amendment to Revise Technical Specifications 3.6.1, 3.6.4, and 3.6.5 for Primary Containment, Secondary Containment, and Drywell Isolation Devices

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1. Proposed Technical Specification Changes (mark-up)
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1.0 SUMMARY DESCRIPTION

The proposed license amendment revises the Operating License for the Perry Nuclear Power Plant (PNPP), License Number NPF-58 Technical Specifications (TS) 3.6.1, 3.6.4, and 3.6.5. This amendment would exempt primary containment, secondary containment, and drywell isolation devices that are locked, sealed, or otherwise secured from Surveillance Requirements (SR) that require position verification. Additionally, the associated actions of Technical Specification 3.6.1, 3.6.4, and 3.6.5 for penetration flow paths would be revised to allow administrative verification of primary containment, secondary containment, and drywell isolation devices that are locked, sealed, or otherwise secured. The proposed amendment is based on generically approved changes through NRC and industry approval of TS Task Force (TSTF) change travelers TSTF-45 and TSTF-269.

2.0 DETAILED DESCRIPTION

The changes are based on TSTF-45 (Revision 2) and TSTF-269 (Revision 2), which have been approved generically for the Boiling Water Reactor (BWR) Standard Technical Specifications, NUREG-1434 (BWR/6). The TS impacted by TSTF-45 and TSTF-269 are 3.6.1.3, "Primary Containment Isolation Valves (PCIVs)," 3.6.4.2, "Secondary Containment Isolation Valves (SCIVs)," and 3.6.5.3, "Drywell Isolation Valves." Incorporating these changes at the Perry Nuclear Power Plant (PNPP) will provide dose savings by allowing containment and drywell isolation devices to be exempted from verification for applicable surveillance requirements and verified through administrative means for the related required actions.

The requested changes based on TSTF-45 would modify SRs 3.6.1.3.3, 3.6.1.3.4, 3.6.4.2.1, and 3.6.5.3.3. Each of these SRs currently contains the following requirements:

SR 3.6.1.3.3

> Verify each primary containment isolation manual valve and blind flange that is located outside primary containment, drywell, and steam tunnel and is required to be closed during accident conditions is closed.

SR 3.6.1.3.4

> Verify each primary containment isolation manual valve and blind flange that is located inside primary containment, drywell, or steam tunnel and is required to be closed during accident conditions is closed.

SR 3.6.4.2.1

> Verify each secondary containment isolation manual valve and blind flange that is required to be closed during accident conditions is closed.

SR 3.6.5.3.3

> Verify each drywell isolation manual valve and blind flange that is required to be closed during accident conditions is closed.

Upon implementing the proposed amendment, the aforementioned SRs would state:

> Verify each...manual valve and blind flange that is...not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed.

The requested changes based on TSTF-269 would modify TS 3.6.1.3, Required Actions A.2 and D.2, TS 3.6.4.2, Required Action A.2, and TS 3.6.5.3, Required Action A.2 to allow administrative verification of isolation devices that are locked, sealed, or otherwise secured. The change would be implemented by adding a second note to each required action to read as follows:

> Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.

Marked-up pages of the affected TSs are provided in Attachment 1. The associated TS Bases will be revised to address the changes made in the TSs in accordance with the TS Bases Control Program. A marked-up copy of the affected TS Bases pages is provided in Attachment 2 for information only. Attachment 3 contains typed copies of the affected TSs with the requested changes included.

No deviations exist between TSTF-45 and the proposed amendment for the PNPP TSs. A minor deviation from TSTF-269 exists as TSTF-269 includes a note added to TS 3.6.1.3 Required Action C.2, which is not applicable to the PNPP TSs. When initially evaluating improved standard TSs for implementation at the PNPP, the decision was made with regards TS 3.6.1.3 to implement more conservative completion time requirements for penetration flow paths containing only one PCIV with one PCIV inoperable. This allowed the Condition C requirements for penetration flow paths with one PCIV to be identical to the Condition A requirements for penetration flow paths with two PCIVs. Subsequently, Condition C was not incorporated into PNPP TSs, and Condition A was modified to allow for penetration flow paths with one or two PCIVs. Therefore, addition of the note for Required Action C.2, as specified in TSTF-269, is not required for the PNPP TSs.

Because NUREG-1434 TS 3.6.1.3 Condition C is not incorporated into the PNPP TSs, successive conditions are moved up one in the order. With Condition E in NUREG-1434 becoming Condition D in PNPP TSs, the note added to Required Action E.2 in TSTF-269 becomes a note added to Required Action D.2 for the PNPP proposed change.

In summary, the requested amendment would implement changes to the verification requirements for locked, sealed, or otherwise secured containment and drywell isolation devices. The proposed changes are based on TSTF-45 and TSTF-269, which were previously approved by the NRC. The associated TS Bases would be revised to describe the changes made in the TSs.

3.0 TECHNICAL EVALUATION

Changes proposed by this amendment request are consistent with other SRs that ensure isolation devices are in the correct position (e.g. SR 3.1.7.6 for standby liquid control valves and SR 3.5.3.2 for reactor core isolation cooling valves). These other surveillance requirements also exclude valves that are locked, sealed, or otherwise secured. This is acceptable because the intent of locking, sealing, or otherwise securing the isolation device in the correct position is to ensure the isolation device is not inadvertently repositioned.

Approval of the requested amendment will allow isolation devices that are locked, sealed, or otherwise secured to be verified by administrative means. It is sufficient to assume that the initial establishment of component status (e.g. isolation valves closed) was performed correctly. Subsequent verification ensures the component has not been inadvertently repositioned. Given that the intent of locking, sealing, or securing is to ensure the same avoidance of inadvertent repositioning, the periodic re-verification should only be a verification of the administrative control that ensures that the component remains in the required state. It would be inappropriate to remove the lock, seal, or other means of securing the component solely to perform an active verification of the required state.

4.0 REGULATORY EVALUATION

4.1 NO SIGNIFICANT HAZARDS CONSIDERATION

FirstEnergy Nuclear Operating Company (FENOC) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed change will revise the position verification requirements for manual containment and drywell isolation devices that are locked, sealed, or otherwise secured in the closed position. Revising the verification requirements will not introduce any physical changes or result in the equipment being operated in a new or different manner. All systems, structures, and components previously required for mitigation of a transient remain capable of performing their designed functions. Furthermore, although the proposed change would revise the position verification requirements, no physical change is being made to the assumed position of the valves for accident analysis. Therefore, this change does not involve a significant increase to the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   Response: No.

   No new accident scenarios or failure mechanisms are introduced as a result of this proposed change. The proposed amendment would revise the position verification requirements but not alter any valve positions. With no changes to the plant lineup, no new or different accidents are possible. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

   Response: No.

   The proposed amendment revises the position verification requirements for manual containment and drywell isolation valves that are locked, sealed, or otherwise secured in the closed position. The revised position verification requirements have no adverse effects on any safety-related system or component and do not challenge the performance or integrity of any safety-related system. Additionally, position verification does not alter the actual valve positions, introduce any physical changes, or reduce the ability of the valve to control leakage rates during design

basis radiological accidents. Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

Based on the above, FENOC concludes that the proposed amendment does not involve a significant hazards consideration for the PNPP under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.2 APPLICABLE REGULATORY REQUIREMENTS/CRITERIA

Per General Design Criterion 16, "Containment Design," reactor containment and associated systems shall be provided to establish an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment and to assure that the containment design conditions important to safety are not exceeded for as long as postulated accident conditions require.

Per General Design Criterion 50, "Containment Design Basis," the reactor containment structure, including access openings, penetrations and the containment heat removal system shall be designed so that the containment structure and its internal compartments can accommodate, without exceeding the design leakage rate and, with sufficient margin, the calculated pressure and temperature conditions resulting from any loss-of-coolant accident.

Per General Design Criterion 54, "Piping Systems Penetrating Containment," piping systems penetrating primary reactor containment shall be provided with leak detection, isolation, and containment capabilities having redundancy, reliability, and performance capabilities which reflect the importance to safety of isolating these piping systems. Such piping systems shall be designed with a capability to test periodically the operability of the isolation valves and associated apparatus and to determine if valve leakage is within acceptable limits.

Per General Design Criterion 56, "Primary Containment Isolation," isolation provisions must be provided for lines that connect directly to the containment atmosphere and which penetrate primary reactor containment unless it can be demonstrated that the isolation provisions for a specific class of lines are acceptable on some other defined basis.

Following a high energy line rupture inside the drywell, the drywell design routes steam through the suppression pool, which condenses the steam and reduces the pressure transient impacting the containment boundary. Drywell design considerations reduce leakage from the drywell to the containment that would bypass the condensing effects of the suppression pool. Drywell and containment design considerations are sufficient to meet the general

design criteria. Incorporating the proposed amendment does not introduce any physical changes to the isolation devices or cause the isolation devices to be operated in a different manner. The proposed position verification requirements will not have an adverse impact on compliance with the aforementioned GDCs. Therefore, incorporating the proposed amendment will not alter the function or integrity of any drywell or containment isolation device.

Containment and drywell design functions are necessary to maintain compliance with 10 CFR 100 for design accident dose limits. The proposed amendment does not alter the position for any isolation device or change the functionality of any isolation device. Therefore, the proposed amendment does not impact any regulatory requirements or criteria.

4.3 PRECEDENT

Peach Bottom Atomic Power Station (PBAPS) Unit Nos. 2 and 3 (Amendment 259 and 262, issued 5/10/06) had approved license amendment requests that included TSTF-45 and TSTF-269 changes. The Exelon request for PBAPS' amendment was different from this request as additional TSTF approved changes were also submitted. Also, PNPP is a BWR/6 while PBAPS is a BWR/4. The approved TSTF changes for BWR/6 plants included changes to the drywell isolation valve TSs that were not part of the approved TSTF changes for BWR/4 plants. Although differences exist between this amendment request and the amendments approved for the PBAPS, the basis for the request remains the same. As evaluated in TSTF-45 and TSTF-269 and included in the PBAPS request, the act of locking, sealing, or otherwise securing the isolation device is considered sufficient to prevent inadvertent repositioning of the device. Therefore, the aforementioned precedent is relevant to this request.

4.4 CONCLUSIONS

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. NRC Approval Letter to Exelon Nuclear, Technical Specification Amendment Nos. 259 and 262, May 10, 2006.

2. NUREG-1434, Standard Technical Specifications General Electric Plants, BWR/6, Rev. 3, published June 2004.

3. TSTF-45, Revision 2, "Exempt verification of CIVs that are not locked, sealed, or otherwise secured," Approved July 26, 1999.

4. TSTF-269, Revision 2, "Allow administrative means of position verification for locked or sealed valves," Approved July 27, 1999.

PROPOSED TECHNICAL SPECIFICATION CHANGES

(MARK-UP)

3.6 CONTAINMENT SYSTEMS

3.6.1.3 Primary Containment Isolation Valves (PCIVs)

LCO 3.6.1.3 Each PCIV, except containment 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 and Drywell Isolation Instrumentation."

ACTIONS

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

1. Penetration flow paths except for the inboard 42 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-Operating," when PCIV leakage results in exceeding overall containment leakage rate acceptance criteria in MODES 1, 2, and 3.

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

No changes to this page.
Provided for context.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2 --------NOTE-------- 1. Isolation devices in high radiation areas may be verified by use of administrative means. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means. --- Verify the affected penetration flow path is isolated.	Once per 31 days for isolation devices outside primary containment, drywell, and steam tunnel AND Prior to entering MODE 2 or 3 from MODE 4, if not performed within the previous 92 days, for isolation devices inside primary containment, drywell, or steam tunnel
B. One or more penetration flow paths with two PCIVs inoperable except due to leakage not within limit.	B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.	1 hour

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more penetration flow paths with leakage rate not within limit, except for purge valve leakage.	C.1 Restore leakage rate to within limit.	4 hours

(continued)

No changes to this page.
Provided for context.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more penetration flow paths with one or more primary containment purge valves not within purge valve 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
	AND	
	D.2 --------NOTE (5)-------- (1.) →Isolation devices in high radiation areas may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.	Once per 31 days for isolation devices outside primary containment AND Prior to entering MODE 2 or 3 from MODE 4 if not performed within the previous 92 days for isolation devices inside primary containment
	AND	(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. (continued)	D.3	Perform SR 3.6.1.3.6 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 of Condition A, B, C, or D not met in MODE 1, 2, or 3.	E.1	Be in MODE 3.	12 hours
	AND		
	E.2	Be in MODE 4.	36 hours
F. Required Action and associated Completion Time of Condition A, B, C, or D not met for PCIV(s) required to be OPERABLE during movement of recently irradiated fuel assemblies in the primary containment.	F.1	Suspend movement of recently irradiated fuel assemblies in primary containment.	Immediately

(continued)

No changes to this page.
Provided for context.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. 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 or during operations with a potential for draining the reactor vessel (OPDRVs).	G.1 Initiate action to suspend OPDRVs. OR G.2 Initiate action to restore valve(s) to OPERABLE status.	Immediately Immediately

No changes to this page.
Provided for context.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.1	----------NOTE---------- Only required to be met in MODES 1, 2, and 3. ---------- Verify each inboard 42 inch primary containment purge valve is sealed closed except for one purge valve in a penetration flow path while in Condition D of this LCO.	31 days
SR 3.6.1.3.2	----------NOTES---------- 1. Only required to be met in MODES 1, 2, and 3. 2. Not required to be met when the 18 inch or outboard 42 inch primary containment purge valves are open for pressure control, ALARA or air quality considerations for personnel entry, or Surveillances or special testing on the purge system that require the valves to be open. ---------- Verify each 18 inch and outboard 42 inch primary containment purge valve is closed.	31 days

(continued)

No changes to this page.
Provided for context.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.3	----------NOTES---------- 1. Only required to be met in MODES 1, 2, and 3. 2. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 3. Not required to be met for PCIVs that are open under administrative controls. ----------	
	Verify each primary containment isolation manual valve and blind flange that is located outside primary containment, drywell, and steam tunnel and is required to be closed during accident conditions is closed.	31 days

and not locked, sealed, or otherwise secured

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.1.3.4 ----------NOTES---------- 1. Only required to be met in MODES 1, 2, and 3. 2. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 3. Not required to be met for PCIVs that are open under administrative controls. 4. Not required to be met for the Inclined Fuel Transfer System (IFTS) penetration when the associated primary containment blind flange is removed, provided that the Fuel Handling Building Fuel Transfer Pool water level is maintained ≥ 40', the upper containment pool water level is ≥ 22 ft 9 inches above the reactor pressure vessel flange and the suppression pool water level is maintained at ≥ 17 ft 11.7 inches, the fuel transfer and storage pool supply isolation valve is closed, the upper pool IFTS gate is installed, and the IFTS transfer tube drain valve remains closed. The IFTS transfer tube drain valve may be opened under administrative controls. Removal of the IFTS blind flange shall not exceed 60 days per cycle while in MODES 1, 2, or 3. ---------- Verify each primary containment isolation manual valve and blind flange that is located inside primary containment, drywell, or steam tunnel and is required to be closed during accident conditions is closed.	Prior to entering MODE 2 or 3 from MODE 4, if not performed within the previous 92 days

and not locked, sealed, or otherwise secured

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.5	Verify the isolation time of each power operated and each automatic PCIV, except MSIVs, is within limits.	In accordance with the Inservice Testing Program
SR 3.6.1.3.6	----------NOTE---------- Only required to be met in MODES 1, 2, and 3. ---------- Perform leakage rate testing for each primary containment purge valve with resilient seals.	184 days AND Once within 92 days after opening the valve
SR 3.6.1.3.7	Verify the isolation time of each MSIV is ≥ 2.5 seconds, and ≤ 5 seconds.	In accordance with the Inservice Testing Program
SR 3.6.1.3.8	Verify each automatic PCIV actuates to the isolation position on an actual or simulated isolation signal.	24 months

(continued)

No changes to this page.
Provided for context.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.9	----------NOTES---------- 1. Only required to be met in MODES 1, 2, and 3. 2. Main Steam Line leakage is not included. ----------	
	Verify the combined leakage rate for all secondary containment bypass leakage paths is ≤ 0.0504 L_a when pressurized to ≥ P_a.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.10	----------NOTE---------- *Only required to be met in MODES 1, 2, and 3.* ----------	
	Verify leakage rate through each main steam line is ≤ 100 scfh when tested at ≥ P_a, and the total leakage rate through all four main steam lines is ≤ 250 scfh, when tested at ≥ P_a.	In accordance with the Primary Containment Leakage Rate Testing Program

(continued)

No changes to this page. Provided for context.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.11	----------NOTE---------- 1. Only required to be met in MODES 1. 2. and 3. 2. Feedwater lines are excluded. ---------- Verify combined leakage rate of 1 gpm times the total number of PCIVs through hydrostatically tested lines that penetrate the primary containment is not exceeded when these isolation valves are tested at $\geq 1.1 P_a$.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.12	----------NOTE---------- Only required to be met in MODES 1, 2, and 3. ---------- Verify each outboard 42 inch primary containment purge valve is blocked to restrict the valve from opening > 50°.	24 months
SR 3.6.1.3.13	----------NOTE---------- Not required to be met when the Backup Hydrogen Purge System isolation valves are open for pressure control, ALARA or air quality considerations for personnel entry, or Surveillances or special testing of the Backup hydrogen Purge System that require the valves to be open. ---------- Verify each 2 inch Backup Hydrogen Purge System isolation valve is closed.	31 days

No changes to this page.
Provided for context.

3.6 CONTAINMENT SYSTEMS

3.6.4.2 Secondary Containment Isolation Valves (SCIVs)

LCO 3.6.4.2 Each SCIV shall be OPERABLE.

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

ACTIONS

----------NOTES----------
1. Penetration flow paths may be unisolated intermittently under administrative controls.
2. Separate Condition entry is allowed for each penetration flow path.
3. Enter applicable Conditions and Required Actions for systems made inoperable by SCIVs.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more penetration flow paths with one SCIV inoperable.	A.1 Isolate the affected penetration flow path by use of at least one closed manual valve or blind flange. AND	8 hours (continued)

No changes to this page.
Provided for context.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued) 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.	A.2 (5) NOTE (1) → Isolation devices in high radiation areas may be verified by use of administrative means. Verify the affected penetration flow path is isolated.	Once per 31 days
NOTE Only applicable to penetration flow paths with two isolation valves.	B.1 Isolate the affected penetration flow path by use of at least one closed manual valve or blind flange.	4 hours
B. One or more penetration flow paths with two SCIVs inoperable.		
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, or 3.	C.1 Be in MODE 3. AND C.2 Be in MODE 4.	12 hours 36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A or B not met during movement of recently irradiated fuel assemblies in the primary containment, or during OPDRVs.	D.1 Suspend movement of recently irradiated fuel assemblies in the primary containment. AND D.2 Initiate action to suspend OPDRVs.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4.2.1 ----------NOTES---------- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for SCIVs that are open under administrative controls. ---------- Verify each secondary containment isolation manual valve and blind flange that is required to be closed during accident conditions is closed.	31 days

not locked, sealed, or otherwise secured and is

3.6 CONTAINMENT SYSTEMS

3.6.5.3 Drywell Isolation Valves

LCO 3.6.5.3 Each drywell isolation valve, except for Drywell Vacuum Relief System valves, shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

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

1. Penetration flow paths, except for the 24 inch and 36 inch purge supply and exhaust valve penetration flow path, 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 drywell isolation valves.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more penetration flow paths with one drywell isolation valve inoperable.	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. AND	8 hours (continued)

No changes to this page.
Provided for context.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued) 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.	A.2	(5) --------NOTE-------- (1) → Isolation devices in high radiation areas may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated.	Prior to entering MODE 2 or 3 from MODE 4, if not performed within the previous 92 days
B. One or more penetration flow paths with two drywell isolation valves inoperable.	B.1	Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.	4 hours
C. Required Action and associated Completion Time not met.	C.1 AND C.2	Be in MODE 3. Be in MODE 4.	12 hours 36 hours

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.6.5.3.1	Verify each 24 inch and 36 inch drywell purge supply and exhaust isolation valve is sealed closed.	31 days
SR 3.6.5.3.2	Deleted.	
SR 3.6.5.3.3	----------NOTES---------- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for drywell isolation valves that are open under administrative controls. ---------- Verify each drywell isolation manual valve and blind flange that is required to be closed during accident conditions is closed. not locked, sealed, or otherwise secured and is	Prior to entering MODE 2 or 3 from MODE 4, if not performed in the previous 92 days
SR 3.6.5.3.4	Verify the isolation time of each power operated and each automatic drywell isolation valve is within limits.	In accordance with the Inservice Testing Program
SR 3.6.5.3.5	Verify each automatic drywell isolation valve actuates to the isolation position on an actual or simulated isolation signal.	24 months

CHANGES TO TS BASES

(PROVIDED FOR INFORMATION)

BASES

ACTIONS (continued)

penetrations and the fact that those penetrations exhaust directly from the primary containment atmosphere to the environment, the penetration flow paths containing these valves may not be opened under administrative controls. A single purge valve in a penetration flow path may be opened to effect repairs to an inoperable valve, as allowed by the exception to SR 3.6.1.3.1 and Note 2 to SR 3.6.1.3.2.

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

The ACTIONS are modified by Notes 3 and 4. These Notes ensure appropriate remedial actions are taken, if necessary, if the affected system(s) are rendered inoperable by an inoperable PCIV (e.g., an Emergency Core Cooling System subsystem is inoperable due to a failed open test return valve), or when the primary containment leakage limits are exceeded in MODES 1, 2, and 3. Pursuant to LCO 3.0.6, these ACTIONS are not required even when the associated LCO is not met. Therefore, Notes 3 and 4 are added to require the proper actions to be taken.

The term "penetration" refers to piping/ductwork lines that pass through the primary containment boundary; these lines are isolable by PCIVs. This use of the term is separate and distinct from the Civil/Structural term "Penetration" used to describe the larger opening that multiple lines may pass through and which is sealed by welded steel plate or environmentally qualified material everywhere except where the lines pass through. When a PCIV becomes inoperable within a line, and the Required Action directs the operator to "isolate the affected penetration flowpath," the intent is to isolate only the line with the inoperable PCIV. It is not the intent to close off other lines that are unaffected by the inoperable PCIV.

A.1 and A.2

With one or more penetration flow paths with one PCIV inoperable except for inoperability due to leakage not within a limit specified in an SR to this LCO, the affected

(continued)

No changes to this page.
Provided for context.

BASES

ACTIONS

A.1 and A.2 (continued)

penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, a blind flange, and a PCIV check valve with flow through the valve secured. For penetrations isolated in accordance with Required Action A.1, the device used to isolate the penetration should be the closest one available to the primary containment. The Required Action must be completed within the 4 hour Completion Time (8 hours for main steam lines). The specified time period of 4 hours is reasonable considering the time required to isolate the penetration and the relative importance of supporting primary containment OPERABILITY during MODES 1, 2, and 3. For main steam lines, an 8 hour Completion Time is allowed. The Completion Time of 8 hours for the main steam lines allows a period of time to restore the MSIVs to OPERABLE status given the fact that MSIV closure will result in isolation of the main steam line(s) and a potential for plant shutdown.

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

(continued)

No changes to this page.
Provided for context.

BASES

ACTIONS

A.1 and A.2 (continued)

Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned.

the inaccessibility of the isolation devices and the existence of other administrative controls ensuring that isolation device misalignment is an unlikely possibility.

Required Action A.2 is modified by a Note that applies to isolation devices located in high radiation areas and allows them to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment; once they have been verified to be in the proper position, is low.

B.1

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

C.1

With the secondary containment bypass leakage rate, hydrostatic leakage rate, or MSIV leakage rate not within limits, the assumptions of the safety analysis may not be met. Therefore, the leakage rate must be restored to within limit within 4 hours. Restoration can be accomplished by isolating the penetration that caused the limit to be exceeded by use of a closed manual valve, a closed and de-activated automatic valve, or blind flange. When a penetration is isolated, the leakage rate for the isolation penetration is assumed to be the actual pathway leakage rate through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed to be the lesser actual pathway leakage rate of the two

(continued)

BASES

ACTIONS

C.1 (continued)

devices. The 4 hour Completion Time is reasonable considering the time required to restore the leakage rate by isolating the penetration and the relative importance to the overall containment function.

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

In the event one or more primary containment purge valves are not within the purge valve leakage limits, purge valve leakage must be restored to within limits or the affected penetration flow path must be isolated. The method of isolation must be by the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed manual valve, a closed and de-activated automatic valve, and a blind flange. If a purge valve with resilient seals is utilized to satisfy Required Action D.1, it must have been demonstrated to meet the leakage requirements of SR 3.6.1.3.6. The specified Completion Time is reasonable, considering that one primary containment purge valve remains closed (refer to the requirement of SR 3.6.1.3.1; if this requirement is not met, entry into Conditions A and B, as appropriate, would also be required), so that a gross breach of primary containment does not exist.

For affected penetrations that have been isolated in accordance with Required Action D.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident, and no longer capable of being automatically isolated, will be isolated should an event occur. This Required Action does not require any testing or isolation device manipulation. Rather, it involves verification that those isolation devices outside primary containment and capable of being mispositioned are in the correct position. The Completion Time for this verification of "once per 31 days for isolation devices outside primary containment," is appropriate because the isolation devices are operated under administrative controls and the probability of their misalignment is low. For isolation devices inside primary containment the specified time period of "prior to entering

(continued)

No changes to this page.
Provided for context.

BASES

ACTIONS

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

MODE 2 or 3 from MODE 4, if not performed within the previous 92 days," is based on engineering judgment and is considered reasonable in view of the inaccessibility of the isolation devices and the existence of other administrative controls ensuring that isolation device misalignment is an unlikely possibility.

Required Action D.2 is modified by a Note that applies to isolation devices located in high radiation areas and allows them to be verified by use of administrative controls.

Allowing verification by administrative controls is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment, once they have been verified to be in proper position, is low.

For each primary containment purge valve with resilient seals that is isolated in accordance with Required Action D.1, SR 3.6.1.3.6 must be performed at least once every 92 days. This provides assurance that degradation of the resilient seal is detected and confirms that the leakage rate of the primary containment purge valve does not increase during the time the penetration is isolated. The normal Frequency for SR 3.6.1.3.6 is 184 days. Since more reliance is placed on a single valve while in this Condition, it is prudent to perform the SR more often. Therefore, a Frequency of once per 92 days was chosen and has been shown acceptable based on operating experience.

E.1 and E.2

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

Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned.

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BASES

ACTIONS (continued)

F.1, G.1, and G.2

If any Required Action and associated Completion Time cannot be met, the plant must be placed in a condition in which the LCO does not apply. If applicable, movement of recently irradiated fuel assemblies in the primary containment must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe condition. Also, if applicable, action must be immediately initiated to suspend operations with a potential for draining the reactor vessel (OPDRVs) to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until OPDRVs are suspended. If suspending the OPDRVs would result in closing the residual heat removal (RHR) shutdown cooling isolation valves, an alternative Required Action is provided to immediately initiate action to restore the valves to OPERABLE status. This allows RHR to remain in service while actions are being taken to restore the valves.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.1

Each inboard 42 inch (1M14-F045 and 1M14-F085) primary containment purge supply and exhaust isolation valve is required to be verified sealed closed at 31 day intervals because the primary containment purge valves are not fully qualified to close under accident conditions. This SR is designed to ensure that a gross breach of primary containment is not caused by an inadvertent opening of a primary containment purge valve. Detailed analysis of these purge supply and exhaust isolation valves failed to conclusively demonstrate their ability to close during a LOCA in time to limit offsite doses. Primary containment purge valves that are sealed closed must have motive power to the valve operator removed. This can be accomplished by de-energizing the source of electric power, removing the air supply to the valve operator, or providing administrative control of the valve control switches. In this application, the term "sealed" has no connotation of leak tightness. The 31 day Frequency is based on primary containment purge valve use during unit operations.

This SR allows a valve that is open under administrative controls to not meet the SR during the time the valve is open. Opening a purge valve under administrative controls

(continued)

No changes to this page.
Provided for context.

SURVEILLANCE REQUIREMENT

SR 3.6.1.3.2 (continued)

The SR is modified by a Note (Note 2) stating that the SR is not required to be met when the purge valves are open for the stated reasons. The Note states that these valves may be opened for pressure control, ALARA or air quality considerations for personnel entry, or for Surveillances or special testing on the purge system (e.g., testing of the containment and drywell ventilation radiation monitors) that require the valves to be open. These primary containment purge valves are capable of closing in the environment following a LOCA. Therefore, these valves are allowed to be open for limited periods of time. The 31 day Frequency is consistent with other PCIV requirements.

SR 3.6.1.3.3

This SR verifies that each primary containment isolation manual valve and blind flange that is located outside primary containment, drywell, and steam tunnel and is required to be closed during accident conditions, is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside of the primary containment boundary is within design limits. This SR does not require any testing or isolation device manipulation. Rather, it involves verification that those devices outside primary containment, drywell, and steam tunnel, and capable of being mispositioned, are in the correct position. Since verification of isolation device position for devices outside primary containment, drywell, and steam tunnel is relatively easy, the 31 day Frequency was chosen to provide added assurance that the devices are in the correct positions.

and not locked, sealed, or otherwise secured

This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

Three Notes are added to this SR. Note 1 provides an exception to meeting this SR in MODES other than MODES 1, 2, and 3. When not operating in MODES 1, 2, or 3, the primary containment boundary, including verification that required penetration flow paths are isolated, is addressed by LCO 3.6.1.10, "Primary Containment-Shutdown" (SR 3.6.1.10.1). The second Note applies to valves and blind flanges located in high radiation areas and allows them to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment of these isolation devices, once they have been

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BASES

SURVEILLANCE REQUIREMENT

SR 3.6.1.3.3 (continued)

verified to be in the proper position, is low. A third Note is included to clarify that PCIVs open under administrative controls are not required to meet the SR during the time the PCIVs are open.

SR ~~3.6.1.3.4~~

and not locked, sealed, or otherwise secured

This SR verifies that each primary containment isolation manual valve and blind flange located inside primary containment, drywell, or steam tunnel, and required to be closed during accident conditions, is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside the primary containment boundary is within design limits. For devices inside primary containment, drywell, or steam tunnel, the Frequency of "prior to entering MODE 2 or 3 from MODE 4, if not performed within the previous 92 days," is appropriate since these devices are operated under administrative controls and the probability of their misalignment is low.

This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

Four Notes are added to this SR. Note 1 provides an exception to meeting this SR in MODES other than MODES 1, 2, and 3. When not operating in MODES 1, 2, or 3, the primary containment boundary, including verification that required penetration flow paths are isolated, is addressed by LCO 3.6.1.10, "Primary Containment- Shutdown" (SR 3.6.1.10.1). The second Note allows valves and blind flanges located in high radiation areas to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment of these isolation devices, once they have been verified to be in their proper position, is low. A third Note is included to clarify that PCIVs that are open under administrative controls are not required to meet the SR during the time that the PCIVs are open.

A fourth Note addresses removal of the Inclined Fuel Transfer System (IFTS) blind flange in MODES 1, 2, and 3 for up to 60 days per cycle. The 60 days per operating cycle is

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BASES

SURVEILLANCE REQUIREMENT

SR 3.6.1.3.4 (continued)

a risk-informed duration that provides the option of performing testing and maintenance of the IFTS during MODES 1, 2 or 3 prior to an outage. However, it is not meant for the movement of fuel. Removal of the IFTS blind flange during MODES 1, 2 or 3 requires the upper pool IFTS gate to be installed and requires the Fuel Handling Building Fuel Transfer Pool water level to be $\geq$ 40' above the bottom of the pool which ensures sufficient submergence of water over the bottom gate valve in the transfer tube to prevent direct communication between the Containment Building atmosphere and the Fuel Handling Building atmosphere, even upon occurrence of the peak post-accident pressure, P_a. Forty feet (40') above the bottom of the pool is equivalent to 22' 8 ¼" above the top of the flange for the IFTS bottom gate valve, which is approximately 3' 10" more water than needed to counteract the peak accident pressure of 7.8 psig. Also, since the IFTS drain piping does not have the same water seal as the transfer tube, administrative controls are required to ensure that the drain flow path can be quickly isolated whenever necessary.

These controls consist of designating an individual, whenever the 1F42-F003 valve is to be opened with the blind flange removed in MODE 1, 2, or 3, to be responsible for verifying closure of the valve if an accident occurs. This designated individual will remain in continuous communication with the control room, and be located at the 620' elevation in the Fuel Handling Area of the Intermediate Building. This person will be in addition to the minimum shift crew composition required to be at the plant site. Once the designated person is notified by the control room of the occurrence of an accident, his only assigned function will be to close this valve. The designated individual will verify the valve is closed from the controls at the IFTS panel if they are available. If this is not successful, the valve will be closed manually at the valve location. The designated person will be equipped with portable lighting (e.g., a flashlight) to supplement emergency lighting.

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No changes to this page,
Provided for context.

BASES

SURVEILLANCE REQUIREMENT

SR 3.6.1.3.4 (continued)

The upper Containment pool gate (both inner and outer gates) between the IFTS pool and the dryer storage pool is required to be installed prior to IFTS blind flange removal during MODES 1, 2 or 3. With this gate installed, should a failure of an IFTS tube component occur the amount of water drained to the lower pools will be limited. Therefore, installing the upper pool IFTS gate provides single failure protection of upper pool water inventory for supporting the SPMU system. If the IFTS gate was not installed, the potential would exist to drain the upper pool volume, reducing the inventory available to the SPMU system to support make up to the suppression pool, which supports the ECCS design function during a LOCA. Reduced suppression pool volume and increased suppression pool temperature could result in a subsequent loss of suction pressure for the ECCS.

Also, to account for the upper containment pool water loss that would result from all leakage sources, including leakage through the upper Containment pool gate and leakage through the Fuel Pool Cooling and Clean-up (FPCC) siphon breaker supply lines; when the IFTS blind flange is removed in MODES 1,2 or 3, the upper containment pool level shall be maintained at $\geq$ 22 ft - 9 inches; and to account for possible leakage, the suppression pool is to be raised to $\geq$ 17 ft - 11.7 inches. These levels were determined via engineering calculation. Also, as a leakage prevention measure, the fuel transfer and storage pool supply isolation valve (G41-F0524) shall be closed to isolate the normal flow of FPCC supply water to the IFTS pool area.

Additional regulatory commitments to the NRC are required when the IFTS blind flange is removed in MODES 1, 2 or 3. These prerequisite administrative controls are controlled by plant procedures and are 1) the lower fuel transfer pool gates must be removed, and 2) Fuel Handling Building closure shall be in effect. Removal of the lower fuel transfer pool gates ensures control room monitoring exists for spent fuel pool level, which would assist in detecting a change in the fuel transfer pool water level in the event of an IFTS component failure. Establishing administrative controls for Fuel Handling Building closure when the IFTS blind flange is removed ensures that the Fuel Handling Area exhaust ventilation subsystem is in operation.

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No changes to this page.
Provided for context.

BASES

SURVEILLANCE REQUIREMENT

SR 3.6.1.3.4 (continued)

Also, the drain piping motor-operated isolation valve is tested in accordance with the Primary Containment Leak Rate Test Program. The leakage rate on this valve will be controlled by the strict limits on potential secondary containment bypass leakage (SR 3.6.1.3.9). Thus, the combination of water seal in the Fuel Handling Building, pressure integrity of the IFTS transfer tube, and various administrative controls, creates acceptable barriers against post-accident leakage to the environment.

SR 3.6.1.3.5

Verifying the isolation time of each power operated and each automatic PCIV is within limits is required to demonstrate OPERABILITY. MSIVs may be excluded from this SR since MSIV

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No changes to this page.
Provided for context.

BASES

ACTIONS (continued)

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

The term "penetration" refers to piping/ductwork lines that pass through the secondary containment boundary; these lines are isolable by SCIVs. This use of the term is separate and distinct from the Civil/Structural term "penetration" used to describe the larger opening that multiple lines may pass through and which is sealed by welded steel plate or environmentally qualified material everywhere except where the lines pass through. When an SCIV becomes inoperable within a line, and the Required Action directs the operator to "isolate the affected penetration flowpath", the intent is to isolate only the line with the inoperable SCIV. It is not the intent to close off the other lines that are unaffected by the inoperable SCIV.

A.1 and A.2

In the event that there are one or more penetration flow paths with one valve inoperable, the affected penetration flow path(s) must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed manual valve or a blind flange. For penetrations isolated in accordance with Required Action A.1, the device used to isolate the penetration should be the closest available device to secondary containment. This Required Action must be completed within the 8 hour Completion Time. The specified time period is reasonable considering the time required to isolate the penetration and the low probability of a DBA occurring during this short time. For affected penetrations that have been isolated in accordance with Required Action A.1, the affected penetration must be verified to be isolated on a periodic basis. This is necessary to ensure that secondary containment penetrations required to be isolated following an accident, will be isolated should an event occur. This Required Action does not require any testing or isolation device manipulation. Rather, it involves verification that these isolation devices capable of being mispositioned are in the correct position. The Completion Time for this verification of "once per 31 days" is appropriate because the isolation devices are operated under administrative controls and the probability of their misalignment is low.

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No changes to this page.
Provided for context.

BASES

ACTIONS

A.1 and A.2 (continued)

Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned.

two s. Note 1

Required Action A.2 is modified by a Note that applies to isolation devices located in high radiation areas and allows them to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment, once they have been verified to be in the proper position, is low.

B.1

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

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

C.1 and C.2

If any Required Action and associated Completion Time of Condition A or B cannot be met in MODE 1, 2, or 3, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

D.1 and D.2

If any Required Action and associated Completion Time of Condition A or B cannot be met during movement of recently irradiated fuel assemblies in the primary containment.

(continued)

BASES

ACTIONS

D.1 and D.2 (continued)

or during OPDRVs, the plant must be placed in a condition in which the LCO does not apply. If applicable, movement of recently irradiated fuel assemblies in the primary containment must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, action must be immediately initiated to suspend OPDRVs in order to minimize the probability of a vessel draindown and the subsequent potential for fission product release. Actions must continue until OPDRVs are suspended.

SURVEILLANCE REQUIREMENTS

SR 3.6.4.2.1

not locked, sealed, or otherwise secured and is

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

This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

Since these isolation devices are readily accessible to personnel during normal unit operation and verification of their position is relatively easy, the 31 day Frequency was chosen to provide added assurance that the isolation devices are in the correct positions.

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

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.2.1 (continued)

that SCIVs that are open under administrative controls are not required to meet the SR during the time the SCIVs are open.

REFERENCES

1. USAR, Section 15.6.5.
2. USAR, Section 6.2.3.
3. USAR, Section 15.7.6.

No changes to this page.
Provided for context.

BASES

ACTIONS (continued)

taken, if necessary, if the affected system(s) are rendered inoperable by an inoperable drywell isolation valve.

Pursuant to LCO 3.0.6, these ACTIONS are not required even when the associated LCO is not met. Therefore, Note 3 is added to require the proper actions to be taken. The term "penetration" refers to piping/ductwork lines that pass through the drywell boundary; these lines are isolable by automatic isolation valves. This use of the term is separate and distinct from the Civil/Structural term "penetration" used to describe the larger opening that multiple lines may pass through and which is sealed by welded steel plate or environmentally qualified material everywhere except where the lines pass through. When a drywell isolation valve becomes inoperable within a line, and the Required Action directs the operator to "isolate the affected penetration flowpath", the intent is to isolate only the line with the inoperable drywell isolation valve. It is not the intent to close off other lines that are unaffected by the inoperable valve.

A.1 and A.2

With one or more penetration flow paths with one drywell isolation valve inoperable, the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed manual valve a closed and de-activated automatic valve, a check valve with flow through the valve secured, and a blind flange. The 8 hour Completion Time is acceptable, due to the low probability of the inoperable valve resulting in excessive drywell leakage and the low probability of the limiting event for drywell leakage occurring during this short time frame. In addition, the Completion Time is reasonable, considering the time required to isolate the penetration and the relative importance of supporting drywell OPERABILITY during MODES 1, 2, and 3.

For affected penetration flow paths that have been isolated in accordance with Required Action A.1, the affected penetration flow paths must be verified to be isolated on a periodic basis. This is necessary to ensure that drywell penetrations that are required to be isolated following an accident, and are no longer capable of being automatically

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No changes to this page.
Provided for context.

BASES

ACTIONS

A.1 and A.2 (continued)

isolated, will be isolated should an event occur. This Required Action does not require any testing or isolation device manipulation. Rather, it involves verification that those devices outside drywell and capable of being mispositioned are in the correct position. Since these isolation devices are inside primary containment, the specified time period of "prior to entering MODE 2 or 3 from MODE 4, if not performed within the previous 92 days," is based on engineering judgment and is considered reasonable in view of the inaccessibility of the isolation devices and the existence of other administrative controls, ensuring that isolation device misalignment is an unlikely possibility. Also, this Completion Time is consistent with the Completion Time specified for PCIVs in LCO 3.6.1.3, "Primary Containment Isolation Valves (PCIVs)." Required Action A.2 is modified by a Note that applies to isolation devices located in high radiation areas and allows them to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment, once they have been verified to be in the proper position, is low.

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two
Note 1
Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertently repositioned.

B.1

With one or more penetration flow paths with two drywell isolation valves inoperable, the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed manual valve, a closed and de-activated automatic valve, a check valve with flow through the valve secured, and a blind flange. The 4 hour Completion Time is acceptable due to the low probability of the inoperable valves resulting in excessive drywell leakage and the low probability of the limiting event for drywell leakage occurring during this short time frame. The Completion Time is reasonable, considering the time required to isolate the penetration, and the probability of a DBA, which requires the drywell isolation valves to close, occurring during this short time is very low.

(continued)

BASES

ACTIONS

C.1 and C.2

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

SURVEILLANCE REQUIREMENTS

SR 3.6.5.3.1

Each 24 (1M14-F055 A (B) and 1M14-F060 A (B)) and 36 inch (1M14-F065 and 1M14-F070) drywell purge supply and exhaust isolation valve is required to be verified sealed closed at 31 day intervals because the drywell purge supply and exhaust isolation valves are not qualified to fully close under accident conditions. This SR is designed to ensure that a gross breach of drywell is not caused by an inadvertent drywell purge supply or exhaust isolation valve opening. Detailed analysis of these 24 and 36 inch drywell purge supply and exhaust isolation valves failed to conclusively demonstrate their ability to close during a LOCA in time to support drywell OPERABILITY. Therefore, these valves are required to be in the sealed closed position during MODES 1, 2, and 3. These 24 and 36 inch drywell purge supply and exhaust isolation valves that are sealed closed must have motive power to the valve operator removed. This can be accomplished by de-energizing the source of electric power, removing the air supply to the valve operator, or providing administrative control of the valve control switches. In this application, the term "sealed" has no connotation of leak tightness. The 31 day Frequency is based on drywell purge supply and exhaust valve use during unit operations.

SR 3.6.5.3.2

Deleted

SR 3.6.5.3.3

This SR verifies that each drywell isolation manual valve and blind flange that is required to be closed during accident conditions is closed. The SR helps to ensure that drywell bypass leakage is maintained to a minimum. Due to

not locked, sealed, or otherwise secured and is

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.5.3.3 (continued)

the location of these isolation devices, the Frequency specified as "prior to entering MODE 2 or 3 from MODE 4, if not performed in the previous 92 days," is appropriate because of the inaccessibility of the devices and because these devices are operated under administrative controls and the probability of their misalignment is low.

This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

Two Notes are added to this SR. The first Note allows valves and blind flanges located in high radiation areas to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable since access to these areas is typically restricted during MODES 1, 2, and 3. Therefore, the probability of misalignment of these isolation devices, once they have been verified to be in their proper position, is low. A second Note is included to clarify that the drywell isolation valves that are open under administrative controls are not required to meet the SR during the time that the drywell isolation valves are open.

SR 3.6.5.3.4

Verifying that the isolation time of each power operated and each automatic drywell isolation valve is within limits is required to demonstrate OPERABILITY. The isolation time test ensures the drywell isolation valve will isolate in a time period less than or equal to that assumed in the safety analysis. The isolation time and Frequency of this SR are in accordance with the Inservice Testing Program.

SR 3.6.5.3.5

Verifying that each automatic drywell isolation valve closes on a drywell isolation signal is required to prevent bypass leakage from the drywell following a DBA. This SR ensures each automatic drywell isolation valve will actuate to its isolation position on a drywell isolation signal. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.6.1.5 overlaps this SR to provide complete testing of the safety function. The 24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power, since isolation of penetrations would eliminate cooling water flow

(continued)

BASES

SURVEILLANCE REQUIREMENT

SR 3.6.5.3.5 (continued)

and disrupt the normal operation of many critical components. The 24 month Frequency is based on operating experience, and is consistent with a typical industry refueling cycle.

REFERENCES

1. USAR, Section 6.2.1.1.5.

No changes to this page.
Provided for context.

RETYPED TECHNICAL SPECIFICATION PAGES

ACTIONS

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

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One or more penetration flow paths with two PCIVs inoperable except due to leakage not within limit.	B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.	1 hour
C. One or more penetration flow paths with leakage rate not within limit, except for purge valve leakage.	C.1 Restore leakage rate to within limit.	4 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more penetration flow paths with one or more primary containment purge valves not within purge valve 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
	AND	
	D.2 --------NOTES-------- 1. Isolation devices in high radiation areas may be verified by use of administrative means. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means. ----------	
	Verify the affected penetration flow path is isolated.	Once per 31 days for isolation devices outside primary containment AND Prior to entering MODE 2 or 3 from MODE 4 if not performed within the previous 92 days for isolation devices inside primary containment
	AND	(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. (continued)	D.3	Perform SR 3.6.1.3.6 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 of Condition A, B, C, or D not met in MODE 1, 2, or 3.	E.1 AND	Be in MODE 3.	12 hours
	E.2	Be in MODE 4.	36 hours
F. Required Action and associated Completion Time of Condition A, B, C, or D not met for PCIV(s) required to be OPERABLE during movement of recently irradiated fuel assemblies in the primary containment.	F.1	Suspend movement of recently irradiated fuel assemblies in primary containment.	Immediately

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.3	----------NOTES---------- 1. Only required to be met in MODES 1, 2, and 3. 2. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 3. Not required to be met for PCIVs that are open under administrative controls. ---------- Verify each primary containment isolation manual valve and blind flange that is located outside primary containment, drywell, and steam tunnel and not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.4	----------NOTES---------- 1. Only required to be met in MODES 1, 2, and 3. 2. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 3. Not required to be met for PCIVs that are open under administrative controls. 4. Not required to be met for the Inclined Fuel Transfer System (IFTS) penetration when the associated primary containment blind flange is removed, provided that the Fuel Handling Building Fuel Transfer Pool water level is maintained ≥ 40', the upper containment pool water level is ≥ 22 ft 9 inches above the reactor pressure vessel flange and the suppression pool water level is maintained at ≥ 17 ft 11.7 inches, the fuel transfer and storage pool supply isolation valve is closed, the upper pool IFTS gate is installed, and the IFTS transfer tube drain valve remains closed. The IFTS transfer tube drain valve may be opened under administrative controls. Removal of the IFTS blind flange shall not exceed 60 days per cycle while in MODES 1, 2, or 3. ---------- Verify each primary containment isolation manual valve and blind flange that is located inside primary containment, drywell, or steam tunnel and not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed.	Prior to entering MODE 2 or 3 from MODE 4, if not performed within the previous 92 days

(continued)

ACTIONS

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

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A or B not met during movement of recently irradiated fuel assemblies in the primary containment, or during OPDRVs.	D.1 Suspend movement of recently irradiated fuel assemblies in the primary containment. AND D.2 Initiate action to suspend OPDRVs.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.2.1	----------NOTES---------- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for SCIVs that are open under administrative controls. ---------- Verify each secondary containment isolation manual valve and blind flange that is not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed.	31 days

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.2	--------NOTES-------- 1. Isolation devices in high radiation areas may be verified by use of administrative means. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated.	Prior to entering MODE 2 or 3 from MODE 4, if not performed within the previous 92 days
B. One or more penetration flow paths with two drywell isolation valves inoperable.	B.1	Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.	4 hours
C. Required Action and associated Completion Time not met.	C.1 AND C.2	Be in MODE 3. Be in MODE 4.	12 hours 36 hours

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.6.5.3.1	Verify each 24 inch and 36 inch drywell purge supply and exhaust isolation valve is sealed closed.	31 days
SR 3.6.5.3.2	Deleted.	
SR 3.6.5.3.3	----------NOTES---------- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for drywell isolation valves that are open under administrative controls. ---------- Verify each drywell 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.	Prior to entering MODE 2 or 3 from MODE 4, if not performed in the previous 92 days
SR 3.6.5.3.4	Verify the isolation time of each power operated and each automatic drywell isolation valve is within limits.	In accordance with the Inservice Testing Program
SR 3.6.5.3.5	Verify each automatic drywell isolation valve actuates to the isolation position on an actual or simulated isolation signal.	24 months