

Industry/TSTF Standard Technical Specification Change Traveler

Completion Time for Restoration of Various Excessive Leakage Rates

Classification: 3) Improve Specifications

NUREGs Affected: 1430 1431 1432 1433 1434

Description:

Rev. 0: The Completion Time for restoration of MSIV leakage is extended from 4 hours to 8 hours in Required Action D.1 for Specification 3.6.1.3, "Primary Containment Isolation Valves." As a result of this change, a separate Completion Time for MSIV leakage is provided in ISTS 3.6.1.3 Required Action D.1 and ISTS 3.6.1.3 Condition D is revised to state, "One or more penetration flow paths with secondary containment bypass leakage rate or MSIV leakage rate not within limit." For consistency, the words inside the brackets of ISTS 3.6.1.3 Conditions A and B are modified to reflect this additional leakage category (currently only the purge valve leakage requirements are exempted). Corresponding changes are also made to the associated Bases.

Rev 1, 2, 3, and 4: The separate Action for specific PCIV leakages (Action D of 3.6.1.3) is revised to include all leakage types applicable to the PCIV Specification. In addition to adding MSIV leakage, this revision also adds hydrostatically tested lines and EFCVs (BWR/4 only). Bracketed options are also included for presenting purge valve leakage Actions, along with a Reviewer's Note regarding the use of the options. Additional clarification is also included for Condition A and B Notes regarding the number of PCIVs in a penetration flow path.

Justification:

Rev. 0: MSIVs are required to be OPERABLE such that they can be automatically repositioned to their accident position (i.e., closed) within the required time period and meet individual leakage rate limits. The MSIV leakage rate limit is separate from the Type A, B, or C leakage rate limits required by ISTS 3.6.1.1, "Primary Containment OPERABILITY." If a required Type A, B, or C leakage rate limit was exceeded due to an individual MSIV exceeding its leakage rate limit, Note 4 to the ACTIONS of ISTS 3.6.1.3 would require the ACTIONS of ISTS 3.6.1.1 to be taken (which would require primary containment OPERABILITY to be restored in one hour). If an MSIV is not meeting the MSIV leakage rate limit (i.e., inoperable), ISTS 3.6.1.3 Required Action A.1 would allow 8 hours to restore the inoperability or isolate the penetration. ISTS 3.6.1.3 Condition D only applies to secondary containment bypass leakage, but the Bases of ISTS 3.6.1.3 also describes Condition D as also applying to MSIV leakage. It appears (per the discussion in the Bases of ISTS 3.6.1.3 Condition D) that ISTS 3.6.1.3 Required Action D.1 requires restoration of the leakage rate to within the limit in 4 hours. (This 4 hour Completion Time is consistent with the Completion Time of ISTS 3.6.1.3 Required Action A.1 for one or more penetration flow paths with one primary containment isolation valve (other than an MSIV) inoperable.) However, the Bases can not be used to change the requirements in the Technical Specifications. Therefore, if an MSIV is inoperable, ISTS 3.6.1.3 Required Action A.1 would allow 8 hours to isolate the affected main steam line (ISTS 3.6.1.3 Condition D would not be entered). ISTS 3.6.1.3 Required Action A.1 also applies to an inoperable MSIV that will not automatically isolate (which means it is essentially full open) and is considered to be a comparable level of degradation, with respect to MSIV leakage. ISTS 3.6.1.3 Required Action A.1 allows the associated penetration to be isolated in 8 hours if one MSIV is inoperable and ISTS 3.6.1.3 Required Action B.1 allows the associated penetration to be isolated in 1 hour if two MSIVs in one penetration are inoperable. However, isolation of the associated penetration (to meet ISTS 3.6.1.3 Required Action A.1 or B.1) can be performed using a leaking valve. This would not provide adequate compensatory measures to allow continued operation. Therefore, when one or more MSIVs are not meeting leakage rate limits, Condition D should be entered and the MSIV leakage rate should be restored. As discussed in the ISTS 3.6.1.3 Bases for Required Action D.1, the leakage can be restored by isolating the penetration with a valve not exceeding leakage limits. This is more restrictive than ISTS 3.6.1.3 Required Actions A.1 and B.1, which allow isolation of the associated penetration using the leaking valve(s). The Completion Time of ISTS 3.6.1.3 Condition D to restore MSIV leakage to within the limit is revised to 8 hours to be consistent with the time provided to restore an inoperable MSIV in ISTS 3.6.1.3 Required Action A.1. This change allows a period of time to restore the MSIV leakage rate to within the limit that takes into consideration the fact that isolation of main steam line(s) results in a potential for a plant shutdown. The extension to the time period to restore the MSIV leakage rate, when two MSIVs in one penetration are inoperable due to leakage, is considered to be acceptable since Note 4 to the ACTIONS of ISTS 3.6.1.3 continues to provide assurance that MSIV leakage does not adversely impact Primary Containment OPERABILITY during the extended time

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period.

This change was approved in the Hatch, Peach Bottom, and WNP2 ITS and was discussed and accepted by Jack Kudrick of the NRC Containment Systems Branch.

This TSTF is being submitted solely at the NRC's request in order for this change to be approved on a plant-specific ITS conversion and this change is the current licensing basis for several BWR plants.

Rev. 1, 2, 3, and 4: a) the words inside the brackets have been modified to reflect the different types of leakage categories. Since there is more than one, the the exclusion "for reasons other than Condition D" has been used in Conditions A, B, and C. All PCIVs are required to be OPERABLE such that they are in the accident condition or can be automatically repositioned to the accident condition and certain PCIVs have individual leakage limits. These leakage limits are in addition to the type A, B, and C limits required by LCO 3.6.1.1, Primary Containment OPERABILITY. If a type A, B, or C limit were exceeded due to an individual valve exceeding its specific leakage limit, LCO 3.6.1.3 ACTIONS Note 4 would require the appropriate ACTIONS of LCO 3.6.1.1 to be taken (which require primary containment to be restored within 1 hour). The change was made to reflect that different compensatory actions are required depending upon the cause of the inoperability. ACTION A is to be taken if the PCIV is inoperable for reasons other than leakage; ACTIONS D and E are required to be taken if the SRs for individual valve leakage limits are not met. Currently in the NUREGs, Condition A would only exempt purge valve leakage requirements (BWR/4 and BWR/6) and secondary containment bypass leakage requirements (BWR/6 only). If an MSIV or a hydrostatically tested valve (or a secondary containment bypass leakage valve or EFCV - BWR/4 only) was not meeting the leakage limits, Condition A would be entered and Required Action A would be required. This Required Action allows the penetration to be isolated. However, the Required Action allows any deactivated automatic valve in the closed position to be used to isolate the penetration; thus isolating the penetration can be performed by using the valve that is not meeting the leakage limits. This would not provide adequate compensatory measures to allow continued operation. When a MSIV or hydrostatically tested valve (or secondary containment bypass leakage valve or EFCV BWR/4 only) leakage is not within limits, Condition D should be entered. The Required Action for this Condition would require the leakage to be restored within limit in 4 hours for secondary containment bypass leakage and hydrostatically tested line leakage not in a closed system, 8 hours for MSIV leakage, and 72 hours for hydrostatically tested lines [leakage on a closed system and EFCV leakage]. The 4 hour and 8 hour Completion Times are consistent with the time provided in Required Action A.1 to isolate the applicable penetration. The 72 hour Completion Time for hydrostatically tested lines leakage on a closed system [and EFCV] is deemed appropriate based in part on the approved generic change TSTF 30, Rev. 2 which provides a 72 hour Completion Time for single valve penetrations in a closed system. As discussed in the NUREG Bases for Action D, the leakage can be restored by isolating the penetration with a valve not exceeding the leakage limits. Conditions B and C have also been modified to exclude leakage. These Conditions are appropriate if the valve is in the incorrect position or will not close.

b) The words in the Conditions A and B Notes and the words in Condition B have been modified to state "two [or more]" in lieu of "two." Some penetration flow paths have more than two PCIVs in series in the flow path (e.g., in some cases a third qualified isolation valve downstream of the outboard valve). This change will clarify that an LCO 3.0.3 entry is not required for these plants and the appropriate actions are taken consistent with plants only two PCIVs per penetration flow path.

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Revision History

OG Revision 0

Revision Status: Closed

Revision Proposed by: Brunswick

5/5/2000

OG Revision 0**Revision Status: Closed**

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 14-Jan-1997

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 04-Feb-1998

TSTF Review Information

TSTF Received Date: 05-Feb-1998 Date Distributed for Review 05-Feb-1998

OG Review Completed: BWOG WOG CEOG BWROG

TSTF Comments:

BWR 4 and 6 only. TSTF approves.

TSTF Resolution: Approved Date: 05-Feb-1998

NRC Review Information

NRC Received Date: 20-Feb-1998

NRC Comments:

4/7/98 - NRC approves.

Final Resolution: Superseded by Revision Final Resolution Date: 07-Apr-1998

TSTF Revision 1**Revision Status: Closed**

Revision Proposed by: BWROG

Revision Description:

ACTIONS A, B, C, and D are being changed to ensure a) the appropriate ACTIONS are entered when an individual PCIV/penetration is not meeting its leakage limit, and b) appropriate ACTIONS are provided when a penetration flow path has more than two PCIVs. Appropriate Bases changes are also being made.

TSTF Review Information

TSTF Received Date: 12-Aug-1998 Date Distributed for Review 12-Oct-1998

OG Review Completed: BWOG WOG CEOG BWROG

TSTF Comments:

NA CE, B&W, WOG.

TSTF Resolution: Approved Date: 20-Nov-1998

NRC Review Information

NRC Received Date: 18-Dec-1998

NRC Comments:

5/5/2000

TSTF Revision 1**Revision Status: Closed**

4/21/99 - NRC comments. After discussion with Bryan Ford, BWROG Chairman and the Containment Systems Branch, NRC is Modifying this proposed change to accept the change to the Note to Condition A and B. However, the change to ACTION D with regards to purge valve leakage is not sufficiently justified in the justification, but a valid justification is provided in the Reviewer's Note of Insert 3 to the Bases. The concern is valid, but it should be made part of ACTION E rather than D.

In addition, failure of the STS 3.6.1.3 PCIV Leakage SRs would render those PCIVs inoperable and require entry into STS 3.6.1.3 ACTION A or C for hydrostatically tested valves or EFCVs, ACTION D for secondary containment bypass and MSIV leakage, ACTION E for purge valves, and STS 3.6.1.1 if total valve leakage exceeds Appendix J limits. In addition, the justification states that Required Action A.1, B and C would allow isolation using the leaking valve. Based on the staff interpretation above, it would not allow this since the valve/penetration would not meet the SR leakage requirement, and isolation would have to be accomplished using another valve. Furthermore the Completion Time proposed for EFCVs is based on TSTF-323 which is still under review by the staff.

Final Resolution: Superceded by Revision

Final Resolution Date: 21-Apr-1999

TSTF Revision 2**Revision Status: Closed**

Revision Proposed by: BWROG

Revision Description:

Revised BWR/4 pages to address EFCV leakage and clarified several Actions.

TSTF Review Information

TSTF Received Date: 30-Jan-1999

Date Distributed for Review 09-Mar-1999

OG Review Completed: BWOG WOG CEOG BWROG

TSTF Comments:

On hold for further evaluation.

TSTF Resolution: Superceded Date: 09-Mar-1999

TSTF Revision 3**Revision Status: Closed**

Revision Proposed by: TSTF

Revision Description:

The separate Action for specific PCIV leakages (Action D of 3.6.1.3) is revised to include all leakage types applicable to the PCIV Specification. In addition to adding MSIV leakage, this revision also adds hydrostatically tested lines and EFCVs (BWR/4 only). Bracketed options are also included for presenting purge valve leakage Actions, along with a Reviewer's Note regarding use of the options. Additional clarification is also included for Condition A and B Notes regarding the number PCIV's in a penetration.

TSTF Review Information

TSTF Received Date: 11-Jun-1999

Date Distributed for Review 15-Jun-1999

OG Review Completed: BWOG WOG CEOG BWROG

TSTF Comments:

(No Comments)

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TSTF Revision 3**Revision Status: Closed**

TSTF Resolution: Approved Date: 15-Jun-1999

NRC Review Information

NRC Received Date: 23-Jun-1999

NRC Comments:

11/10/00 - NRC provided comments. TSTF to respond.

The NRC provided the following comments on TST-207, Rev. 3:

1. PWRs had indicated in initial review that no penetrations had more than 2 CIVs
2. Because the PWRs had fewer (B&W had none) CIV-types with specific leakage SRs, the format "enhancement" was not significant enough to warrant inclusion in the change request.
3. The sentences in the TSTF Justification referencing intent in complying with Action A, B, and C are deleted. They were not pertinent to justifying the proposed change. The remainder of Item #3 was addressed in the Tech Branch Review comments.

Plant Systems Branch Comments (Draft)

Referring to the 3 items in the Conclusion:

- (1) We agree to revise the exception wording for Condition A, B, and C to be "for reasons other than Condition D." This eliminates the potential questions regarding what leakages are being referred to, and provides phrasing that is consistent with other exceptions throughout all ISTS NUREGs.
- (2) The Reviewers Note (Insert 3) is modified to include clarification on the use of the bracketed closed system wording. This clarification is consistent with the stated Staff understanding of the allowances.
- (3) We agree to remove the "[]" around "water" seal as a plant specific issue addressable without the need for brackets.

Final Resolution: Superseded by Revision

Final Resolution Date:

TSTF Revision 4**Revision Status: Closed**

Revision Proposed by: NRC

Revision Description:

1. Applicability to PWRs now Noted. Changes to Condition A and B made to PWRs as in BWRs.
2. W & CE PWRs add bracketed purge valve Completion Time to Action D (and added brackets to Action E for CE). B&W had no separate Action for leakages other than purge valves, therefore the format "enhancement" did not apply.

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TSTF Revision 4

Revision Status: Closed

3. The sentences in the TSTF Justification referencing intent in complying with Action A, B, and C are deleted. They were not pertinent to justifying the proposed change. The remainder of Item #3 was addressed in the Tech Branch Review comments.

Referring to the 3 items in the Conclusion:

(1) Revised the exception wording for Condition A, B, and C to be "for reasons other than" This eliminates the potential questions regarding what leakages are being referred to, and provides phrasing that is consistent with other exceptions throughout all ISTS NUREGs. For B&W, since there was only one leakage type, the specific leakage (purge valve leakage) was referenced in lieu of the reference to Condition D that was utilized for the other NUREGs.

(2) The Reviewers Note (Insert 3) for BWRs is modified to include clarification on the use of the bracketed closed system wording associated with hydrostatically tested valves. This clarification is consistent with the stated Staff understanding of the allowances.

(3) In the BWR Insert 3, removed the "[]" around "water" seal as a plant specific issue addressable without the need for brackets.

TSTF Review Information

TSTF Received Date: 01-Mar-2000 Date Distributed for Review 01-Mar-2000

OG Review Completed: BWOG WOG CEOG BWROG

TSTF Comments:

(No Comments)

TSTF Resolution: Approved Date: 01-Mar-2000

NRC Review Information

NRC Received Date: 13-Mar-2000

NRC Comments:

3/24/00 - NRC provided comments. TSTF to address.

Final Resolution: Superseded by Revision

Final Resolution Date: 24-Mar-2000

TSTF Revision 5

Revision Status: Active

Next Action:

Revision Proposed by: NRC

Revision Description:

Revised to incorporate NRC comments. Change Conditions A and B for the PWRs and A, B, and C for the BWRs to stated "for reasons other than Condition[s] D [and E]". Corrected the Insert title for CEOG and WOG Bases for Action D.1. Added "[or more]" to BWR/6, Condition B and the corresponding Bases.

TSTF Review Information

TSTF Received Date: 24-Mar-2000

Date Distributed for Review 24-Mar-2000

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TSTF Revision 5**Revision Status: Active****Next Action:**OG Review Completed: BWOG WOG CEOG BWROG

TSTF Comments:

(No Comments)

TSTF Resolution: Approved Date: 24-Mar-2000

Incorporation Into the NUREGs

File to BBS/LAN Date:

TSTF Informed Date:

TSTF Approved Date:

NUREG Rev Incorporated:

Affected Technical Specifications

Action 3.6.3.A	Containment Isolation Valves	NUREG(s)- 1430 1431 1432 Only
Action 3.6.3.A Bases	Containment Isolation Valves	NUREG(s)- 1430 1431 1432 Only
Action 3.6.3.B	Containment Isolation Valves	NUREG(s)- 1430 1431 1432 Only
Action 3.6.3.B Bases	Containment Isolation Valves	NUREG(s)- 1430 1431 1432 Only
Action 3.6.3.D	Containment Isolation Valves	NUREG(s)- 1431 1432 Only
Action 3.6.3.D Bases	Containment Isolation Valves	NUREG(s)- 1431 1432 Only
Action 3.6.3.E	Containment Isolation Valves	NUREG(s)- 1432 Only
Action 3.6.3.E Bases	Containment Isolation Valves	NUREG(s)- 1432 Only
Action 3.6.1.3.A	Primary Containment Isolation Valves (PCIVs)	NUREG(s)- 1433 1434 Only
Action 3.6.1.3.A Bases	Primary Containment Isolation Valves (PCIVs)	NUREG(s)- 1433 1434 Only
Action 3.6.1.3.B	Primary Containment Isolation Valves (PCIVs)	NUREG(s)- 1433 1434 Only
Action 3.6.1.3.B Bases	Primary Containment Isolation Valves (PCIVs)	NUREG(s)- 1433 1434 Only
Action 3.6.1.3.C	Primary Containment Isolation Valves (PCIVs)	NUREG(s)- 1433 1434 Only
Action 3.6.1.3.C Bases	Primary Containment Isolation Valves (PCIVs)	NUREG(s)- 1433 1434 Only
Action 3.6.1.3.D	Primary Containment Isolation Valves (PCIVs)	NUREG(s)- 1433 1434 Only
Action 3.6.1.3.D Bases	Primary Containment Isolation Valves (PCIVs)	NUREG(s)- 1433 1434 Only

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Insert Bases (CE & W)

[The 24 hour Completion time for purge valve leakage is acceptable considering the purge valves remain closed so that a gross breach of the containment does not exist.]

[REVIEWER'S NOTE: The bracketed options provided in ACTION D reflect options in plant design and options in adopting the associated leakage rate Surveillances.

The options (in both ACTION D and ACTION E) for purge valve leakage, are based primarily on the design - if leakage rates can be measured separately for each purge valve, ACTION E is intended to apply. This would be required to be able to implement Required Action E.3. Should the design allow only for leak testing both purge valves simultaneously, then the Completion Time for ACTION D should include the "24 hours for purge valve leakage" and ACTION E should be eliminated.]

INSERT (BWR/4)

COMPLETION TIME

...
...

AND

8 hours for MSIV leakage

AND

[24 hours for
purge valve leakage]

AND

[72 hours for
hydrostatically tested
line leakage [on a closed system] [and EFCV]leakage]

INSERT CONDITION (BWR/4)

[MSIV leakage rate,] [purge valve leakage rate,] [hydrostatically tested line leakage rate,]][or] [EFCV
leakage rate]

INSERT Bases (BWR/4)**INSERT 1**

... secondary containment bypass leakage rate, MSIV leakage rate, purge valve leakage rate, or hydrostatically tested line leakage rate or EFCV leakage rate . . .

INSERT 2

... (SR 3.6.1.3.1.13),] [purge valve leakage rate (SR 3.6.1.3.7),] [or] [hydrostatically tested line leakage rate (SR 3.6.1.3.14),] [or [EFCV leakage rate (SR 3.6.1.3.10)] ...

INSERT 3

For MSIV leakage, an 8 hour Completion Time is allowed. The Completion Time of 8 hours for MSIV leakage 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 potential for plant shutdown. [The 24 hour Completion Time for purge valve leakage is acceptable considering the purge valves remain closed so that a gross breach of the containment does not exist.] [The 72 hour Completion Time for hydrostatically tested line leakage [on a closed system] is acceptable based on the available water seal expected to remain as a gaseous fission product boundary during the accident, and the an associated closed system.] [The 72 hour Completion Time for EFCV leakage is acceptable based on the instrument and the small pipe diameter of the penetration (hence, reliability) to act as a penetration isolation boundary.]

[REVIEWER'S NOTE: The bracketed options provided in ACTION D reflect options in plant design and options in adopting the associated leakage rate Surveillances.

The options (both in ACTION D and ACTION E) for purge valve leakage, are based primarily on the design. If leakage rates can be measured separately for each purge valve, ACTION E is intended to apply. This would be required to be able to implement Required Action E.3. Should the design allow only for leak testing both purge valves simultaneously, then the Completion Time for ACTION D should include the "24 hours for purge valve leakage" and ACTION E should be eliminated.

The option for EFCV is based on the acceptance criteria of SR 3.6.1.3.10. If the acceptance criteria is a specific leakage rate (e.g., 1 gph) then the Completion Time for ACTION D should include the "72 hours for EFCV leakage." If the acceptance criteria for SR 3.6.1.3.10 is non-specific (e.g., "actuates to the closed position") then there is no specific leakage criteria and the EFCV Completion Time is not adopted.

Similarly, adopting Completion Times for secondary containment bypass and/or hydrostatically tested lines is based on whether the associated SRs are adopted.

The additional bracketed options for whether the hydrostatically tested line is with or without a closed system is predicated on plant-specific design. If the design is such that there are not both types of hydrostatically tested lines (some with and some without closed systems), the specific 'closed system' wording can be removed and the appropriate 4 or 72 hour Completion Time retained. In the event there are both types, the clarifying wording remains and the brackets are removed.]

INSERT (BWR/6)

COMPLETION TIME

...
...

AND

8 hours for MSIV leakage

AND

[24 hours for
purge valve leakage]

AND

[72 hours for
hydrostatically tested
line leakage] [on a closed system]]

INSERT CONDITION (BWR/6)

[MSIV leakage rate,] [purge valve leakage rate,] [or] [hydrostatically tested line leakage rate]

INSERT Bases (BWR/6)

INSERT 1

... secondary containment bypass leakage rate, MSIV leakage rate, purge valve leakage rate, or hydrostatically tested line leakage rate . . .

INSERT 2

... (SR 3.6.1.3.1.9),] MSIV leakage rate (SR 3.6.1.3.10), [purge valve leakage rate (SR 3.6.1.3.6),] [or] [hydrostatically tested line leakage rate (SR 3.6.1.3.11)] ...

INSERT 3

For MSIV leakage, an 8 hour Completion Time is allowed. The Completion Time of 8 hours for MSIV leakage 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 potential for plant shutdown. [The 24 hour Completion Time for purge valve leakage is acceptable considering the purge valves remain closed so that a gross breach of the containment does not exist.] [The 72 hour Completion Time for hydrostatically tested line leakage [on a closed system] is acceptable based on the available water seal expected to remain as a gaseous fission product boundary during the accident [, and, in many cases, an associated closed system].]

[REVIEWER'S NOTE: The bracketed options provided in ACTION D reflect options in plant design and options in adopting the associated leakage rate Surveillances.

The options (both in ACTION D and ACTION E) for purge valve leakage, are based primarily on the design. If leakage rates can be measured separately for each purge valve, ACTION E is intended to apply. This would be required to be able to implement Required Action E.3. Should the design allow only for leak testing both purge valves simultaneously, then the Completion Time for ACTION D should include the "24 hours for purge valve leakage" and ACTION E should be eliminated.

Adopting Completion Times for secondary containment bypass and/or hydrostatically tested lines is based on whether the associated SRs are adopted.

The additional bracketed options for whether the hydrostatically tested line is with or without a closed system is predicated on plant-specific design. If the design is such that there are not both types of hydrostatically tested lines (some with and some without closed systems), the specific 'closed system' wording can be removed and the appropriate 4 or 72 hour Completion Time retained. In the event there are both types, the clarifying wording remains and the brackets are removed.]

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3.6 CONTAINMENT SYSTEMS

3.6.3 Containment Isolation Valves

LCO 3.6.3 Each containment isolation valve shall be OPERABLE.

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

ACTIONS

NOTES

1. Penetration flow paths [except for 48 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 system(s) made inoperable by containment isolation valves.
4. Enter applicable Conditions and Required Actions of LCO 3.6.1, "Containment," when isolation valve leakage results in exceeding the overall containment leakage rate acceptance criteria.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE----- Only applicable to penetration flow paths with two containment isolation valves. <i>[or more]</i></p> <p>One or more penetration flow paths with one containment isolation valve inoperable (except for <i>[for reasons other than</i> purge valve leakage not within limits)</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>AND</p>	<p>4 hours</p> <p>(continued)</p>

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ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. (continued)</p>	<p>A.2</p> <p>-----NOTE----- Isolation devices in high radiation areas may be verified by use of administrative means. -----</p> <p>Verify the affected penetration flow path is isolated.</p>	<p>Once per 31 days for isolation devices outside containment</p> <p>AND</p> <p>Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment</p>
<p>B. -----NOTE----- Only applicable to penetration flow paths with two containment isolation valves.</p> <p>[or more]</p> <p>One or more penetration flow paths with two containment isolation valves inoperable (except for purge valve leakage not within limit.)</p>	<p>B.1</p> <p>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>[for reasons other than</p>	<p>1 hour</p>

(continued)

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BASES

ACTIONS
(continued)

into the applicable Conditions and Required Actions of
LCO 3.6.1.

A.1 and A.2

In the event one containment isolation valve in one or more penetration flow paths is inoperable (except for purge valve leakage not within limits), the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic containment isolation valve, a closed manual valve, a blind flange, and a check valve with flow through the valve secured. For a penetration isolated in accordance with Required Action A.1, the device used to isolate the penetration should be the closest available one to containment. Required Action A.1 must be completed within the 4 hour Completion Time. The specified time period is reasonable, considering the time required to isolate the penetration and the relative importance of supporting containment OPERABILITY during MODES 1, 2, 3, and 4.

For affected penetration flow paths that cannot be restored to OPERABLE status within the 4 hour Completion Time and 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 periodic verification is necessary to ensure that containment penetrations required to be isolated following an accident and no longer capable of being automatically isolated will be in the isolation position should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification, through a system walkdown, that those isolation devices outside containment and capable of being mispositioned are in the correct position. The Completion Time of "once per 31 days for isolation devices outside containment" is appropriate considering the fact that the devices are operated under administrative controls and the probability of their misalignment is low. For the isolation devices inside containment, the time period specified as "prior to entering MODE 4 from MODE 5 if not performed within the previous

(continued)

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BASES

ACTIONS

A.1 and A.2 (continued)

92 days" is based on engineering judgment and is considered reasonable in view of the inaccessibility of the isolation devices and other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

[or more]

Condition A has been modified by a Note indicating this Condition is only applicable to those penetration flow paths with two containment isolation valves. For penetration flow paths with only one containment isolation valve and a closed system, Condition C provides appropriate actions.

Required Action A.2 is modified by a Note that applies to isolation devices located in high radiation areas and allows the devices 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 of these devices, once they have been verified to be in the proper position, is small.

B.1

[or more]

With two containment isolation valves in one or more penetration flow paths inoperable, [except for purge valve leakage not within limit], the affected penetration flow path must be isolated within 1 hour. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1. In the event the affected penetration is isolated in accordance with Required Action B.1, the affected penetration must be verified to be isolated on a periodic basis per Required Action A.2, which remains in effect. This periodic verification is necessary to assure leak tightness of containment and that penetrations requiring isolation following an accident are isolated. The Completion Time of once per 31 days for verifying each affected penetration flow path is isolated is appropriate considering the fact that the valves are

(continued)

BASES

TSTF-207 Rev 5

ACTIONS

B.1 (continued)

operated under administrative controls and the probability of their misalignment is low.

Condition B is modified by a Note indicating this Condition is only applicable to penetration flow paths with two ← [or more] containment isolation valves. Condition A of this LCO addresses the condition of one containment isolation valve inoperable in this type of penetration flow path.

C.1 and C.2

With one or more penetration flow paths with one containment isolation valve inoperable, the inoperable valve must be restored to OPERABLE status or the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. A check valve may not be used to isolate the affected penetration. Required Action C.1 must be completed within the [4] hour Completion Time. The specified time period is reasonable, considering the relative stability of the closed system (hence, reliability) to act as a penetration isolation boundary and the relative importance of supporting containment OPERABILITY during MODES 1, 2, 3, and 4. In the event the affected penetration is isolated in accordance with Required Action C.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This periodic verification is necessary to assure leak tightness of containment and that containment penetrations requiring isolation following an accident are isolated. The Completion Time of once per 31 days for verifying that each affected penetration flow path is isolated is appropriate considering the fact that the valves are operated under administrative controls and the probability of their misalignment is low.

Condition C is modified by a Note indicating that this Condition is only applicable to those penetration flow paths with only one containment isolation valve and a closed system. This Note is necessary since this Condition is

(continued)

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3.6 CONTAINMENT SYSTEMS

3.6.3 Containment Isolation Valves (Atmospheric and Dual)

LCO 3.6.3 Each containment isolation valve shall be OPERABLE.

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

ACTIONS

NOTES

1. Penetration flow paths [except for [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 system(s) made inoperable by containment isolation valves.
4. Enter applicable Conditions and Required Actions of LCO 3.6.1, "Containment," when leakage results in exceeding the overall containment leakage rate acceptance criteria.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE----- Only applicable to penetration flow paths with two containment isolation valves. ----- One or more penetration flow paths with one containment isolation valve inoperable [except for purge valve leakage and shield building bypass leakage not within limit].</p> <p><i>[or more]</i></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>AND <i>for reasons other than Condition(s) D [and E]</i></p>	<p>4 hours</p> <p>(continued)</p>

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ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. (continued)</p>	<p>A.2</p> <p>-----NOTE----- Isolation devices in high radiation areas may be verified by use of administrative means. -----</p> <p>Verify the affected penetration flow path is isolated.</p>	<p>Once per 31 days for isolation devices outside containment</p> <p><u>AND</u></p> <p>Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment</p>
<p>B. -----NOTE----- Only applicable to penetration flow paths with two containment isolation valves.</p> <p>----- One or more penetration flow paths with two containment isolation valves inoperable [except for purge valve leakage and shield building bypass leakage not within limit].</p>	<p>B.1</p> <p>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>1 hour</p>

[or more]

for reasons other than Condition[s] D [and E]

(continued)

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. -----NOTE----- Only applicable to penetration flow paths with only one containment isolation valve and a closed system. -----</p> <p>One or more penetration flow paths with one containment isolation valve inoperable.</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 -----NOTE----- Isolation devices in high radiation areas may be verified by use of administrative means. -----</p> <p>Verify the affected penetration flow path is isolated.</p>	<p>[4] hours</p> <p>Once per 31 days</p>
<p><i>One or more</i></p> <p>D. Secondary containment bypass leakage <i>not</i> within limit. <i>[or purge valve leakage]</i></p>	<p>D.1 Restore leakage within limit.</p>	<p>4 hours <i>for secondary containment bypass leakage</i></p>
<p>E. One or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits.</p>	<p>E.1 Isolate the affected penetration flow path by use of at least one [closed and de-activated automatic valve with resilient seals, closed manual valve with resilient seals, or blind flange].</p> <p><u>AND</u></p>	<p>24 hours</p> <p><u>AND</u> 24 hours for purge valve leakage</p> <p>(continued)</p>

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ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>E. (continued)</p>	<p>E.2 -----NOTE----- Isolation devices in high radiation areas may be verified by use of administrative means. -----</p> <p>Verify the affected penetration flow path is isolated.</p> <p><u>AND</u></p> <p>E.3 Perform SR 3.6.3.6 for the resilient seal purge valves closed to comply with Required Action E.1.</p>	<p>Once per 31 days for isolation devices outside containment</p> <p><u>AND</u></p> <p>Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment</p> <p>Once per [] days</p>
<p>F. Required Action and associated Completion Time not met.</p>	<p>F.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>F.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>

BASES (continued)

ACTIONS

The ACTIONS are modified by a Note allowing penetration flow paths, except for [42] inch purge valve penetration flow paths, to be unisolated intermittently under administrative controls. These administrative controls consist of stationing a dedicated operator at the valve controls, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for containment isolation is indicated. Due to the size of the containment purge line penetration and the fact that those penetrations exhaust directly from the containment atmosphere to the environment, these valves may not be opened under administrative controls.

A second Note has been added to provide clarification that, for 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 containment isolation valve. Complying with the Required Actions may allow for continued operation, and subsequent inoperable containment isolation valves are governed by subsequent Condition entry and application of associated Required Actions.

The ACTIONS are further modified by a third Note, which ensures that appropriate remedial actions are taken, if necessary, if the affected systems are rendered inoperable by an inoperable containment isolation valve.

A fourth Note has been added that requires entry into the applicable Conditions and Required Actions of LCO 3.6.1 when leakage results in exceeding the overall containment leakage limit.

A.1 and A.2

In the event one containment isolation valve in one or more penetration flow paths is inoperable, [except for purge valve leakage and shield building bypass leakage not within limit], the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic containment isolation valve, a closed manual valve, a blind

(continued)

Containment Isolation Valves (Atmospheric and Dual)
B 3.6.3

BASES

TSTF-207 Rev 5

ACTIONS

A.1 and A.2 (continued)

flange, and a check valve with flow through the valve secured. For penetrations isolated in accordance with Required Action A.1, the device used to isolate the penetration should be the closest available one to containment. Required Action A.1 must be completed within the 4 hour Completion Time. The 4 hour Completion Time is reasonable, considering the time required to isolate the penetration and the relative importance of supporting containment OPERABILITY during MODES 1, 2, 3, and 4.

For affected penetration flow paths that cannot be restored to OPERABLE status within the 4 hour Completion Time and 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 containment penetrations required to be isolated following an accident and no longer capable of being automatically isolated will be in the isolation position should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification, through a system walkdown, that those isolation devices outside containment and capable of being mispositioned are in the correct position. The Completion Time of "once per 31 days for isolation devices outside containment" is appropriate considering the fact that the devices are operated under administrative controls and the probability of their misalignment is low. For the isolation devices inside containment, the time period specified as "prior to entering MODE 4 from MODE 5 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 other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

[or more]

Condition A has been modified by a Note indicating that this Condition is only applicable to those penetration flow paths with two containment isolation valves. For penetration flow paths with only one containment isolation valve and a closed system, Condition C provides appropriate actions.

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

(continued)

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BASES

ACTIONS

A.1 and A.2 (continued)

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

B.1

[or more]

With two containment isolation valves in one or more penetration flow paths inoperable, except for purge valve leakage and shield building bypass leakage not within limit], the affected penetration flow path must be isolated within 1 hour. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1. In the event the affected penetration is isolated in accordance with Required Action B.1, the affected penetration must be verified to be isolated on a periodic basis per Required Action A.2, which remains in effect. This periodic verification is necessary to assure leak tightness of containment and that penetrations requiring isolation following an accident are isolated. The Completion Time of once per 31 days for verifying each affected penetration flow path is isolated is appropriate considering the fact that the valves are operated under administrative controls and the probability of their misalignment is low.

Condition B is modified by a Note indicating this Condition is only applicable to penetration flow paths with two [or more] containment isolation valves. Condition A of this LCO addresses the condition of one containment isolation valve inoperable in this type of penetration flow path.

C.1 and C.2

With one or more penetration flow paths with one containment isolation valve inoperable, the inoperable valve must be restored to OPERABLE status or the affected penetration flow

(continued)

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BASES

ACTIONS

C.1 and C.2 (continued)

path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. A check valve may not be used to isolate the affected penetration. Required Action C.1 must be completed within the [4] hour Completion Time. The specified time period is reasonable, considering the relative stability of the closed system (hence, reliability) to act as a penetration isolation boundary and the relative importance of supporting containment OPERABILITY during MODES 1, 2, 3, and 4. In the event the affected penetration is isolated in accordance with Required Action C.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This is necessary to assure leak tightness of containment and that containment penetrations requiring isolation following an accident are isolated. The Completion Time of once per 31 days for verifying that each affected penetration flow path is isolated is appropriate considering the valves are operated under administrative controls and the probability of their misalignment is low.

Condition C is modified by a Note indicating that this Condition is only applicable to those penetration flow paths with only one containment isolation valve and a closed system. This Note is necessary since this Condition is written to specifically address those penetration flow paths in a closed system.

Required Action C.2 is modified by a Note that applies to valves and blind flanges located in high radiation areas and allows these devices to be verified closed 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 of these valves, once they have been verified to be in the proper position, is small.

D.1

(SR 3.6.3.9) [or purge valve leakage rate (SR 3.6.3.6)]

With the secondary containment bypass leakage rate not within limit, the assumptions of the safety analysis are not

(continued)

BASES

ACTIONS

D.1 (continued)

met. Therefore, the leakage must be restored to within limit ~~within 4 hours~~. Restoration can be accomplished by isolating the penetration(s) that caused the limit to be exceeded by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. When a penetration is isolated, the leakage rate for the isolated penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed to be the lesser actual pathway leakage of the two devices. The 4 hour Completion Time is reasonable considering the time required to restore the leakage by isolating the penetration(s) and the relative importance of secondary containment bypass leakage to the overall containment function.

↑ INSERT Bases (CE + W)

for secondary containment bypass leakage

E.1, E.2, and E.3

In the event one or more containment purge valves in one or more penetration flow paths are not within the purge valve leakage limits, purge valve leakage must be restored to within limits, or the affected penetration 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 and de-activated automatic valve with resilient seals, a closed manual valve with resilient seals, or a blind flange]. A purge valve with resilient seals utilized to satisfy Required Action E.1 must have been demonstrated to meet the leakage requirements of SR 3.6.3.6. The specified Completion Time is reasonable, considering that one containment purge valve remains closed so that a gross breach of containment does not exist.

In accordance with Required Action E.2, this penetration flow path must be verified to be isolated on a periodic basis. The periodic verification is necessary to ensure that containment penetrations required to be isolated following an accident, which are no longer capable of being automatically isolated, will be in the isolation position should an event occur. This Required Action does not require any testing or valve manipulation. Rather, it involves verification, through a system walkdown, that those

(continued)

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BASES

ACTIONS

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

isolation devices outside containment capable of being mispositioned are in the correct position. For the isolation devices inside containment, the time period specified as "prior to entering MODE 4 from MODE 5 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 other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

For the containment purge valve with resilient seal that is isolated in accordance with Required Action E.1, SR 3.6.3.6 must be performed at least once every [92] days. This assures that degradation of the resilient seal is detected and confirms that the leakage rate of the containment purge valve does not increase during the time the penetration is isolated. The normal Frequency for SR 3.6.3.6, 184 days, is based on an NRC initiative, Generic Issue B-20 (Ref. 3). 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 to be acceptable based on operating experience.

F.1 and F.2

If the Required Actions and associated Completion Times are not met, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 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 3.6.3.1

Each [42] inch containment purge valve is required to be verified sealed closed at 31 day intervals. This Surveillance is designed to ensure that a gross breach of containment is not caused by an inadvertent or spurious

(continued)

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3.6 CONTAINMENT SYSTEMS

3.6.3 Containment Isolation Valves (Atmospheric, Subatmospheric, Ice Condenser, and Dual)

LCO 3.6.3 Each containment isolation valve shall be OPERABLE.

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

ACTIONS

NOTES

1. Penetration flow path(s) [except for [42] inch purge valve flow paths] may be unisolated intermittently under administrative controls.
2. Separate Condition entry is allowed for each penetration flow path.
3. Enter applicable Conditions and Required Actions for systems made inoperable by containment isolation valves.
4. Enter applicable Conditions and Required Actions of LCO 3.6.1, "Containment," when isolation valve leakage results in exceeding the overall containment leakage rate acceptance criteria.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE----- Only applicable to penetration flow paths with two containment isolation valves.</p> <p><i>[or more]</i></p> <p>One or more penetration flow paths with one containment isolation valve inoperable [except for purge valve or shield building bypass 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>AND</p> <p><i>for reasons other than Condition(s) D [and E]</i></p>	<p>4 hours</p> <p>(continued)</p>

Containment Isolation Valves (Atmospheric,
Subatmospheric, Ice Condenser, and Dual)
3.6.3

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ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. (continued)</p>	<p>A.2</p> <p>-----NOTE----- Isolation devices in high radiation areas may be verified by use of administrative means. -----</p> <p>Verify the affected penetration flow path is isolated.</p>	<p>Once per 31 days for isolation devices outside containment</p> <p><u>AND</u></p> <p>Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment</p>
<p>B. -----NOTE----- Only applicable to penetration flow paths with two containment isolation valves.</p> <p>-----</p> <p>One or more penetration flow paths with two containment isolation valves inoperable [except for purge valve or shield building bypass leakage not within limit].</p>	<p>B.1</p> <p>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>1 hour</p>

[or more]

for reasons other than Conditions A D [and E]

(continued)

Containment Isolation Valves (Atmospheric,
Subatmospheric, Ice Condenser, and Dual)
3.6.3

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. -----NOTE----- Only applicable to penetration flow paths with only one containment isolation valve and a closed system. -----</p> <p>One or more penetration flow paths with one containment isolation valve inoperable.</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 -----NOTE----- Isolation devices in high radiation areas may be verified by use of administrative means. -----</p> <p>Verify the affected penetration flow path is isolated.</p>	<p>[4] hours</p> <p>Once per 31 days</p>
<p>D. Shield building bypass leakage not within limit. [or purge valve leakage]</p>	<p>D.1 Restore leakage within limit.</p>	<p>4 hours</p> <p><u>AND</u> 24 hours for purge valve leakage</p> <p>for shield building bypass leakage</p>
<p>E. One or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits.</p>	<p>E.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>24 hours</p> <p>(continued)</p>

BASES (continued)

TSTF-207 Rev 5

ACTIONS

The ACTIONS are modified by a Note allowing penetration flow paths, except for [42] inch purge valve penetration flow paths, to be unisolated intermittently under administrative controls. These administrative controls consist of stationing a dedicated operator at the valve controls, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for containment isolation is indicated. Due to the size of the containment purge line penetration and the fact that those penetrations exhaust directly from the containment atmosphere to the environment, the penetration flow path 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 SR 3.6.3.1.

A second Note has been added to provide clarification that, for 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 containment isolation valve. Complying with the Required Actions may allow for continued operation, and subsequent inoperable containment isolation valves are governed by subsequent Condition entry and application of associated Required Actions.

The ACTIONS are further modified by a third Note, which ensures appropriate remedial actions are taken, if necessary, if the affected systems are rendered inoperable by an inoperable containment isolation valve.

In the event the air lock leakage results in exceeding the overall containment leakage rate, Note 4 directs entry into the applicable Conditions and Required Actions of LCO 3.6.1.

A.1 and A.2

In the event one containment isolation valve in one or more penetration flow paths is inoperable, [except for purge valve or shield building bypass leakage not within limit], the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active

(continued)

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BASES

ACTIONS

A.1 and A.2 (continued)

failure. Isolation barriers that meet this criterion are a closed and de-activated automatic containment isolation valve, a closed manual valve, a blind flange, and a check valve with flow through the valve secured. For a penetration flow path isolated in accordance with Required Action A.1, the device used to isolate the penetration should be the closest available one to containment. Required Action A.1 must be completed within 4 hours. The 4 hour Completion Time is reasonable, considering the time required to isolate the penetration and the relative importance of supporting containment OPERABILITY during MODES 1, 2, 3, and 4.

For affected penetration flow paths that cannot be restored to OPERABLE status within the 4 hour Completion Time and 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 containment penetrations required to be isolated following an accident and no longer capable of being automatically isolated will be in the isolation position should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification, through a system walkdown, that those isolation devices outside containment and capable of being mispositioned are in the correct position. The Completion Time of "once per 31 days for isolation devices outside containment" is appropriate considering the fact that the devices are operated under administrative controls and the probability of their misalignment is low. For the isolation devices inside containment, the time period specified as "prior to entering MODE 4 from MODE 5 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 other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

[or more]

Condition A has been modified by a Note indicating that this Condition is only applicable to those penetration flow paths with two containment isolation valves. For penetration flow paths with only one containment isolation valve and a closed system, Condition C provides the appropriate actions.

(continued)

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BASES

ACTIONS

A.1 and A.2 (continued)

Required Action A.2 is modified by a Note that applies to isolation devices located in high radiation areas and allows these devices to be verified closed 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 of these devices once they have been verified to be in the proper position, is small.

B.1

[or more]

[except for purge valve or shield building by pass leakage not within limit,]

With two containment isolation valves in one or more penetration flow paths inoperable, the affected penetration flow path must be isolated within 1 hour. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1. In the event the affected penetration is isolated in accordance with Required Action B.1, the affected penetration must be verified to be isolated on a periodic basis per Required Action A.2, which remains in effect. This periodic verification is necessary to assure leak tightness of containment and that penetrations requiring isolation following an accident are isolated. The Completion Time of once per 31 days for verifying each affected penetration flow path is isolated is appropriate considering the fact that the valves are operated under administrative control and the probability of their misalignment is low.

Condition B is modified by a Note indicating this Condition is only applicable to penetration flow paths with two containment isolation valves. Condition A of this LCO addresses the condition of one containment isolation valve inoperable in this type of penetration flow path.

[or more]

(continued)

BASES

NO Δ FYI ONLY

TSTF-207 Rev 5

ACTIONS
(continued)

C.1 and C.2

With one or more penetration flow paths with one containment isolation valve inoperable, the inoperable valve flow path must be restored to OPERABLE status or the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. A check valve may not be used to isolate the affected penetration flow path. Required Action C.1 must be completed within the [4] hour Completion Time. The specified time period is reasonable considering the relative stability of the closed system (hence, reliability) to act as a penetration isolation boundary and the relative importance of maintaining containment integrity during MODES 1, 2, 3, and 4. In the event the affected penetration flow path is isolated in accordance with Required Action C.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This periodic verification is necessary to assure leak tightness of containment and that containment penetrations requiring isolation following an accident are isolated. The Completion Time of once per 31 days for verifying that each affected penetration flow path is isolated is appropriate because the valves are operated under administrative controls and the probability of their misalignment is low.

Condition C is modified by a Note indicating that this Condition is only applicable to those penetration flow paths with only one containment isolation valve and a closed system. This Note is necessary since this Condition is written to specifically address those penetration flow paths in a closed system.

Required Action C.2 is modified by a Note that applies to valves and blind flanges located in high radiation areas and allows these devices to be verified closed 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 of these valves, once they have been verified to be in the proper position, is small.

(continued)

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BASES

ACTIONS
(continued)

D.1

(SR 3.6.3.11) [or purge valve leakage rate (SR 3.6.3.7)]

With the shield building bypass leakage rate not within limit, the assumptions of the safety analyses are not met. Therefore, the leakage must be restored to within limit ~~within 4 hours~~. Restoration can be accomplished by isolating the penetration(s) that caused the limit to be exceeded by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. When a penetration is isolated the leakage rate for the isolated penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed to be the lesser actual pathway leakage of the two devices. The 4 hour Completion Time is reasonable considering the time required to restore the leakage by isolating the penetration(s) and the relative importance of secondary containment bypass leakage to the overall containment function.

INSERT Bases (LEAD)

for shield building bypass leakage

E.1, E.2, and E.3

In the event one or more containment purge valves in one or more penetration flow paths 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 and de-activated automatic valve, closed manual valve, or blind flange]. A purge valve with resilient seals utilized to satisfy Required Action E.1 must have been demonstrated to meet the leakage requirements of SR 3.6.3.7. The specified Completion Time is reasonable, considering that one containment purge valve remains closed so that a gross breach of containment does not exist.

In accordance with Required Action E.2, this penetration flow path must be verified to be isolated on a periodic basis. The periodic verification is necessary to ensure that containment penetrations required to be isolated following an accident, which are no longer capable of being

(continued)

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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 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 in MODES 1, 2, and 3.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE----- Only applicable to penetration flow paths with two PCIVs.</p> <p>[or more]</p> <p>One or more penetration flow paths with one PCIV inoperable [except for purge valve leakage not within limit.].</p> <p>for reasons other than condition [B]</p> <p>D [and E]</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>AND</p>	<p>4 hours except for main steam line</p> <p>AND</p> <p>8 hours for main steam line</p> <p>(continued)</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. -----NOTE----- Only applicable to penetration flow paths with two PCIVs.</p> <p><i>[or more]</i> <i>[or more]</i></p> <p>One or more penetration flow paths with two PCIVs inoperable [except for purge valve leakage not within limit].</p>	<p>B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.</p> <p><i>for reasons other than Condition[s] D [and E]</i></p>	<p>1 hour</p>
<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</p> <p><i>[for reasons other than Condition[s] D [and E]]</i></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 -----NOTE----- Isolation devices in high radiation areas may be verified by use of administrative means.</p> <p>Verify the affected penetration flow path is isolated.</p>	<p>[4] hours except for excess flow check valves (EFCVs)</p> <p><u>AND</u></p> <p>12 hours [for EFCVs]</p> <p><i>4 hours for hydrostatically tested line leakage [not on a closed system]</i></p> <p><u>AND</u></p> <p>Once per 31 days <i>for secondary containment bypass leakage</i></p>
<p><i>One or more</i></p> <p>D. Secondary containment bypass leakage rate not within limit.</p>	<p>D.1 Restore leakage rate to within limit.</p>	<p><i>4 hours</i></p>

INSERT CONDITION

INSERT Comp Tm

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

the device used to isolate the penetration should be the closest available valve to the primary containment. The Required Action must be completed within the 4-hour Completion Time (8 hours for main steam lines). The Completion Time 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(s) must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident, and no longer capable of being automatically isolated, will be in the isolation position should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification that those devices outside containment and capable of potentially being mispositioned are in the correct position. The Completion Time of "once per 31 days for isolation devices outside primary containment" is appropriate because the devices are operated under administrative controls and the probability of their misalignment is low. For the devices inside primary containment, the time period specified "prior to entering MODE 2 or 3 from MODE 4, if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days" is based on engineering judgment and is considered reasonable in view of the inaccessibility of the devices and other administrative controls ensuring that device misalignment is an unlikely possibility.

[or more]

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

Required Action A.2 is modified by a Note that applies to isolation devices located in high radiation areas, and

(continued)

BASES

ACTIONS
(continued)

communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated. Due to the size of the primary containment purge line penetration and the fact that those penetrations exhaust directly from the containment atmosphere to the environment, the penetration flow path containing these valves is not allowed to 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 SR 3.6.1.3.1.

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

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

A.1 and A.2

INSERT 1

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

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

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 of these devices, once they have been verified to be in the proper position, is low.

B.1 [except for INSERT 1 not within limit₂] [or more]

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

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

[or more]

C.1 and C.2

With one or more penetration flow paths with one PCIV inoperable, the inoperable valve must be restored to OPERABLE status or the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. A check valve may not be used to isolate the affected penetration. Required Action C.1 must be completed within the [4] hour Completion Time. The Completion Time of [4] hours is reasonable considering the relative stability of the closed system (hence, reliability) to act as a penetration isolation boundary and the relative importance of supporting primary containment OPERABILITY during

(continued)

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BASES

ACTIONS

C.1 and C.2 (continued)

MODES 1, 2, and 3. The Completion Time of 12 hours is reasonable considering the instrument and the small pipe diameter of penetration (hence, reliability) to act as a penetration isolation boundary and the small pipe diameter of the affected penetrations. In the event the affected penetration flow path is isolated in accordance with Required Action C.1, the affected penetration must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident are isolated. The Completion Time of once per 31 days for verifying each affected penetration is isolated is appropriate because the valves are operated under administrative controls and the probability of their misalignment is low.

[or more]

Condition C is modified by a Note indicating that this Condition is only applicable to penetration flow paths with only one PCIV. For penetration flow paths with two PCIVs, Conditions A and B provide the appropriate Required Actions.

Required Action C.2 is modified by a Note that 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. Therefore, the probability of misalignment of these valves, once they have been verified to be in the proper position, is low.

INSERT 2

(SR 3.6.1.3.12)

D.1

With the Secondary containment bypass leakage rate or MSIV leakage rate not within limit, the assumptions of the safety analysis may not be met. Therefore, the leakage 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 one closed and de-activated automatic valve, closed manual valve, or blind flange. When a penetration is isolated, the leakage rate for the isolated penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed

(continued)

BASES

for hydrostatically tested line leakage [not on a closed system] and for secondary containment bypass leakage

ACTIONS

D.1 (continued)

to be the lesser actual pathway leakage of the two devices. The 4 hour Completion Time is reasonable considering the time required to restore the leakage by isolating the penetration and the relative importance of secondary containment bypass leakage to the overall containment function.

↑ INSERT 3

E.1, E.2, and E.3

In the event one or more containment purge valves are not within the purge valve leakage limits, purge valve leakage must be restored to within limits or the affected penetration 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 and de-activated automatic valve, closed manual valve, and blind flange]. If a purge valve with resilient seals is utilized to satisfy Required Action E.1, it must have been demonstrated to meet the leakage requirements of SR 3.6.1.3.7. The specified Completion Time is reasonable, considering that one containment purge valve remains closed so that a gross breach of containment does not exist.

In accordance with Required Action E.2, this penetration flow path must be verified to be isolated on a periodic basis. The periodic verification is necessary to ensure that containment penetrations required to be isolated following an accident, which are no longer capable of being automatically isolated, will be in the isolation position should an event occur. This Required Action does not require any testing or valve manipulation. Rather, it involves verification that those isolation devices outside containment and potentially capable of being mispositioned are in the correct position. For the isolation devices inside containment, the time period specified as "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 other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

(continued)

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3.6 CONTAINMENT SYSTEMS

3.6.1.3 Primary Containment Isolation Valves (PCIVs)

LCO 3.6.1.3 Each PCIV shall be OPERABLE.

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

ACTIONS

NOTES

1. Penetration flow paths [except for [] 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 in MODES 1, 2, and 3.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. -----NOTE----- Only applicable to penetration flow paths with two PCIVs. ----- One or more penetration flow paths with one PCIV inoperable [except for purge valve or secondary containment bypass leakage not within limit]. ----- for reasons other than Condition [S] D [and E]</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. AND</p>	<p>4 hours except for main steam line AND 8 hours for main steam line (continued)</p>

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. -----NOTE----- Only applicable to penetration flow paths with two PCIVs. ----- [or more] One or more penetration flow paths with two PCIVs inoperable [except for purge valve leakage not within limit].</p>	<p>B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.</p> <p>for reasons other than Condition [S] D [and E]</p>	<p>1 hour</p>
<p>C. -----NOTE----- Only applicable to penetration flow paths with only one PCIV. ----- One or more penetration flow paths with one PCIV inoperable [for reasons other than Condition [S] D [and E]] One or more</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>AND</p> <p>C.2 -----NOTE----- Isolation devices in high radiation areas may be verified by use of administrative means. ----- Verify the affected penetration flow path is isolated.</p>	<p>[4] hours</p> <p>4 hours for hydrostatically tested line leakage [not on a closed system] AND Once per 31 days for secondary containment bypass leakage</p>
<p>D. Secondary containment bypass leakage rate not within limit.</p>	<p>D.1 Restore leakage rate to within limit.</p>	<p>[4 hours]</p>

INSERT CONDITION

INSERT Comp Tm

(continued)

BASES

ACTIONS
(continued)

subsequent Condition entry and application of associated Required Actions.

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

A.1 and A.2

INSERT 1

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

For affected penetrations that have been isolated in accordance with Required Action A.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following

(continued)

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ACTIONS

A.1 and A.2 (continued)

an accident, and no longer capable of being automatically isolated, will be in the isolation position should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification that those devices outside the primary containment, 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 devices are operated under administrative controls and the probability of their misalignment is low. For devices inside the 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 the inaccessibility of the devices and the existence of other administrative controls ensuring that device misalignment is an unlikely possibility.

[or more]

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

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 of these devices, once they have been verified to be in the proper position, is low.

[except for INSERT 1 not within limit]

B.1

With one or more penetration flow paths with two PCIVs inoperable, 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.

[or more]

(continued)

BASES

ACTIONS

B.1 (continued)

Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1.1.

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

C.1 and C.2

[except for INSERT 1 not within limits]

When one or more penetration flow paths with one PCIV inoperable, the inoperable valve must be restored to OPERABLE status or the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. A check valve may not be used to isolate the affected penetration. Required Action C.1 must be completed within [4] hours. The [4] hour Completion Time is reasonable considering the relative stability of the closed system (hence, reliability) to act as a penetration isolation boundary and the relative importance of supporting primary containment OPERABILITY during MODES 1, 2, and 3. In the event the affected penetration is isolated in accordance with Required Action C.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident are isolated. The Completion Time of once per 31 days for verifying that each affected penetration is isolated is appropriate because the valves are operated under administrative controls and the probability of their misalignment is low.

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

(continued)

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BASES

ACTIONS

C.1 and C.2 (continued)

specifically to address those penetrations with a single PCIV.

Required Action C.2 is modified by a Note that 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. Therefore, the probability of misalignment of these valves, once they have been verified to be in the proper position, is low.

(SR 3.6.1.3.9) INSERT 2

D.1

With the secondary containment bypass leakage rate, not within limit, the assumptions of the safety analysis are not met. Therefore, the leakage 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 one closed and de-activated automatic valve, closed manual valve, or blind flange. When a penetration is isolated, the leakage rate for the isolation penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed to be the lesser actual pathway leakage of the two devices. The 4 hour Completion Time is reasonable considering the time required to restore the leakage by isolating the penetration and the relative importance of secondary containment bypass leakage to the overall containment function.

INSERT 3

for hydrostatically tested line leakage [not on a closed system] and for secondary containment bypass leakage

E.1, E.2, and E.3

In the event one or more containment purge valves are not within the purge valve leakage limits, purge valve leakage must be restored to within limits or the affected penetration 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 and

(continued)