Industry/TSTF Standard Technical Specification Change Traveler

Increase CIV Completion Time from 4 Hours to 7 Days

Classification: 3) Improve Specifications

Priority: High

NUREGs Affected: ☐ 1430 ☐ 1431 ☑ 1432 ☐ 1433 ☐ 1434

Description:
This change extends the Completion Time for penetration flowpaths with one valve inoperable from 4 hours to 7 days. This change is applicable to both penetrations with two containment isolation valves and with one containment isolation valve. This change is not applicable to the containment sump supply valves to the ECCS and containment spray pump.

Justification:
See Attached

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Revision History

OG Revision 0 **Revision Status: Active** **Next Action: EXCEL**

Revision Proposed by: CEOG

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 11-Jul-00

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 05-Dec-00

TSTF Review Information

TSTF Received Date: 15-Jan-01 Date Distributed for Review: 15-Jan-01

OG Review Completed: ☑ BWOG ☑ WOG ☑ CEOG ☑ BWROG

TSTF Comments:

WOG, BWOG, BWROG - Not applicable.
The TSTF requested the following changes:
Change "NRC SER" to "NRC Safety Evaluation"
Bracket Condition B
Eliminate references to a CRMP as Maintenance Rule a.4 is now in effect.
Move the Reviewer's Note to the Bases.
Returned to CEOG for prioritization.

TSTF Resolution: Approved Date: 14-Feb-01

Incorporation Into the NUREGs

File to BBS/LAN Date: TSTF Informed Date: TSTF Approved Date:

NUREG Rev Incorporated:

Affected Technical Specifications

Ref. 3.6.3 Bases	Containment Isolation Valves (Atmospheric and Dual)
Action 3.6.3.A	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition B and revised
Action 3.6.3.A	Containment Isolation Valves (Atmospheric and Dual) Change Description: New
Action 3.6.3.A Bases	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition B and revised
Action 3.6.3.A Bases	Containment Isolation Valves (Atmospheric and Dual) Change Description: New
Action 3.6.3.B	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition C
Action 3.6.3.B Bases	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition C
Action 3.6.3.C	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition D and revised
Action 3.6.3.C Bases	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition D and revised
Action 3.6.3.D	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition E
Action 3.6.3.D Bases	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition E
Action 3.6.3.E	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition F
Action 3.6.3.E Bases	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition F
Action 3.6.3.F	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition G
Action 3.6.3.F Bases	Containment Isolation Valves (Atmospheric and Dual) Change Description: Renamed Condition G

Background

The CEOG Joint Applications Report NPSD-1168 provides a risk-informed technical basis for specific changes to Technical Specification Completion Times (CTs) of Specification 3.6.3, Containment Isolation Valves (Atmospheric and Dual) in NUREG 1432. The primary intent of the proposed change is to provide for the potential of on-line maintenance, repair and testing of a Containment Isolation Valve (CIV) that is declared inoperable during operation in the applicable MODES (MODES 1, 2, 3 and 4). These changes are warranted based on the low risk associated with the extended CTs and the relatively greater risk associated with transitioning from the existing MODE to cold shutdown (MODE 5).

This application is being pursued by the CEOG as a risk informed plant modification in accordance with NRC Regulatory Guides 1.174 and 1.177.

To expedite the review process, the JAR provides, where appropriate, generic bounding risk assessments of the impact of adopting these TS changes. The risk calculations included in this evaluation consider all significant impacts of CIV TS modification, including:

- Assessment of the Incremental Conditional Core Damage Probability (ICCDP) and Incremental Conditional Large Early Release Probability (ICLERP) resulting from allowing CIVs to remain in the OPEN position for the duration of the Completion Time.
- For systems with CIVs that are connected to the RCS, ICCDP/ICLERP assessments include consideration of Interfacing System LOCA (ISLOCA).
- Assessment of Incremental Conditional Core Damage Probability (ICCDP) associated with retaining valves, which have a safety function (in addition to containment isolation), in the closed position for an extended time.

Risk evaluations also include explicit consideration of incremental risks associated with CIVs connected to systems containing non-seismically qualified piping. All risk assessments consider the effect of maintaining the CIV in an open position

In accordance with Regulatory Guide 1.177, risks associated with a single Completion Time are evaluated against the "very small risk" metrics of 5.0E-7 for ICCDP and 5.0E-8 for ICLERP. The cumulative impact of multiple simultaneous and sequential entries into the Condition are also considered.

The supporting/analytical material contained within the JAR is considered applicable to all CE NSSS designed units of the CEOG member utilities regardless of the details of the valve actuators.

Need for Change

The proposed change is needed to allow on-line maintenance, repair and testing of a CIV that is declared inoperable during operation in MODES 1, 2, 3 and 4.

Proposed Change

The proposed change adds a new Condition A to Specification 3.6.3 for those components which retain the 4 hour Completion Time and revises the existing Conditions A and C to provide for a 7 day Completion Time.

Justification

The CEOG Joint Applications Report developed a process for evaluating plant risk associated with the proposed changes to the CIV Technical Specification CT. The process involves grouping the various containment penetrations into defined classes. For each class, the containment penetrations are further sub-divided into generic type of configurations. An evaluation is then performed for each of the generic configurations of containment penetration to assess the impact on plant risk due to the proposed CT extension for the associated CIVs. The evaluation of the impact on plant risk determines the change in core damage frequency (ΔCDF), the incremental conditional core damage probability (ICCDP), the change in large early release frequency (ΔLERF) and the incremental conditional large early release probability (ICLERP).

The results of the evaluation in the CEOG Joint Applications Report demonstrate that the proposed CT extension provides plant operational flexibility while simultaneously allowing plant operation with an acceptable level of risk. The results demonstrate that the risk level associated with the proposed CT is below the guidelines set forth in Regulatory Guide 1.174.

Conditions of Implementation

The NRC Safety Evaluation, dated June 26, 2000, which approved the CEOG Joint Applications Report contained a number of conditions on the use of the report. They are:

1. Individual licensees requesting CIV Completion Time relaxations should state in their plant-specific application that they have verified that the JAR results apply to their plant. Licensees should verify that the relaxed Completion Times will only apply to penetrations analyzed to meet the risk guidelines of Regulatory Guide 1.177 and fall within the 14 containment penetration configurations considered in the Joint Applications Report. Any other containment penetration configurations must be supported by a plant-specific analysis. Licensee submittals must retain the current Completion Times for the three configurations

that were not analyzed in the Joint Applications Report: containment sump supply valves to the ECCS and containment spray systems pumps, valves associated with the main feedwater system, and main steam isolation valves.)

2. Licensees should provide sufficient quantitative or qualitative substantiation to demonstrate that external events will not affect the results of the analysis supporting the extended Completion Times.

3. Licensees should state that they have verified acceptable PRA quality as described in Regulatory Guide 1.177.

4. The licensees must state in their plant specific application that a risk-informed plant Configuration Risk Management Program (CRMP) has been implemented, unless the submittal is made after the revised Maintenance Rule has become effective.

5. The Joint Applications Report assumes that the penetrations remain physically intact in MODES in which these valves are to be operable during corrective maintenance. Licensees should describe in their plant specific application how the affected penetration will remain physically intake, or state that the penetration will be isolated so as to not permit a release to the outside environment.

6. The licensee's CRMP should consider the additive nature of multiple failed CIVs and the possibility of entering multiple Completion Times and verify that these situations will result in risks consistent with the incremental conditions core damage probability and incremental large early release probability guidelines to that defense-in-depth for safety systems will be maintained.

Determination of No Significant Hazards Consideration

A change is proposed to the Improved Standard Technical Specifications (NUREG 1432) for Combustion Engineering Plants to increase the Completion Time for an inoperable containment isolation valve from 4 hours to 7 days. The change was justified in CEOG Joint Applications Report No CE-NPSD-1168, dated June 1999 and found acceptable in the NRC Safety Evaluation dated June 26, 2000.

In accordance with the criteria set forth in 10 CFR 50.92, the Industry has evaluated these proposed changes and determined that they do not represent a significant hazards consideration. The following is provided in support of this conclusion:

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

No. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed change revises the Completion Time for an inoperable containment isolation valve within the scope of the

CEOG Joint Application Report CE-NPSD-1168 from 4 hours to 7 days. Containment isolation valves are not accident initiators in any accident previously evaluated. Consequently, the probability of an accident previously evaluated is not significantly increased.

Containment isolation valves (CIV's), individually and in combination, control the extent of leakage from the containment following an accident. The proposed CT extension applies to the reduction in redundancy in the containment isolation function by the CIV's for a limited period of time but do not alter the ability of the plant to meet the overall containment leakage requirements. In order to evaluate the proposed CT extension a probabilistic risk assessment evaluation was performed in CEOG Joint Application Report CE-NPSD-1168. The risk assessment concluded that, based on the use of bounding risk parameters for CE-designed plants, the proposed increase in the CIV CT from four hours to seven days does not alter the ability of the plant to meet the overall containment leakage requirements. It also concluded that the proposed change does not result in an unacceptable incremental conditional core damage probability or incremental conditional large early release probability according to the guidelines of Regulatory Guide 1.177. As a result, there would be no significant increase in the consequences of an accident previously evaluated.

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

No. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The change revises the Completion Time for an inoperable containment isolation valve within the scope of the CEOG Joint Application Report CE-NPSD-1168 from 4 hours to 7 days. Containment isolation valves, individually and in combination, control the extent of leakage from the containment following an accident. The proposed CT extension applies to the reduction in redundancy in the containment isolation function by the CIV's for a limited period of time but do not alter the ability of the plant to meet the overall containment leakage requirements. The proposed change does not change the design, configuration, or method of operation of the plant. The proposed change does not involve a physical alteration of the plant (no new of different type of equipment will be installed). Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

No. The proposed change does not involve a significant reduction in a margin of safety. The proposed change revises the Completion Time for an inoperable containment isolation valve within the scope of the CEOG Joint Application Report CE-NPSD-1168 from 4 hours to 7 days. Containment isolation valves, individually and in combination, control the extent of leakage from the containment following an accident. The proposed CT extension applies to the reduction in redundancy in the containment isolation function by the CIV's for a limited period of time but do not alter the ability of the plant to meet

the overall containment leakage requirements. In order to evaluate the proposed CT extension a probabilistic risk assessment evaluation was performed in CEOG Joint Application Report CE-NPSD-1168. The risk assessment concluded that, based on the use of bounding risk parameters for CE-designed plants, the proposed increase in the CIV CT from four hours to seven days does not alter the ability of the plant to meet the overall containment leakage requirements. It also concluded that the proposed change does not result in an unacceptable incremental conditional core damage probability or incremental conditional large early release probability according to the guidelines of Regulatory Guide 1.177. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

INSERT 1

CONDITION	REQUIRED ACTION	COMPLETION TIME
[A. ----------NOTE---------- Only applicable to the containment sump supply valves to the ECCS and containment spray pumps. ---------- One or more penetration flow paths with one containment isolation valve inoperable.	A.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured. AND A.2 ----------NOTE---------- Isolation devices in high radiation areas may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated.	4 hours Once per 31 days for isolation devices outside containment AND Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment.]

INSERT 2

---------- Reviewer's Note ----------

Adoption of the 7 day Completion Time is contingent on the conditions identified in the NRC Safety Evaluation dated June 26, 2000 for CE Joint Applications Report CE NPSD-1168.

INSERT 3

[In the event one containment isolation valve in one or more penetration flow paths is inoperable, the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed 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 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.

Condition A has been modified by a Note indicating that this Condition is only applicable to the containment sump supply valves to the ECCS and containment spray pumps.

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.]

INSERT 4

6. Combustion Engineering Owners Group (CEOG) Joint Applications Report (JAR) CE-NPSD-1168, Joint Applications Report for Containment Isolation Valve AOT Extension, dated June 1999.

7. NRC Safety Evaluation for CEOG Joint Applications Report CE-NPSD-1168, "JAR for CIV AOT Extension," dated June 26, 2000.

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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.

Insert 1

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
A. ~~B~~ ----------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]. Condition A	~~A~~ B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured. AND	~~4 hours~~ [7 days] (continued)

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CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2 --------NOTE-------- Isolation devices in high radiation areas may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated.	Once per 31 days for isolation devices outside containment AND Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment
B. --------NOTE-------- Only applicable to penetration flow paths with two containment isolation valves. ---------- 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].	B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.	1 hour

(continued)

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. ---------NOTE--------- Only applicable to penetration flow paths with only one containment isolation valve and a closed system. ---------- One or more penetration flow paths with one containment isolation valve inoperable.	D.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange. AND D.2 --------NOTE--------- Isolation devices in high radiation areas may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated.	[4] hours [7 days] Once per 31 days
[E. Secondary containment bypass leakage not within limit.	E.1 Restore leakage within limit.	4 hours]
F. One or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits.	F.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]. AND	24 hours (continued)

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ACTIONS

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

BASES (continued)

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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.

Insert 3

Insert 2

A.1 and A.2

B

Condition A, and for

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

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ACTIONS

B
A.1 and A.2 (continued)

flange, and a check valve with flow through the valve secured. For penetrations isolated in accordance with B 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 [7 day] reasonable, considering the time required to isolate the penetration and the relative importance of supporting containment. OPERABILITY during MODES 1, 2, 3, and 4. Ref. 6 and 7

For affected penetration flow paths that cannot be restored to OPERABLE status within the 4 hour Completion Time and B 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.

B 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 D system, Condition C provides appropriate actions.

B 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

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ACTIONS

A.1 and B.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

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 containment isolation valves. Condition A of this LCO addresses the condition of one containment isolation valve inoperable in this type of penetration flow path.

D.1 and D.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

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ACTIONS

D.1 and D.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 D.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 D.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.

[7 day]

Condition D 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 D.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.

E.1

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

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ACTIONS

E.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.

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

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ACTIONS

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

G.1 and G.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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SURVEILLANCE REQUIREMENTS

SR 3.6.3.9 (continued)

equal to the specified leakage rate. This provides assurance that the assumptions in the safety analysis are met. The leakage rate of each bypass leakage path is assumed to be the maximum pathway leakage (leakage through the worse of the two isolation valves) unless the penetration is isolated by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. In this case, the leakage rate of the isolated bypass leakage path is assumed to be the actual pathway leakage through the isolation device. If both isolation valves in the penetration are closed, the actual leakage rate is the lesser leakage rate of the two valves. This method of quantifying maximum pathway leakage is only to be used for this SR (i.e., Appendix J maximum pathway leakage limits are to be quantified in accordance with Appendix J). The Frequency is required by 10 CFR 50, Appendix J, as modified by approved exemptions (and therefore, the Frequency extensions of SR 3.0.2 may not be applied), since the testing is an Appendix J, Type C test. This SR simply imposes additional acceptance criteria.

[Bypass leakage is considered part of L_a. [Reviewer's Note: Unless specifically exempted].]

REFERENCES

1. FSAR, Section [ ].
2. FSAR, Section [ ].
3. Generic Issue B-20.
4. Generic Issue B-24.
5. 10 CFR 50, Appendix J.

Insert 4