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10 CFR 50.90

NMP2L2576

March 23, 2015

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

Nine Mile Point Nuclear Station, Unit 2
Renewed Facility Operating License No. NPF-69
NRC Docket No. 50-410

Subject: License Amendment Request - Relocation of Secondary Containment Bypass Leakage Paths Table from Technical Specifications to the Technical Requirements Manual

In accordance with 10 CFR 50.90, Exelon Generation Company, LLC (Exelon) requests an amendment to the Technical Specifications, Appendix A, of Renewed Facility Operating License No. NPF-69 for Nine Mile Point Nuclear Station, Unit 2 (NMP2).

The proposed changes will revise NMP2 Technical Specifications (TS) to remove TS Table 3.6.1.3-1, "Secondary Containment Bypass Leakage Paths Leakage Rate Limits," and references to the table and relocate the information to the Technical Requirements Manual (TRM). These proposed changes follow the guidance in Generic Letter 91-08, "Removal of Component Lists from Technical Specifications."

The proposed changes have been reviewed by the NMP Plant Operations Review Committee and approved in accordance with Nuclear Safety Review Board procedures.

Exelon requests approval of the proposed amendment by February 26, 2016. The requested approval date supports the implementation of the hardened containment vent modifications at NMP2 to comply with the schedule required by NRC Order EA-13-109, Order to Modify Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions, dated June 6, 2013. Once approved, the amendment shall be implemented within 120 days.

There are no regulatory commitments contained in this request.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), Exelon is notifying the State of New York of this application of license amendment by transmitting a copy of this letter and its attachments to the designated State Official.

Should you have any questions concerning this submittal, please contact Ron Reynolds at (610) 765-5247.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 23rd day of March 2015.

Respectfully,

James Barstow
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Attachments: 1) Evaluation of Proposed Technical Specification Changes
2) Proposed Technical Specification, Bases and TRM Marked-Up Pages

cc: USNRC Regional Administrator, Region I w/attachments
USNRC Project Manager, NMP w/attachments
USNRC Senior Resident Inspector, NMP w/attachments
A. L. Peterson, NYSERDA w/attachments

ATTACHMENT 1

EVALUATION OF PROPOSED TECHNICAL SPECIFICATION CHANGES

SUBJECT: Relocation of Secondary Containment Bypass Leakage Rate Limits Table from Technical Specifications to the Technical Requirements Manual

1.0 SUMMARY DESCRIPTION

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (Exelon) requests an amendment to Renewed Operating License No. NPF-69 for Nine Mile Point Nuclear Station, Unit 2 (NMP2).

The proposed changes would remove Table 3.6.1.3-1, "Secondary Containment Bypass Leakage Paths Leakage Rate Limits," and references to the table, from the Technical Specification (TS) and relocate the information from the table to the Technical Requirements Manual (TRM) using the guidance provided in Generic Letter (GL) 91-08, "Removal of Component Lists from Technical Specifications." Marked up TS pages and Bases pages are provided in Attachment 2.

Exelon requests approval of the proposed changes. Once approved, the amendment shall be implemented within 120 days.

2.0 DETAILED DESCRIPTION

The proposed changes would remove Table 3.6.1.3-1 and references to the table, from the TS and relocate the information from the table to the TRM using the guidance in Generic Letter (GL) 91-08. The TRM is a licensee-controlled document which is controlled under the provisions of 10 CFR 50.59. The TRM is established to provide, in a single location, a variety of information to which ready access is needed in the daily routine operation of the plant. Therefore, removal of the table from TS will permit administrative control of future changes to the table without processing a license amendment.

3.0 TECHNICAL EVALUATION

The NRC approved NMP2 conversion to Improved Technical Specifications (ITS) on February 15, 2000. The ITS conversion was based on NUREG-1433 and -1434, "Standard Technical Specifications for General Electric Plants BWR4/BWR6," Rev. 1 dated April 1995. As part of the conversion to ITS, NMP2 included a component list for secondary containment bypass leakage paths leakage rate limits. Revision 4 of NUREG-1433, "General Electric BWR/4 Improved Standard Technical Specifications" and Revision 4 of NUREG-1434, "General Electric BWR/6 Improved Standard Technical Specifications" do not require the secondary containment bypass leakage paths leakage rate limits to be listed in a table format within the TS.

NMP2 is proposing to remove Table 3.6.1.3-1 and references to the table from the TS and relocate the information from the table to the TRM following the guidance in GL 91-08. As precedence for this proposed change, two NRC approved license amendment requests from Limerick Generating Station where component tables were removed from the TS using the guidance in GL 91-08 are provided (References 1 and 2).

GL 91-08 provides guidance for preparing a request for a license amendment to remove component lists from TS. This guidance provides an acceptable alternative to identifying every component by its plant identification number as it is currently listed in the tables of TS components. The removal of component lists is acceptable because it does not alter existing TS requirements or those components to which they apply.

Section 3 of Enclosure 1 to GL 91-08 provides specific guidance for the removal of secondary containment bypass leakage paths. Section 3 states,

> "The TS on containment leakage includes a list of secondary containment bypass leakage paths. The list identifies these leakage paths by penetration number for dual containment plants. The combined leakage rate for all penetrations identified as secondary containment bypass leakage paths is specified.
>
> As part of the plant licensing basis, the FSAR defines the penetrations that are secondary containment bypass leakage paths. This definition of "secondary containment bypass leakage paths" is adequate such that the TS requirements do not require further clarification upon the removal of this list from the TS. Therefore, the TS requirements may be stated in terms of secondary containment bypass leakage paths without further clarification. For example, the limitation of TS 3.6.1.2.c on containment leakage rates should be revised to state the following:
>
> > A combined leakage rate of less than or equal to [0.10] La for all penetrations that are secondary containment bypass leakage paths when pressurized to Pa."

Using the guidance in GL 91-08, the proposed license amendment would remove TS Table 3.6.1.3-1 and references to the table from the TS and relocate the information from the table to the TRM. Section 6.0 of the NMP2 USAR currently lists the leakage rate acceptance criteria for each secondary containment bypass leakage paths listed in TS Table 3.6.1.3-1. These proposed changes maintain the consistency with the current USAR requirements regarding secondary containment leakage rate limits.

The TS Surveillance Requirement (SR) in SR 3.6.1.3.11 requires verification of the leakage rate for the secondary containment bypass leakage paths are within their limits when pressurized to greater than or equal to 40 psig. This SR and the surveillance frequency will be unchanged by this proposed license amendment.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

The proposed changes have been evaluated to determine whether applicable regulations and requirements continue to be met. Exelon has determined that the proposed changes do not require any exemptions or relief from regulatory requirements other than the TS.

The following applicable regulations and regulatory requirements were reviewed in making this determination:

Generic Letter 91-08, Removal of Component Lists from Technical Specifications dated May 6, 1991

NUREG-1433, Standard Technical Specifications, General Electric BWR/4 Plants, Volume 1, Specifications, Rev. 4

NUREG-1433, Standard Technical Specifications, General Electric BWR/4 Plants, Volume 2, Bases, Rev. 4

NUREG-1434, Standard Technical Specifications, General Electric BWR/6 Plants, Volume 1, Specifications, Rev. 4

NUREG-1434, Standard Technical Specifications, General Electric BWR/6 Plants, Volume 2, Bases, Rev. 4

10 CFR 50.36, Technical specifications

The NRC approved conversion to Improved Standard Technical Specification (ITS) at NMP2 used the guidance in NUREG-1433, Revision 1, and NUREG-1434, Revision 1. This conversion included Table 3.6.1.3-1, Secondary Containment Bypass Leakage Paths Leakage Rate Limits.

For the proposed License Amendment Request, a review was performed of NUREG-1433, Revision 4, and NUREG-1434, Revision 4, to ensure that their requirements are met. Since NMP2 is a General Electric BWR/5 containment design, both NUREGs for BWR4 and BWR6 plants are reviewed. These NUREGs provide the latest guidance for ITS and do not specify the requirement to have a tabulation of the secondary containment bypass leakage paths leakage rate limits in the ITS. Therefore, the removal of Table 3.6.1.3-1 from NMP2 TS and relocation of the information to the TRM does not result in a deviation to the current NUREG guidance for ITS. In addition, the proposed License Amendment Request will not change the current Limiting Condition for Operation (LCO) 3.6.1.3.D for secondary containment operability or the current TS Surveillance Requirement (SR) 3.6.1.3.11 for surveillance of secondary containment leakage. In conclusion, as a result of the proposed change, the guidance in the current revisions to NUREG 1433 and 1434 are met.

Guidance in GL 91-08 is reviewed for applicability to the proposed License Amendment Request. This GL provides an acceptable alternative to identifying every component by its plant identification number as it is currently listed in the tables of TS components. The guidance allows for the removal of component lists provided it does not alter existing TS requirements or those components to which they apply. Furthermore, this GL provides guidance on including component lists into plant procedures that are subject to the change control provisions for plant procedures in the Administrative Controls Section of the TS. This guidance is applicable to this License Amendment Request because the proposed changes will result in a line-item TS improvement as described in the GL. Enclosure 1 to the GL, Guidance on the Removal of Component Lists From TS, will be used as guidance for the relocation of the information from TS Table 3.6.1.3-1 to the TRM which is subject to the change control provisions of 10 CFR 50.59.

The removal of TS Table 3.6.1.3-1 from the TS meets the criteria of 10 CFR 50.36, "Technical Specifications." Paragraph (c)(2)(ii), Criterion 3 state the following:

> (ii) A Technical Specification Limiting Condition for Operation of a nuclear reactor must be established for each item meeting one or more of the following criteria:
>
> Criterion 3. A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

The proposed changes do not remove the leakage limit requirements from TS 3.6.1.3, "Primary Containment Isolation Valves (PCIVs)," and therefore Criterion 3 of 10 CFR 50.36(c)(2)(ii) continues to be met.

Further, 10 CFR 50.36, Paragraph (c)(3), Surveillance Requirements, states the following:

> Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

The proposed changes do not remove the surveillance requirements for secondary containment bypass leakage limitations. SR 3.6.1.3.11 requires verification of the leakage rate for the secondary containment bypass leakage paths are within their limits when pressurized to greater than or equal to 40 psig. This SR and the surveillance frequency is currently in the TS and will be unchanged by this proposed license amendment. Therefore, 10 CFR 50.36(c)(3) continues to be met.

4.2 Precedent

A 1995 Limerick License Amendment (Reference 1) was approved by NRC for the relocation of the Reactor Enclosure and Refueling Area Secondary Containment Isolation Valve Tables 3.6.5.2.1-1 and 3.6.5.2.2-1 and references to them from the Technical Specifications to the Updated Final Safety Analysis Report in accordance with the guidance in GL 91-08.

A 1999 Limerick License Amendment (Reference 2) was approved by NRC for the relocation of the Primary Containment Isolation Valve Table 3.6.3-1 and references to the table from the Technical Specifications to the Technical Requirements Manual in accordance with the guidance in GL 91-08.

4.3 No Significant Hazards Consideration

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

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

   Response: No.

   Using the guidance in GL 91-08, the NMP2 proposed change would remove Table 3.6.1.3-1 and references to the table from the TS and relocates the information from the table to the TRM, which is a licensee controlled document. This change is consistent with Revision 4 of NUREG-1433, "General Electric BWR/4 Improved Standard Technical Specifications" and Revision 4 of NUREG-1434, "General Electric BWR/6 Improved Standard Technical Specifications." This change is an administrative change that will not alter the manner in which the valves will be operated. Since the proposed change does not alter the manner in which the valves are operated, there is no significant impact on reactor operation.

Being an administrative change, the proposed change does not involve a physical change to the valves, nor does it change the safety function of the valves. The proposed TS revision involves no significant changes to the operation of any systems or components in normal or accident operating conditions and no changes to existing structures, systems, or components.

Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

   Response: No.

   The relocation of the table for the secondary containment isolation valves is an administrative change that will not impact the safety function of the secondary containment isolation valves. The proposed change does not affect the manner in which the valves will be operated; therefore, there are no new failure mechanisms created. The proposed change does not involve physical changes to the valves, nor does it change the safety function of the valves. The proposed change does not physically alter secondary containment isolation capability. The secondary containment bypass leakage paths leakage rate limits will not be changed by the proposed amendment.

   Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

   Response: No.

   There is no adverse impact on the existing equipment capability as well as associated structures as a result of this administrative change. The proposed changes continue to provide the same limitations for secondary containment bypass leakage paths leakage rate limits as the existing leakage rate limits.

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

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

4.4 Conclusions

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

5.0 ENVIRONMENTAL CONSIDERATION

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

6.0 REFERENCES

1. Limerick Generating Station, Units 1 and 2 (TAC NOS. M93690 AND M93691) dated November 20, 1995

2. Limerick Generating Station, Units 1 and 2 - Issuance of Amendment Re: Relocation of the Primary Containment Isolation Valve Table from the Technical Specifications to the Technical Requirements Manual and Deleting References to Tables (TAC NOS. MA8101 and MA8102) dated October 18, 2000.

ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATION and BASES MARKED-UP PAGES

(Unit 2)

TS Pages 3.6.1.3-1, -12, -14 and -15

Bases Pages B3.6.1.3-1 through -3

TRM Pages 3.6-23a and -23b

Secondary Containment Bypass Leakage Valve

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3.6 CONTAINMENT SYSTEMS

3.6.1.3 Primary Containment Isolation Valves (PCIVs)

LCO 3.6.1.3 Each PCIV and each ~~non-PCIV listed in Table 3.6.1.3-1~~ 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 may be unisolated intermittently under administrative controls.

2. Separate Condition entry is allowed for each penetration flow path.

3. Enter applicable Conditions and Required Actions for systems made inoperable by PCIVs.

4. Enter applicable Conditions and Required Actions of LCO 3.6.1.1, "Primary Containment," when PCIV leakage results in exceeding overall containment leakage rate acceptance criteria.

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

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.6	Perform leakage rate testing for each primary containment purge valve with resilient seals.	184 days AND Once within 92 days after opening the valve
SR 3.6.1.3.7	Verify the isolation time of each MSIV is ≥ 3 seconds and ≤ 5 seconds.	In accordance with the Inservice Testing Program
SR 3.6.1.3.8	Verify each automatic PCIV actuates to the isolation position on an actual or simulated isolation signal.	24 months
SR 3.6.1.3.9	Verify a representative sample of reactor instrumentation line EFCVs actuates to the isolation position on an actual or simulated instrument line break signal.	24 months
SR 3.6.1.3.10	Remove and test the explosive squib from each shear isolation valve of the TIP System.	24 months on a STAGGERED TEST BASIS
SR 3.6.1.3.11	Verify the leakage rate for the secondary containment bypass leakage paths is within the limits ~~of Table 3.6.1.3-1~~ when pressurized to ≥ 40 psig.	In accordance with 10 CFR 50 Appendix J Testing Program Plan

(continued)

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Table 3.6.1.3-1 (page 1 of 2)
Secondary Containment Bypass Leakage Paths Leakage Rate Limits

VALVE NUMBER	PER VALVE LEAK RATE (SCFH)
2MSS*MOV111 2MSS*MOV112	1.875
2MSS*MOV208	0.625
2CMS*SOV74A, B (d) 2CMS*SOV75A, B (d) 2CMS*SOV76A, B (d) 2CMS*SOV77A, B (d)	0.2344
2DER*MOV119 2DER*RV344	(a)
2DER*MOV120	1.25
2DER*MOV130 2DER*MOV131	0.625
2DFR*MOV120	1.875
2DFR*MOV121 2DFR*RV228	(b)
2DFR*MOV139 2DFR*MOV140	0.9375
2WCS*MOV102 2WCS*MOV112	2.5
2FWS*V23A, B 2FWS*V12A, B	12.0
2CPS*AOV104 2CPS*AOV106	4.38
2CPS*AOV105 2CPS*AOV107	3.75

(continued)

(a) The combined leakage rate for these two valves shall be ≤ 1.25 SCFH.

(b) The combined leakage rate for these two valves shall be ≤ 1.875 SCFH.

The information from this Technical Specification section has been relocated to the TRM.

Table 3.6.1.3-1 (page 2 of 2)
Secondary Containment Bypass Leakage Paths Leakage Rate Limits

VALVE NUMBER	PER VALVE LEAK RATE (SCFH)
2CPS*SOV119 2CPS*SOV120 2CPS*SOV121 2CPS*SOV122	0.625
2IAS*SOV164 2IAS*V448	0.9375
2IAS*SOV165 2IAS*V449	0.9375
2GSN*SOV166 2GSN*V170	(c)
2IAS*SOV166 2IAS*SOV184	(c)
2IAS*SOV167 2IAS*SOV185	(c)
2IAS*SOV168 2IAS*SOV180	(c)
2CPS*SOV132 2CPS*V50	(c)
2CPS*SOV133 2CPS*V51	(c)

(c) The combined leak rate for these penetrations shall be ≤ 3.6 SCFH. The assigned leakage rate through a penetration shall be that of the valve with the highest leakage rate in that penetration. However, if a penetration is isolated by one closed and de-activated automatic valve, closed manual valve, or blind flange, the leakage through the penetration shall be the actual pathway leakage.

(d) The LCO requirements and leakage rate limit shall apply until such time as a modification eliminates the potential secondary containment bypass leakage path.

The information from this Technical Specification section has been relocated to the TRM.

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.3 Primary Containment Isolation Valves (PCIVs)

BASES

Secondary Containment Bypass Leakage Valves

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BACKGROUND

The function of the PCIVs and the ~~non-PCIVs listed in Table 3.6.1.3-1 (2CMS*SOV74A, 74B, 75A, 75B, 76A, 76B, 77A, and 77B)~~, in combination with other accident mitigation systems, is to limit fission product release during and following postulated Design Basis Accidents (DBAs) to within limits. Primary containment isolation within the time limits specified for those PCIVs designed to close automatically ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a DBA.

The OPERABILITY requirements for PCIVs help ensure that an adequate primary containment boundary is maintained during and after an accident by minimizing potential paths to the environment. Therefore, the OPERABILITY requirements provide assurance that the primary containment function assumed in the safety analysis will be maintained. These isolation devices consist of either passive devices or active (automatic) devices. Manual valves, de-activated automatic valves secured in their closed position (including check valves with flow through the valve secured), blind flanges (which include plugs and caps as listed in Reference 1), and closed systems are considered passive devices. Check valves, or other automatic valves designed to close without operator action following an accident, are considered active devices. Two barriers in series are provided for each penetration, except for penetrations isolated by excess flow check valves, so that no single credible failure or malfunction of an active component can result in a loss of isolation or leakage that exceeds limits assumed in the safety analysis. One of these barriers may be a closed system.

The 12 and 14 inch primary containment purge valves are PCIVs that are qualified for use during all operational conditions. The 12 and 14 inch primary containment purge valves are normally maintained closed in MODES 1, 2, and 3 to ensure the primary containment boundary is maintained. However, the purge valves may be open when being used for pressure control, inerting, de-inerting, ALARA, or air quality considerations since they are fully qualified.

(continued)

BASES

BACKGROUND (continued)

A two inch bypass line is provided when the primary containment full flow line to the Standby Gas Treatment (SGT) System is isolated.

Secondary Containment Bypass Leakage Valve

APPLICABLE SAFETY ANALYSES

The PCIVs LCO was derived from the assumptions related to minimizing the loss of reactor coolant inventory, and establishing the primary containment boundary during major accidents. As part of the primary containment boundary, PCIV (and ~~non-PCIVs listed in Table 3.6.1.3-1~~) OPERABILITY supports leak tightness of primary containment. Therefore, the safety analysis of any event requiring isolation of primary containment is applicable to this LCO.

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The DBAs that result in a release of radioactive material for which the consequences are mitigated by PCIVs are a loss of coolant accident (LOCA) and a main steam line break (MSLB) (Refs. 2 and 3). In the analysis for each of these accidents, it is assumed that PCIVs are either closed or function to close within the required isolation time following event initiation. This ensures that potential paths to the environment through PCIVs (including primary containment purge valves) are minimized. Of the events analyzed in References 2 and 3, the LOCA is the most limiting event due to radiological consequences. In addition, the ~~non-PCIVs listed in Table 3.6.1.3-1~~ are also assumed to be closed during the LOCA. The closure time of the main steam isolation valves (MSIVs) is a significant variable from a radiological standpoint. The MSIVs are required to close within 3 to 5 seconds since the 3 second closure time is assumed in the MSIV closure (the most severe overpressurization transient) analysis (Ref. 4) and 5 second closure time is assumed in the MSLB analysis (Ref. 3). Likewise, it is assumed that the primary containment isolates such that release of fission products to the environment is controlled.

Secondary Containment Bypass Leakage Valves

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The DBA analysis assumes that isolation of the primary containment is complete and leakage terminated, except for the maximum allowable leakage, L_a, prior to fuel damage.

The single failure criterion required to be imposed in the conduct of unit safety analyses was considered in the original design of the primary containment purge valves. Two valves in series on each purge line provide assurance that both the supply and exhaust lines could be isolated even if a single failure occurred.

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

PCIVs satisfy Criterion 3 of Reference 5.

LCO

PCIVs form a part of the primary containment boundary. The PCIV safety function is related to minimizing the loss of reactor coolant inventory and establishing the primary containment boundary during a DBA.

The power operated, automatic isolation valves are required to have isolation times within limits and actuate on an automatic isolation signal. The valves covered by this LCO are listed with their associated stroke times in Ref. 1.

The normally closed manual PCIVs are considered OPERABLE when the valves are closed and blind flanges in place, or open under administrative controls. Normally closed automatic PCIVs, which are required by design (e.g., to meet 10 CFR 50 Appendix R requirements) to be de-activated and closed, are considered OPERABLE when the valve is closed and de-activated. These passive isolation valves and devices are those listed in Reference 1. Purge valves with resilient seals, secondary containment bypass valves, MSIVs, and hydrostatically tested valves must meet additional leakage rate requirements. Other PCIV leakage rates are addressed by LCO 3.6.1.1, "Primary Containment," as Type B or C testing.

Secondary Containment Bypass Leakage Valves

This LCO provides assurance that the PCIVs will perform their designed safety functions to minimize the loss of reactor coolant inventory and establish the primary containment boundary during accidents. In addition, the LCO ensures leakage through the ~~non-PCIVs listed in Table 3.6.1.3-1~~ are within the limits assumed in the accident analysis.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause a release of radioactive material to primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, most PCIVs are not required to be OPERABLE and the primary containment purge valves are not required to be normally closed in MODES 4 and 5. Certain valves are required to be OPERABLE, however, to prevent inadvertent reactor vessel draindown. These valves are

(continued)

TRM Table 3.6.1-3 (page 1 of 2)
Secondary Containment Bypass Leakage Paths Leakage Rate Limits

VALVE NUMBER	VALVE DESCRIPTION	PER VALVE LEAK RATE (SCFH)
2MSS*MOV111 2MSS*MOV112	Main steam drain line (inboard)	1.875
2MSS*MOV208	Main steam drain line (outboard)	0.625
2CMS*SOV74A, B (d) 2CMS*SOV75A, B (d) 2CMS*SOV76A, B (d) 2CMS*SOV77A, B (d)	4 Post-accident sampling lines	0.2344
2DER*MOV119 2DER*RV344 2DER*MOV120	Drywell equipment drain lines	(a) 1.25
2DER*MOV130 2DER*MOV131	Drywell equipment vent line	0.625
2DFR*MOV120 2DFR*MOV121 2DFR*RV228	Drywell floor drain line	1.875 (b)
2DFR*MOV139 2DFR*MOV140	Drywell floor vent line	0.9375
2WCS*MOV102 2WCS*MOV112	RWCU line	2.5
2FWS*V23A, B 2FWS*V12A, B	Feedwater line	12.0
2CPS*AOV104 2CPS*AOV106 2CPS*AOV105 2CPS*AOV107	CPS supply line to drywell CPS supply line to supp. chamber	4.38 3.75

(continued)

(a) The combined leakage rate for these two valves shall be ≤ 1.25 SCFH.

(b) The combined leakage rate for these two valves shall be ≤ 1.875 SCFH.

TRM Table 3.6.1.3-1 (page 2 of 2)
Secondary Containment Bypass Leakage Paths Leakage Rate Limits

VALVE NUMBER	VALVE DESCRIPTION	PER VALVE LEAK RATE (SCFH)
2CPS*SOV119 2CPS*SOV120 2CPS*SOV121 2CPS*SOV122	CPS supply line to supp. chamber	0.625
2IAS*SOV164 2IAS*V448	Inst. air to ADS accumulators	0.9375
2IAS*SOV165 2IAS*V449	Inst. air to ADS accumulators	0.9375
2GSN*SOV166 2GSN*V170	N2 purge to TIP index mechanism	(c)
2IAS*SOV166 2IAS*SOV184	Inst. air to SRV accumulators	(c)
2IAS*SOV167 2IAS*SOV185	Inst. air to drywell	(c)
2IAS*SOV168 2IAS*SOV180	Inst. air to CPS valve in supp. chamber	(c)
2CPS*SOV132 2CPS*V50	Inst. air to CPS valve in supp. chamber	(c)
2CPS*SOV133 2CPS*V51	Inst. air to CPS valve in supp. chamber	(c)

(c) The combined leak rate for these penetrations shall be ≤ 3.6 SCFH. The assigned leakage rate through a penetration shall be that of the valve with the highest leakage rate in that penetration. However, if a penetration is isolated by one closed and de-activated automatic valve, closed manual valve, or blind flange, the leakage through the penetration shall be the actual pathway leakage.

(d) The LCO requirements and leakage rate limit shall apply until such time as a modification eliminates the potential secondary containment bypass leakage path.

TRM Markup provided for information only.