

10CFR 50.90

March 6, 2007

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

Peach Bottom Atomic Power Station, Units 2 and 3  
Renewed Facility Operating License Nos. DPR-44 and DPR-56  
Docket Nos. 50-277 and 50-278

Subject: License Amendment Request – Proposed Change to Technical Specifications  
Regarding Main Steam Isolation Valve Leakage

Pursuant to 10CFR 50.90 Exelon Generation Company, LLC, (Exelon) hereby requests the following amendment to the Technical Specifications (TS), Appendix A, of Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3.

The proposed amendment would change the Main Steam Line Isolation Valve (MSIV) leakage Surveillance Requirement (SR) 3.6.1.3.14 to establish a total leakage rate limit for the sum of the four main steam lines that is equal to four times the current individual MSIV leakage rate limit. This change would provide beneficial personnel radiation dose savings due to the resultant improved maintenance efficiencies. Currently, analyzed doses due to MSIV leakage (i.e., for Exclusion Area Boundary, Low Population Zone, and Control Room) do not consider individual valve leakage rates. These analyses consider the total leakage rate through the four main steam lines. Therefore, the proposed change will not affect any existing radiological analyses.

The NRC has previously approved similar amendment requests to the TS for other plants including James A. Fitzpatrick Nuclear Power Plant, Monticello Nuclear Generating Plant, Dresden Nuclear Power Station and Quad Cities Nuclear Power Station. The subject License Amendment Request proposes to adopt surveillance testing requirements similar to those discussed in the previously approved amendments.

Exelon requests approval of the proposed amendment by September 7, 2007, with the amendment being implemented within 30 days upon issuance. The requested approval date and implementation period will allow usage of the Technical Specification Amendment for the

PBAPS Main Steam Isolation Valve Leakage  
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upcoming P3R16 Refueling Outage, which is scheduled to begin on September 23, 2007. Receipt of the Technical Specification Amendment is expected to afford the site dose savings concerning MSIV maintenance activities.

There are no regulatory commitments contained in this letter.

These proposed changes have been reviewed by the Plant Operations Review Committee, and in accordance with the Nuclear Safety Review Board procedure.

Pursuant to 10CFR 50.91 (b)(1), a copy of this License Amendment Request is being provided to the designated official of the Commonwealth of Pennsylvania.

If any additional information is needed, please contact Mr. Tom Loomis at 610-765-5510.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 6th day of March 2007.

Respectfully,

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Pamela B. Cowan  
Director, Licensing & Regulatory Affairs  
Exelon Generation Company, LLC

Attachments: 1 – Evaluation of Proposed Changes  
2 – Markup of Proposed Technical Specification Pages  
3 – Markup of Proposed Technical Specification Bases Pages

cc: S. J. Collins, Administrator, Region I, USNRC  
F. L. Bower, USNRC Senior Resident Inspector, PBAPS  
J. J. Shea, Project Manager, USNRC  
R. R. Janati, Commonwealth of Pennsylvania

## **ATTACHMENT 1**

### **Evaluation of Proposed Changes**

#### **PBAPS, Units 2 and 3 Renewed Facility Operating License Nos. DPR-44 and DPR-56**

#### **“Proposed Change to Technical Specifications Regarding Main Steam Isolation Valve Leakage”**

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## **ATTACHMENT 1**

### **Evaluation of Proposed Changes**

#### **1.0 DESCRIPTION**

In accordance with 10CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (Exelon) requests the following amendment to Appendix A, Technical Specifications (TS), of Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. Specifically, the proposed changes would revise the Main Steam Line Isolation Valve (MSIV) leakage Surveillance Requirement (SR) 3.6.1.3.14 to establish a total MSIV leakage rate limit for the sum of the four main steam lines that is equal to four times the current individual MSIV leakage rate limit.

This change would provide personnel radiation dose savings due to the elimination of unwarranted MSIV maintenance. Currently, analyzed doses due to MSIV leakage (i.e., for Exclusion Area Boundary, Low Population Zone, and Control Room) do not consider individual valve leakage rates. These analyses consider the total leakage rate through the four main steam lines. Therefore, the proposed change will not affect any existing radiological analyses.

The NRC has previously approved similar amendment requests to the TS for other plants including James A. Fitzpatrick Nuclear Power Plant, Monticello Nuclear Generating Plant, Dresden Nuclear Power Station and Quad Cities Nuclear Power Station. The subject License Amendment Request proposes to adopt surveillance testing requirements similar to those discussed in the previously approved amendments.

Exelon requests approval of the proposed amendment by September 7, 2007, with the amendment being implemented within 30 days upon issuance. The requested approval date and implementation period will allow usage of the Technical Specification Amendment for the upcoming P3R16 Refueling Outage, which is scheduled to begin on September 23, 2007. Receipt of the Technical Specification Amendment is expected to afford the site dose savings concerning MSIV maintenance activities.

#### **2.0 PROPOSED CHANGE**

The proposed change revises the TS Surveillance Requirement (SR) for periodic leakage testing of the MSIVs. The current requirement is stipulated by SR 3.6.1.3.14 and is contained in TS 3.6.1.3, "Primary Containment Isolation Valves (PCIVs)". SR 3.6.1.3.14 currently specifies that leakage through each MSIV must be verified to be  $\leq 11.5$  scfh when tested at  $\geq 25$  psig. The proposed change will require that the combined main steam line leakage rate be  $\leq 46$  scfh when tested at  $\geq 25$  psig.

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.14	Verify combined main steam line leakage rate is $\leq 46$ scfh when tested at $\geq 25$ psig.	In accordance with the Primary Containment Leakage Rate Testing Program

Additionally, in support of this proposed TS change, the associated TS Bases Section 3.6.1.3.14 will be revised to reflect the change in the MSIV leakage rate surveillance. The Bases change is being provided for information only.

### **3.0 BACKGROUND**

The main steam system transports steam from the reactor vessel to the main turbines and other steam driven auxiliary equipment. Each of the four Main Steam Lines (MSLs) contains two quick closing main steam isolation valves (MSIVs) located in the containment penetration piping. One MSIV in each line is located inside the containment, and the other is located outside containment. These valves serve to rapidly isolate the primary containment MSL penetrations in the event of a main steam line break (MSLB) accident or loss-of-coolant accident (LOCA).

The valves, when closed, form part of the nuclear system process barrier for openings outside the primary containment, and part of the primary containment barrier for nuclear system breaks inside the containment. Each valve is a "Y"-shaped, 26-inch globe valve and is installed in a matching 26-inch pipe. As stated in UFSAR Section 4.6, "Main Steam Isolation Valves", the safety objective of the two MSIV's, one on each side of the primary containment barrier in each of the main steam lines, is to close automatically to:

1. Prevent damage to the fuel barrier by limiting the loss of reactor coolant in case of a major leak from the steam piping outside the primary containment.
2. Limit release of radioactive materials by closing the nuclear system process barrier in case of gross release of radioactive materials from the reactor fuel to the reactor cooling water and steam.
3. Limit release of radioactive materials by closing the primary containment barrier in case of a major leak from the nuclear system inside the primary containment.

Although the MSIVs are designed to provide a leak-tight barrier, it is recognized that some leakage through the valves will occur. The current TS limit for each MSIV leakage is 11.5 scfh. Operating experience indicates that leak-by in excess of current TS limits occasionally occurs in MSIVs.

On July 16, 1982, the NRC issued Information Notice 82-23, "Main Steam Isolation Valve Leakage," which discussed the high frequency at which MSIVs were failing to meet TS leak test criteria. Because of these recurring problems with excessive leakage of MSIVs, Generic Issue C-8, "Main Steam Line Valve Leakage Control Systems," was established. The same year, the BWR Owners' Group formed an MSIV Leakage Committee to address the MSIV leakage issue. In 1986, Generic Letter 86-17, "Technical Findings Related to Generic Issue C-8; Boiling Water Reactor Main Steam Isolation Valve Leakage and Leakage Treatment Methods," was issued and a follow-on MSIV Leakage Closure Committee was formed to further the effort. Based on the committee's work, the BWROG developed an approach for resolution on Generic Issue C-8 that proposed to remove the safety-related leakage control systems on those facilities having them, and increase MSIV allowable leakage limits. The BWROG described the proposal in NEDC-31858P, "BWROG Report for Increasing MSIV Leakage Rate Limits and Elimination of Leakage Control Systems." The staff reviewed NEDC-31858P and issued its safety evaluation

on March 3, 1999 (Accession No. 9903110303), approving it for reference in future individual plant applications.

The radiological analysis in PBAPS Units 2 and 3 Updated Final Safety Analysis Report (UFSAR) Section 14.9 for the Design Basis Accident – Loss of Coolant Accident (DBA-LOCA) assumes a Primary Containment leakage rate of 0.635% per day. In UFSAR Section 14.9, the secondary containment bypass (i.e. MSIV leakage) is assumed to be a separate leak rate of 0.145% per day. The MSIV leakage path dominates the calculated control room LOCA dose because of the lower dispersion (ground level) compared with stack (elevated) releases. The leakage value of 0.145% per day is based on the assumption that all four main steam lines are leaking at their Technical Specification allowable isolation valve leak rate of 11.5 scfh. The individual main steam line leakage rates assumed are a total of 46 scfh in the associated radiological analyses. The limit of  $\leq 11.5$  scfh on individual MSIV leak rates in SR 3.6.1.3.14 is currently in place to limit main steam line leakage to a total of  $\leq 46$  scfh.

#### **4.0 TECHNICAL ANALYSIS**

Exelon is proposing to change TS SR 3.6.1.3.14 and the associated Bases to allow a combined maximum flow path leakage for all main steam lines of  $\leq 46$  scfh when tested at  $\geq 25$  psig. The effect of the proposed amendment would be to allow an individual main steam line penetration to have a maximum leakage rate of up to 46 scfh (four times higher than previously), provided that the other three penetrations had no leakage.

NEDC-31858P states that MSIV leakage could increase in excess of 200 scfh per valve without reducing the valve's ability to perform its safety function. Based on this, it can be concluded that PBAPS current 11.5 scfh leakage limit, as well as the proposed combined 46 scfh leakage limit, does not reduce the valve's safety capability. The 11.5 scfh limit, therefore, requires PBAPS to perform unwarranted maintenance on the MSIVs to comply with the current TS requirements.

As currently written, the TS requires each MSIV to meet the leakage limit of  $\leq 11.5$  scfh regardless of the leak rates of the other MSIVs on other main steam lines. The proposed change to SR 3.6.1.3.14 will prevent unnecessary radiation exposure to maintenance and other support personnel involved in performing maintenance on valves when the aggregate leakage of the main steam lines would otherwise still be less than assumed in the radiological analysis for the DBA-LOCA. During the most recent refueling outage (P2R16 – Fall 2006), approximately 7 Rem of radiation exposure was realized as a result of maintenance that would not have been required under the proposed combined TS MSIV leakage limit of 46 scfh.

For PBAPS, the MSIV leak rates are not included in the Type B and C Containment Leak test totals, which are used for demonstrating compliance with the primary containment leakage limit. Therefore, the proposed amendment does not affect the total leakage through containment valves and penetrations subject to the primary containment Type B and C total leakage requirements.

#### **Dose Analysis**

The proposed amendment does not result in changes to the current radiological analysis for the DBA-LOCA calculation. Therefore, the proposed amendment is bounded by the current unchanged radiological analysis.

As shown in Table 1 below, offsite radiological doses (Exclusion Area Boundary (EAB) and Low Population Zone (LPZ)) are dominated by Standby Gas Treatment System (SGTS) filtered stack releases (i.e., Primary Containment to Secondary Containment leakage). Dose contributions from the Secondary Containment bypass pathway (i.e., MSIV leakage) are very low as shown in Table 1 below.

**Table 1 – PBAPS Units 2 and 3 Offsite Dose Analysis for DBA LOCA**

Calculated Offsite Dose Location	Offsite Doses Resulting from Secondary Containment Bypass (MSIV Leakage)		Offsite Doses Resulting from SGTS Filtered Stack Releases	
	Whole Body (Rem)	Thyroid (Rem)	Whole Body (Rem)	Thyroid (Rem)
EAB	1.3E-7	2.8E-6	0.655	14.8
LPZ	8.0E-4	2.4E-1	3.83	239
Note: 1. 10CFR 100 offsite limits are 300 Rem thyroid and 25 Rem whole body.				

The dominant contributor to onsite (Main Control Room, Technical Support Center, Vital Areas and Vital Area Access Routes) doses is due to secondary containment bypass leakage (i.e., through the MSIVs). The proposed amendment has no impact on currently calculated doses (0.012 Rem whole body and 1.64 Rem thyroid). 10CFR 50, Appendix A, GDC 19 Control Room limits are 30 Rem thyroid and 5 Rem whole body.

The proposed change does not compromise or revise existing equipment qualification relating to radiological dose since the combined total MSIV leakage rate has been factored into existing equipment qualification analyses for 10CFR 50.49.

### Precedent

The PBAPS proposed TS change is similar to changes approved by the NRC for a number of BWR plants, including TS changes approved for Monticello Nuclear Generating Plant on April 3, 1996, Dresden Nuclear Power Station, Units 2 and 3, on October 1, 1999, James A. Fitzpatrick Nuclear Power Plant on August 13, 2002, and Quad Cities Nuclear Power Station, Units 1 and 2 on December 21, 1999.

The NRC's Safety Evaluations: (1) cited the fact that individual main steam leakage limits are not needed in order to comply with plant safety analyses or Appendix J requirements for Type B and Type C testing, and (2) documented the NRC's conclusion that the disadvantages such as increased maintenance and higher worker radiation exposure associated with maintaining relatively low individual main steam leakages are not justified by any additional conservatism the individual limits might provide. Recognizing this, the NRC has determined that individual

leakage rate limits for main steam lines or valves need not be specified, considering that an aggregate main steam line leakage limit would satisfy the basis for the TS requirement.

## **5.0 REGULATORY ANALYSIS**

### **5.1 No Significant Hazards Consideration**

In accordance with 10CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (Exelon) requests the following amendment to Appendix A, Technical Specifications (TS), of Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. Specifically, the proposed changes would revise the Main Steam Line Isolation Valve (MSIV) leakage Surveillance Requirement (SR) 3.6.1.3.14 to establish a total leakage rate limit for the sum of the four main steam lines that is equal to four times the current individual MSIV leakage rate limit.

This change would provide personnel radiation dose savings due to the elimination of unwarranted MSIV maintenance. Currently, analyzed doses due to MSIV leakage (i.e., for Exclusion Area Boundary, Low Population Zone, and Control Room) do not consider individual valve leakage rates. These analyses consider the total leakage rate through the four main steam lines. Therefore, the proposed change will not affect any existing radiological analyses.

According to 10CFR 50.92, "Issuance of amendment," paragraph (c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in a margin of safety.

In support of this determination, 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 10CFR 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

The proposed amendment results in no change in radiological consequences of the design basis LOCA as currently analyzed for Peach Bottom Atomic Power Station. This analysis was calculated assuming a combined total MSIV leakage at accident pressure for determining acceptance to the regulatory limits for the offsite, control room and Technical Support Center (TSC) radiation doses as contained in 10CFR 100 and 10CFR 50, Appendix A, GDC 19. The proposed change does not compromise existing radiological equipment qualification, since the combined total MSIV leakage rate has been factored into existing



equipment qualification analyses for 10CFR 50.49. This change will not alter the operation of process variables, structures, systems, or components as described in the PBAPS Updated Final Safety Analysis Report (UFSAR). The proposed amendment does not alter the operational capability of the MSIVs.

Therefore, based on the above information, 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 proposed amendment does not modify the MSIVs or any other plant system or structure associated with this amendment and therefore, will not affect their capability to perform their design functions. The combined total main steam line leakage rate is included in the current radiological analyses for the assessment of radiation exposure following an accident. This proposal changes the allowable leakage rate from a per valve limit to a total combined leakage rate limit for all four main steam lines, but does not change the cumulative limit. The proposed change does not affect the responses of plant equipment to transient or accident conditions. The proposed amendment does not change or introduce any new equipment, modes of system operation or failure mechanisms.

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

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

Response: No

The proposed amendment has no impact on equipment design or operation, and there are no changes being made to safety limits or safety system allowable values that would adversely affect plant safety. The proposed change does not affect safety analysis assumptions or initial conditions and therefore, the margin of safety in the original safety analyses are maintained. The leakage rate limit specified for the MSIVs is used to quantify the maximum amount of bypass leakage assumed in the LOCA radiological analysis. Results of the analysis are evaluated against the dose guidelines contained in 10CFR 100 and 10CFR 50, Appendix A, GDC 19. The margin of safety in this context is considered to be the difference between the calculated dose exposures and the guidelines provided by 10CFR 100 and GDC 19. Therefore, since the proposed combined total main steam line leakage rate limit is unchanged from the assumed maximum leakage rate for MSIVs for the purpose of calculating potential radiation dose, the margin of safety is not affected.

Based on the above evaluation, Exelon concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10CFR 50.92(c).

## **5.2 Applicable Regulatory Requirements/Criteria**

Compliance with the Code of Federal Regulations, Title 10, Part 50, Appendix J (10CFR 50, Appendix J) provides assurance that the primary containment, including those systems and components that penetrate the primary containment, do not exceed the allowable leakage rate values specified in the TSs and their bases. The proposed change maintains compliance with 10CFR 50, Appendix J to Part 50 - Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors.

10CFR 50.36(c)(3), "Surveillance requirements," states that SRs 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 amendment would change the Main Steam Line Isolation Valve (MSIV) leakage Surveillance Requirement (SR) 3.6.1.3.14 to establish a total leakage rate limit for the sum of the four main steam lines that is equal to four times the current individual MSIV leakage rate limit. This surveillance provides assurance that the MSIV leakage limits remain within those assumed in the LOCA radiological analysis and therefore, the limiting conditions for operation would be met.

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.

## **6.0 ENVIRONMENTAL EVALUATION**

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10CFR 20, "Standards for Protection Against Radiation," or would change an inspection or surveillance requirement. However, the proposed amendment does not involve: (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any 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 10CFR 51.22, "Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review," Paragraph (c)(9). Therefore, pursuant to 10CFR 51.22, Paragraph (b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## **7.0 REFERENCES**

1. NEDC-31858P, Rev. 2, 'BWROG Report for Increasing MSIV Leakage Rate Limits and Elimination of Leakage Control Systems' dated September 1993.

2. Safety Evaluation for NEDC-31858P, Revision 2, 'BWROG Report for Increasing MSIV Leakage Rate Limits and Elimination of Leakage Control Systems' dated March 3, 1999
3. Monticello, Letter from Kim (NRC) to Anderson (Northern States Power) dated April 3, 1996.
4. Quad Cities, Letter from Dimmette (Com Ed) to NRC dated July 15, 1999.
5. Quad Cities, Letter from Bailey (NRC) to Kingsley (Com Ed) dated December 21, 1999.
6. James A. Fitzpatrick, Letter from Sullivan (Entergy Nuclear) to NRC dated January 9, 2002
7. James A. Fitzpatrick, Letter from Vissing (NRC) to Kansler (Entergy Nuclear) dated August 13, 2002.
8. Dresden Nuclear Power Station, Letter from Rossbach (NRC) to Kingsley (Commonwealth Edison) dated October 1, 1999

**ATTACHMENT 2**

**PBAPS, Units 2 and 3  
Renewed Facility Operating License Nos. DPR-44 and DPR-56**

**“Proposed Change to Technical Specifications Regarding Main Steam Isolation Valve  
Leakage”**

**Markup of Proposed Technical Specification Pages**

**REVISED TS PAGES**

**Unit 2      Unit 3**

**3.6-16      3.6-16**

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<div data-bbox="128 406 488 455" data-label="Text">combined main steam line</div> <div data-bbox="185 491 1113 595" data-label="Text"> <p>SR 3.6.1.3.14 Verify leakage rate through each MSIV is <math>\leq 11.5</math> scfh when tested at <math>\geq 25</math> psig.</p> </div> <div data-bbox="680 595 801 644" data-label="Text">46</div>	In accordance with the Primary Containment Leakage Rate Testing Program
<p>SR 3.6.1.3.15 Verify each 6 inch and 18 inch primary containment purge valve and each 18 inch primary containment exhaust valve is blocked to restrict opening greater than the required maximum opening angle.</p>	24 months
<p>SR 3.6.1.3.16 Replace the inflatable seal of each 6 inch and 18 inch primary containment purge valve and each 18 inch primary containment exhaust valve.</p>	96 months

SURVEILLANCE REQUIREMENTS (continued)

combined main steam line	SURVEILLANCE	FREQUENCY
SR 3.6.1.3.14 Verify leakage rate through each MSIV is $\leq 11.5$ scfh when tested at $\geq 25$ psig.	46	In accordance with the Primary Containment Leakage Rate Testing Program
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**ATTACHMENT 3**

**PBAPS, Units 2 and 3  
Renewed Facility Operating License Nos. DPR-44 and DPR-56**

**“Proposed Change to Technical Specifications Regarding Main Steam Isolation Valve  
Leakage”**

**Markup of Proposed Technical Specification Bases Pages**

**REVISED TS BASES PAGES**

Unit 2      Unit 3

B 3.6-29    B 3.6-29

BASES

SURVEILLANCE  
REQUIREMENTS  
(continued)

SR 3.6.1.3.13

This SR ensures that in case the non-safety grade instrument air system is unavailable, the SGIG System will perform its design function to supply nitrogen gas at the required pressure for valve operators and valve seals supported by the SGIG System. The 24 month Frequency was developed considering it is prudent that this Surveillance be performed only during a plant outage. Operating experience has shown that these components will usually pass this Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

Combined main  
steam line leakage

SR 3.6.1.3.14

46

Leakage through each MSIV must be  $\leq 11.5$  scfh when tested at  $\geq P_t$  (25 psig). The analyses in Reference 1 are based on treatment of MSIV leakage as a secondary containment bypass leakage, independent of a primary to secondary containment leakage analyzed at  $1.27 L_a$ . In the Reference 1 analysis all 4 steam lines are assumed to leak at the TS Limit. This ensures that MSIV leakage is properly accounted for in determining the overall impacts of primary containment leakage. The Frequency is required by the Primary Containment Leakage Rate Testing Program.

11.5 scfh for a total of  
46 scfh.

SR 3.6.1.3.15

Verifying the opening of each 6 inch and 18 inch primary containment purge valve and each 18 inch primary containment exhaust valve is restricted by a blocking device to less than or equal to the required maximum opening angle specified in the UFSAR (Ref. 4) is required to ensure that the valves can close under DBA conditions within the times in the analysis of Reference 1. If a LOCA occurs, the purge and exhaust valves must close to maintain primary containment leakage within the values assumed in the accident analysis. At other times pressurization concerns are not present, thus the purge and exhaust valves can be fully open. The 24 month Frequency is appropriate because the blocking devices may be removed during a refueling outage.

(continued)



BASES

SURVEILLANCE  
REQUIREMENTS  
(continued)

SR 3.6.1.3.13

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Leakage through each MSIV must be  $\leq 11.5$  scfh when tested at  $\geq P_t$  (25 psig). The analyses in Reference 1 are based on treatment of MSIV leakage as a secondary containment bypass leakage, independent of a primary to secondary containment leakage analyzed at  $1.27 L_a$ . In the Reference 1 analysis all 4 steam lines are assumed to leak at the TS Limit. This ensures that MSIV leakage is properly accounted for in determining the overall impacts of primary containment leakage. The Frequency is required by the Primary Containment Leakage Rate Testing Program.

46

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SR 3.6.1.3.15

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(continued)