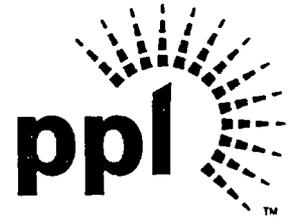


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**JAN 28 2005**

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station OP1-17  
Washington, DC 20555

**SUSQUEHANNA STEAM ELECTRIC STATION  
PROPOSED AMENDMENT NO. 270 TO LICENSE  
NPF-14 AND PROPOSED AMENDMENT NO. 237 TO  
LICENSE NPF-22: REVISION TO TECHNICAL  
SPECIFICATION 5.5.6  
PLA-5840**

**Docket Nos. 50-387  
and 50-388**

In accordance with the provisions of 10 CFR 50.90, PPL Susquehanna, LLC is submitting a request for an amendment to the Technical Specifications for Susquehanna Units 1 and 2.

The proposed amendment replaces the reference to ASME Boiler and Pressure Vessel Code with a reference to ASME Code for Operation and Maintenance of Nuclear Power Plants in Technical Specification 5.5.6.

These proposed changes have been reviewed by the Plant Operations Review Committee and approved by the Susquehanna Review Committee.

The Enclosure to this letter provides a description of the proposed change. Attachment 1 provides the existing Technical Specification pages marked-up to show the proposed change. Attachment 2 provides the corresponding TS Bases "markup" pages. No new regulatory commitments are made herein.

We request approval of the proposed License Amendment by November 1, 2005, with the amendment being implemented within 30 days following approval.

In accordance with 10 CFR 50.91(b), PPL Susquehanna, LLC is providing the Commonwealth of Pennsylvania with a copy of this proposed License Amendment request.

ASD1

These proposed amendments are similar to the amendments approved for Turkey Point Units 3 and 4 on July 22, 2004 (ADAMS Accession No. ML042050230).

If you have any questions regarding this submittal, please contact Mr. C. T. Coddington at (610) 774-4019.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 1-28-05



B. T. McKinney

Enclosure: PPL Susquehanna Evaluation of the Proposed Changes

Attachments:

Attachment 1 - Proposed Technical Specification Changes Units 1 & 2,  
(Mark-ups)

Attachment 2 - Proposed Technical Specification Bases Changes Units 1 & 2,  
(Mark-ups provided for information.)

cc: NRC Region I  
Mr. A. J. Blamey, NRC Sr. Resident Inspector  
Mr. R. V. Guzman, NRC Project Manager  
Mr. R. Janati, DEP/BRP

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## **Enclosure to PLA-5840**

# **PPL Susquehanna, LLC Evaluation of Proposed Changes**

## **Technical Specification 5.5.6**

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1. DESCRIPTION
2. PROPOSED CHANGES
3. BACKGROUND
4. TECHNICAL ANALYSIS
5. REGULATORY SAFETY ANALYSIS
  - 5.1 No Significant Hazards Consideration
  - 5.2 Applicable Regulatory Requirements/Criteria
6. ENVIRONMENTAL CONSIDERATION
7. REFERENCES

## PPL EVALUATION

**Subject: TECHNICAL SPECIFICATION 5.5.6**

### **1.0 DESCRIPTION**

This is a request to amend Operating Licenses NPF-14 and NPF-22 for PPL Susquehanna, LLC (PPL), Susquehanna Steam Electric Station (SSES) Units 1 and 2 respectively.

The proposed changes would revise the Operating Licenses to update references to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI as the source of requirements for the inservice testing of ASME Code Class 1, 2, and 3 pumps and valves in Technical Specification 5.5.6. The proposed changes delete reference to Section XI of the Code and incorporate reference to the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code). These changes are being submitted to conform the technical specifications to the revised Inservice Testing Program.

The proposed changes are consistent with the implementation of the SSES Third 10-Year Interval Inservice Testing (IST) Program in accordance with the requirements of 10 CFR 50.55a(f). The Third 10-Year Interval started on June 1, 2004 for both Units.

### **2.0 PROPOSED CHANGES**

Revise TS 5.5.6 to read:

#### **5.5.6 Inservice Testing Program**

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program shall include the following:

- a. Testing frequencies specified in the ASME Operation and Maintenance Code and applicable Addenda are as follows:

**ASME Operation  
and Maintenance Code and  
applicable Addenda terminology  
for inservice testing activities**

**Required Frequencies  
for performing  
inservice testing activities**

Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

- b. The provisions of SR 3.0.2 are applicable to the above required Frequencies for performing inservice testing activities;
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and
- d. Nothing in the ASME Operation and Maintenance Code shall be construed to supersede the requirements of any TS.

Technical Specification Bases Sections B 3.4.3, B 3.4.5, B 3.5.1, and B 3.6.2.3 will also be revised to replace the reference to Section XI of the ASME Boiler and Pressure Vessel Code with a reference to the ASME OM Code.

### **3.0 BACKGROUND**

In 1990, the ASME published the initial edition of the ASME OM Code that provides rules for inservice testing of pumps and valves. The ASME OM Code replaced Section XI of the Boiler and Pressure Vessel Code for inservice testing of pumps and valves. The 1995 edition of the ASME OM Code was incorporated by reference into 10 CFR 50.55a(b) on September 22, 1999. Since 10 CFR 50.55a(f)(4)(ii) requires that inservice testing during successive 10-year intervals comply with the requirements of the latest edition and addenda of the Code incorporated into 10 CFR 50.55a(b), Technical Specification 5.5.6 and Technical Specifications Bases Sections B 3.4.3, B 3.4.5, B 3.5.1, and B 3.6.2.3 must be revised to reference the ASME OM Code.

#### **4.0 TECHNICAL ANALYSIS**

By final rule issued on September 22, 1999 (64 FR 51370) the NRC amended 10 CFR 50.55a(f)(4)(ii) to require licensees to update their IST program to the latest approved edition of the ASME OM Code incorporated by reference into 10 CFR 50.55a(b).

The Technical Specifications for SSES Units 1 and 2 currently reference the ASME Boiler and Pressure Vessel Code, Section XI, as the source of the IST requirements for ASME Code 1, 2, and 3 components. The Code of record for the ongoing Third 10-Year IST interval is the 1998 Edition through the OMB-2000 Addenda of the ASME OM Code. The proposed changes to Technical Specification 5.5.6 would be revised to reference the ASME OM Code. The proposed changes to Technical Specification 5.5.6 are necessary for consistency with the IST requirements of 10 CFR 50.55a. The IST requirements of 10 CFR 50.55a(f) for nuclear power plants have been demonstrated and accepted by the NRC as providing an adequate level of protection to the public health and safety. The proposed changes to Technical Specification 5.5.6 conform the technical specifications to the requirements of 10 CFR 50.55a(f) and will not adversely affect nuclear safety.

#### **5.0 REGULATORY SAFETY ANALYSIS**

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

PPL Susquehanna, LLC (PPL) 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 change involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated?**

Response: No.

The proposed changes revise Technical Specification 5.5.6 for SSES Units 1 and 2 to conform to the requirements of 10 CFR 50.55a(f) regarding the inservice testing of pumps and valves for the Third 10-Year Interval. The current Technical Specifications reference the ASME Boiler and Pressure Vessel Code, Section XI, requirements for the inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. The proposed changes would

reference the ASME OM Code, which is consistent with 10 CFR 50.55a(f) and accepted for use by the NRC. The proposed changes are administrative in nature.

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

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

Response: No.

The proposed changes revise Technical Specification 5.5.6 for SSES Units 1 and 2 to conform to the requirements of 10 CFR 50.55a(f) regarding the inservice testing of pumps and valves for the Third 10-Year Interval. The current Technical Specifications reference the ASME Boiler and Pressure Vessel Code, Section XI, requirements for the inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. The proposed changes would reference the ASME OM Code, which is consistent with 10 CFR 50.55a(f) and accepted for use by the NRC. The proposed changes are administrative in nature.

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?**

Response: No.

The proposed changes revise Technical Specification 5.5.6 for SSES Units 1 and 2 to conform to the requirements of 10 CFR 50.55a(f) regarding the inservice testing of pumps and valves for the Third 10-Year Interval. The current Technical Specifications reference the ASME Boiler and Pressure Vessel Code, Section XI, requirements for the inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. The proposed changes would reference the ASME OM Code, which is consistent with 10 CFR 50.55a(f) and accepted for use by the NRC. The proposed changes are administrative in nature.

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

Based on the above, PPL concludes that the proposed changes present no 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.

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

SSES FSAR Sections 3.1 and 3.13 provide detailed discussion of SSES compliance with the applicable regulatory requirements and guidance. The proposed TS amendment:

- (a) Does not alter the design or function of any system;
- (b) Does not result in any change in the qualifications of any component; and
- (c) Does not result in the reclassification of any component’s status in the areas of shared, safety-related, independent, redundant, and physically or electrically separated.

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 CONSIDERATIONS**

10 CFR 51.22(c)(9) identifies certain licensing and regulatory actions, which are eligible for categorical exclusion from the requirement to perform an environmental assessment. A proposed amendment to an operating license for a facility does not require an environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; or (3) result in a significant increase in individual or cumulative occupational radiation exposure. PPL Susquehanna, LLC has evaluated the proposed changes and has determined that the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Accordingly, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with issuance of the amendment. The basis for this determination, using the above criteria, follows:

Basis

As demonstrated in the No Significant Hazards Consideration Evaluation, the proposed amendment does not involve a significant hazards consideration.

There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite. The proposed change does not involve any physical alteration of the plant (no new or different type of equipment will be installed) or change in methods governing normal plant operation.

There is no significant increase in individual or cumulative occupational radiation exposure. The proposed changes do not involve any physical alteration of the plant (no new or different type of equipment will be installed) or change in methods governing normal plant operation.

**7.0** REFERENCES

1. ASME Operation and Maintenance Code for Operation and Maintenance of Nuclear Power Plants, 1998 Edition through the OMB-2000 Addenda.

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**Attachment 1 to PLA-5840**  
**Proposed Technical Specification Changes**  
**Units 1 & 2**  
**(Mark-ups)**

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5.5 Programs and Manuals (continued)

5.5.6 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program shall include the following:

- a. Testing frequencies specified in ~~Section XI~~ <sup>Operation and Maintenance</sup> of the ASME ~~Boiler and Pressure Vessel~~ Code and applicable Addenda are as follows:

<del>ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities</del> <sup>Operation and Maintenance</sup>	<u>Required Frequencies for performing inservice testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

- b. The provisions of SR 3.0.2 are applicable to the above required Frequencies for performing inservice testing activities;
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and
- d. Nothing in the ASME ~~Boiler and Pressure Vessel~~ <sup>Operation and Maintenance</sup> Code shall be construed to supersede the requirements of any TS.

(continued)

5.5 Programs and Manuals (continued)

5.5.6 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program shall include the following:

- a. Testing frequencies specified in ~~Section XI~~ <sup>Operation and Maintenance</sup> of the ASME ~~Boiler and Pressure Vessel Code~~ and applicable Addenda are as follows:

<del>ASME Boiler and Pressure Vessel Code</del> <sup>Operation and Maintenance</sup> and applicable Addenda terminology for <u>inservice testing activities</u>	<u>Required Frequencies for performing inservice testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

- b. The provisions of SR 3.0.2 are applicable to the above required Frequencies for performing inservice testing activities;
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and
- d. Nothing in the ASME ~~Boiler and Pressure Vessel Code~~ <sup>Operation and Maintenance</sup> shall be construed to supersede the requirements of any TS.

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**Attachment 2 to PLA-5840**  
**Technical Specification Bases Changes**  
**(Mark-ups Provided for Information)**

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BASES

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**SURVEILLANCE  
REQUIREMENTS**

SR 3.4.3.1 (continued)

The Frequency of this Surveillance is established in accordance with the Inservice Testing Program.

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**REFERENCES**

1. FSAR, Section 5.2.2.1.4.
2. FSAR, Section 15.
3. ~~ASME, Boiler and Pressure Vessel Code, Section XI.~~
4. Final Policy Statement on Technical Specifications Improvements, July 22, 1993 (58 FR 39132).

*X. ASME Operation and Maintenance Code*

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BASES

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**SURVEILLANCE  
REQUIREMENTS**

SR 3.4.5.1 (continued)

The 24 month <sup>OM</sup> Frequency required by the Inservice Testing Program is within the ASME Code, Section XI, Frequency requirement and is based on the need to perform this Surveillance during an outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power.

This SR is modified by a Note that states the leakage Surveillance is not required to be performed in MODE 3. Entry into MODE 3 is permitted for leakage testing at high differential pressures with stable conditions not possible in the lower MODES.

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**REFERENCES**

1. 10 CFR 50.2.
  2. 10 CFR 50.55a(c).
  3. 10 CFR 50, Appendix A, GDC 55.
  4. ASME <sup>Operation and Maintenance</sup> Boiler and Pressure Vessel Code, Section XI.
  5. NUREG-0677, May 1980.
  6. Final Policy Statement on Technical Specifications Improvements, July 22, 1993 (58 FR 39132).
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BASES

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SURVEILLANCE REQUIREMENTS: SR 3.5.1.6 (continued)

the demonstrated reliability of these valves. If the valve is inoperable and in the open position, the associated LPCI subsystem must be declared inoperable.

SR 3.5.1.7, SR 3.5.1.8, and SR 3.5.1.9

OM — The performance requirements of the low pressure ECCS pumps are determined through application of the 10 CFR 50, Appendix K criteria (Ref. 8). This periodic surveillance is performed (in accordance with the ASME Code, Section XI requirements for the ECCS pumps) to verify that the ECCS pumps will develop the flow rates required by the respective analyses. The low pressure ECCS pump flow rates ensure that adequate core cooling is provided to satisfy the acceptance criteria of Reference 10. The pump flow rates are verified against a system head equivalent to the RPV pressure expected during a LOCA. The total system pump outlet pressure is adequate to overcome the elevation head pressure between the pump suction and the vessel discharge, the piping friction losses, and RPV pressure present during a LOCA. These values may be established during preoperational testing.

The flow tests for the HPCI System are performed at two different pressure ranges such that system capability to provide rated flow is tested at both the higher and lower operating ranges of the system. Additionally, adequate steam flow must be passing through the main turbine or turbine bypass valves to continue to control reactor pressure when the HPCI System diverts steam flow. Reactor steam pressure is considered adequate when  $\geq 920$  psig to perform SR 3.5.1.8 and  $\geq 150$  psig to perform SR 3.5.1.9. However, the requirements of SR 3.5.1.9 are met by a successful performance at any pressure  $< 165$  psig. Adequate steam flow is represented by at least 1.25 turbine bypass valves open. Therefore, sufficient time is allowed after adequate pressure and flow are achieved to perform these tests. Reactor startup is allowed prior to performing the low pressure Surveillance test because the reactor pressure is low and the time allowed to satisfactorily perform the Surveillance test is short. The reactor pressure is allowed to be increased to normal operating pressure since it is assumed that the low pressure test has been satisfactorily

(continued)

BASES

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SURVEILLANCE  
REQUIREMENTS

SR 3.6.2.3.1 (continued)

The Frequency of 31 days is justified because the valves are operated under procedural control, improper valve position would affect only a single subsystem, the probability of an event requiring initiation of the system is low, and the subsystem is a manually initiated system. This Frequency has been shown to be acceptable based on operating experience.

SR 3.6.2.3.2

Verifying that each RHR pump develops a flow rate  $\geq 9750$  gpm while operating in the suppression pool cooling mode with flow through the associated heat exchanger ensures that pump performance has not degraded during the cycle. Flow is a normal test of centrifugal pump performance required by ASME Code, Section XI (Ref. 2). This test confirms one point on the pump design curve, and the results are indicative of overall performance. Such inservice inspections confirm component OPERABILITY, trend performance, and detect incipient failures by indicating abnormal performance. The Frequency of this SR is in accordance with the Inservice Testing Program.

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REFERENCES

1. FSAR, Section 6.2.
2. ASME <sup>Operation and Maintenance Code</sup> Boiler and Pressure Vessel Code, Section XI.
3. Final Policy Statement on Technical Specifications Improvements, July 22, 1993 (58 FR 39132).

**BASES**

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**SURVEILLANCE  
REQUIREMENTS**

SR 3.4.3.1 (continued)

The Frequency of this Surveillance is established in accordance with the Inservice Testing Program.

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**REFERENCES**

1. FSAR, Section 5.2.2.1.4.
  2. FSAR, Section 15.
  3. ~~ASME, Boiler and Pressure Vessel Code, Section XI.~~ ←
  4. Final Policy Statement on Technical Specifications Improvements, July 22, 1993 (58 FR 39132).
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ASME Operation and Maintenance Code

BASES

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SURVEILLANCE REQUIREMENTS SR 3.4.5.1 (continued)

*OM* The 24 month Frequency required by the Inservice Testing Program is within the ASME Code, Section XI Frequency requirement and is based on the need to perform this Surveillance during an outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power.

This SR is modified by a Note that states the leakage Surveillance is not required to be performed in MODE 3. Entry into MODE 3 is permitted for leakage testing at high differential pressures with stable conditions not possible in the lower MODES.

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REFERENCES

1. 10 CFR 50.2.
2. 10 CFR 50.55a(c).
3. 10 CFR 50, Appendix A, GDC 55.
4. ASME, *Operation and Maintenance* Boiler and Pressure Vessel Code, Section XI.
5. NUREG-0677, May 1980.
6. Final Policy Statement on Technical Specifications Improvements, July 22, 1993 (58 FR 39132).

**BASES**

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**SURVEILLANCE  
REQUIREMENTS**

SR 3.5.1.6 (continued)

The specified Frequency is once during reactor startup before THERMAL POWER is > 25% RTP. However, this SR is modified by a Note that states the Surveillance is only required to be performed if the last performance was more than 31 days ago. Therefore, implementation of this Note requires this test to be performed during reactor startup before exceeding 25% RTP. Verification during reactor startup prior to reaching > 25% RTP is an exception to the normal Inservice Testing Program generic valve cycling Frequency of 92 days, but is considered acceptable due to the demonstrated reliability of these valves. If the valve is inoperable and in the open position, the associated LPCI subsystem must be declared inoperable.

SR 3.5.1.7, SR 3.5.1.8, and SR 3.5.1.9

*OM* — The performance requirements of the low pressure ECCS pumps are determined through application of the 10 CFR 50, Appendix K criteria (Ref. 8). This periodic Surveillance is performed (in accordance with the ASME Code, Section XI requirements for the ECCS pumps) to verify that the ECCS pumps will develop the flow rates required by the respective analyses. The low pressure ECCS pump flow rates ensure that adequate core cooling is provided to satisfy the acceptance criteria of Reference 10. The pump flow rates are verified against a system head equivalent to the RPV pressure expected during a LOCA. The total system pump outlet pressure is adequate to overcome the elevation head pressure between the pump suction and the vessel discharge, the piping friction losses, and RPV pressure present during a LOCA. These values may be established during preoperational testing.

The flow tests for the HPCI System are performed at two different pressure ranges such that system capability to provide rated flow is tested at both the higher and lower operating ranges of the system. Additionally, adequate steam flow must be passing through the main turbine or turbine bypass valves to continue to control reactor pressure when the HPCI System diverts steam flow. Reactor steam pressure is considered adequate when  $\geq 920$  psig to perform SR 3.5.1.8 and  $\geq 150$  psig to perform SR 3.5.1.9. However, the requirements of SR 3.5.1.9 are met by a successful performance at any pressure  $\leq 165$  psig. Adequate steam flow is represented by at least 1.25 turbine bypass valves open. Therefore, sufficient time is allowed after adequate pressure and flow are achieved to perform these tests. Reactor startup is allowed prior to performing the low pressure Surveillance test because the reactor pressure is low and the time allowed to satisfactorily

(continued)

BASES

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SURVEILLANCE  
REQUIREMENTS

SR 3.6.2.3.1 (continued)

The Frequency of 31 days is justified because the valves are operated under procedural control, improper valve position would affect only a single subsystem, the probability of an event requiring initiation of the system is low, and the subsystem is a manually initiated system. This Frequency has been shown to be acceptable based on operating experience.

SR 3.6.2.3.2

Verifying that each RHR pump develops a flow rate  $\geq 9750$  gpm while operating in the suppression pool cooling mode with flow through the associated heat exchanger ensures that pump performance has not degraded during the cycle. Flow is a normal test of centrifugal pump performance required by ASME Code, ~~Section XI~~ (Ref. 2). This test confirms one point on the pump design curve, and the results are indicative of overall performance. Such inservice inspections confirm component OPERABILITY, trend performance, and detect incipient failures by indicating abnormal performance. The Frequency of this SR is in accordance with the Inservice Testing Program.

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REFERENCES

1. FSAR, Section 6.2.
2. ASME, <sup>Operation and Maintenance</sup> ~~Boiler and Pressure Vessel Code, Section XI.~~
3. Final Policy Statement on Technical Specifications Improvements, July 22, 1993 (58 FR 39132).