Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37384-2000

December 19, 2005

TVA-SQN-TS-05-11 10 CFR 50.90

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

Gentlemen:

In the Matter of	)	Docket Nos. 50-327
Tennessee Valley Authority	)	50-328

SEQUOYAH NUCLEAR PLANT (SQN) - UNITS 1 AND 2 - TECHNICAL SPECIFICATIONS (TS) CHANGE 05-11, "REVISION TO TECHNICAL SPECIFICATION TO SUPPORT THIRD 10-YEAR INTERVAL INSERVICE TEST (IST) PROGRAM"

Pursuant to 10 CFR 50.90, Tennessee Valley Authority (TVA) is submitting a request for a TS change (TS 05-11) to Licenses DPR-77 and DPR-79 for SQN Units 1 and 2. The proposed change revises SQN TS for consistency with the requirements of 10 CFR 50.55a(f)(4). The 10 CFR 50.55a(f)(4) provides reference to the applicable American Society of American Engineers (ASME) code for testing pumps and valves that are classified as ASME Code Class 1, 2, and 3. The applicable code referenced in (f)(4) is the Code for Operation and Maintenance of Nuclear Power Plants (ASME OM code).

TVA's proposed change provides consistency with the 10 CFR 50.55a(f)(4) requirement by replacing the TS reference to ASME Boiler and Pressure Vessel Code, Section XI, with the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code).

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TVA's proposed change is based on TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a."

TVA has determined that there are no significant hazards considerations associated with the proposed change and that the TS change qualifies for categorical exclusion from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9).

Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and enclosures to the Tennessee State Department of Public Health.

TVA requests approval of this TS change to support a June 1, 2006, schedule for implementation of SQN's third 10-year IST interval. Implementation of TVA's proposed TS change is requested to occur in conjunction with the June 1, 2006, IST program implementation date.

TVA's proposed changes are based on similar changes approved for Seabrook Station by NRC letter dated May 8, 2000, and is recognized as a needed TS correction in Technical Specification Task Force TSTF-479, Revision 0.

There are no commitments contained in this submittal.

If you have any questions about this change, please contact me at 843-7170 or Jim Smith at 843-6672.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 19th day of December, 2005.

Sincerely,

for

P. L. Pace
Manager, Site Licensing and
Industry Affairs

Enclosures:
1. TVA Evaluation of the Proposed Changes
2. Proposed Technical Specifications Changes (mark-up)
3. Changes to Technical Specifications Bases Pages

cc: See page 3

Enclosures
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ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY (TVA)
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2

1.0 DESCRIPTION

This letter is a request to amend Operating Licenses DPR-77 and DPR-79 for SQN Units 1 and 2. The proposed changes would update SQN's Inservice Test (IST) program to be consistent with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves that are classified as American Society of Mechanical Engineers (ASME) Code Class 1, 2 and 3. The proposed change replaces the TS reference to ASME Boiler and Pressure Vessel Code, Section XI, with the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code) as it applies to the IST program. The proposed revision also indicates that the IST program includes test frequencies applicable to the ASME OM Code.

2.0 PROPOSED CHANGE

The proposed change revises SQN's IST program that is described in Surveillance Requirement (SR) 4.0.5.

The first change is SR 4.0.5.a that currently states:

> "Provisions that inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a."

TVA's proposed change revises SR 4.0.5.a to read:

> "Provisions that inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as required by 10 CFR 50.55a."

The second change is to SR 4.0.5.b that currently states:

> "Testing Frequencies specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as follows:"

SR 4.0.5.b is revised to read:

> "Testing Frequencies applicable to the ASME OM Code and applicable Addenda as follows:"

The third change is to SR 4.0.5.c that currently states:

> "The provisions of SR 4.0.2 are applicable to the above required Frequencies for performing inservice testing activities."

SR 4.0.5.c is revised to read:

> "The provisions of SR 4.0.2 are applicable to the above required Frequencies and other normal and accelerated frequencies specified in the Inservice Testing Program."

The last change is to SR 4.0.5.e that currently states:

> "Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any TS."

SR 4.0.5.e is revised to read:

> "Nothing in the ASME OM Code shall be construed to supersede the requirements of any TS."

TVA is also including related changes to applicable sections of the TS Bases. One specific change to the Bases removes a statement that used an example from ASME Section XI code that allowed a valve to be inoperable for up to 24 hours before being declared inoperable. This provision is not part of the ASME OM Code and is thus being removed as an example in the Bases. Accordingly, the Bases revisions will provide consistency with the above changes for referencing the ASME OM Code.

In summary, TVA is proposing to revise the IST program requirements of TS SR 4.0.5 to update ASME code references to the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code). This update will provide consistency with the code requirements referenced in 10 CFR 50.55a(f)(4).

3.0 BACKGROUND

As identified in the SQN Updated Final Safety Analysis Report (UFSAR), Section 6.8, SQN is currently in its second 10-year interval for inservice testing of ASME Class 1, 2, and 3 pumps and valves. SQN's current IST program is based upon the requirements of the ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition.

Nuclear Regulatory Commission (NRC) regulation 10 CFR 50.55a(f)(4)(ii) requires that IST that are conducted during successive 120-month intervals comply with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph (b) of this section 12 months before the start of the 120-month interval. In addition, NRC regulation 10 CFR 50.55a(f)(4)(i) requires the IST program be revised by the licensee, as necessary, to meet the requirements of paragraph (f)(4) of this section. In accordance with these regulations, TVA is updating SQN's IST program to the 2001 Edition (through the 2003 Addenda) of the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code). The update to the IST program will be implemented at the start of SQN's third 10-year interval that begins June 1, 2006.

TVA has reviewed the updated code requirements with respect to SQN's current TS requirements. This review was performed to comply with the provisions of 10 CFR 50.55a(f)(4)(ii) that states:

> "If a revised inservice test program for a facility conflicts with the technical specification for the facility, the license shall apply to the Commission for amendment of the technical specifications to conform the technical specification to the revised program. The licensee shall submit the application as specified in 10 CFR 50.4 at least 6 months before the start of the period during which the provisions become applicable, as determined by paragraph (f)(4) of this section."

TVA has identified updates to SQN's IST program that will conflict with certain TS provisions identified in SR 4.0.5.a, 4.0.5.b, 4.0.5.c, and 4.0.5.e. In order to comply with the above regulation, TVA is submitting the enclosed license amendment.

4.0 TECHNICAL ANALYSIS

The purpose of the IST program is to assess the operational readiness of pumps and valves, to detect degradation that might affect component operability, and to maintain safety margins with provisions for increased surveillance and corrective action. NRC regulation 10 CFR 50.55a defines the requirements for applying industry codes to each licensed nuclear power facility. Licensees are required by 10 CFR 50.55a(f)(4)(ii) to update their programs to utilize the latest edition and addenda incorporated into paragraph (b) of 10 CFR 50.55a on the date 12 months prior to the start of the each successive 10-year interval.

Section XI of the ASME Code has been revised on a continuing basis over the years to provide updated requirements for the

IST program. Until 1990, the ASME Code requirements for testing pumps and valves were contained in Section XI, Subsections IWP (pumps) and IWV (valves). In 1990, the ASME published the initial edition of the OM Code that provides the rules for inservice testing of pumps and valves. Since the establishment of the 1990 Edition of the OM Code, rules for testing pumps and valves is no longer updated in Section XI. In 1999, the ASME OM Code replaced Section XI as a reference in the 10 CFR 50.55a requirements. By final rule issued on September 22, 1999 (64 FR51370) 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. The need to update TSs to reflect these changes to the 10 CFR 50.55a is recognized as a TS correction by the Nuclear Industry Technical Specification Task Force in TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a."

As identified in SECY-99-017 dated January 13, 1999, the NRC has generally considered the evolution of the ASME Code over the years to be a net improvement in the measures for testing pumps and valves. This is based on the general improvements from increased test requirements.

In summary, TVA is revising SQN TS SR 4.0.5 to update the IST program references associated with ASME code. The current reference for inservice testing programs is the ASME OM Code. This update will provide consistency with the code requirements referenced in 10 CFR 50.55a(f)(4).

5.0 REGULATORY SAFETY ANALYSIS

Tennessee Valley Authority (TVA) is proposing a change to SQN Technical Specification (TS) Surveillance Requirement(SR) 4.0.5 to replace the reference to ASME Boiler and Pressure Vessel Code, Section XI, with ASME Operation and Maintenance (OM) Code. The proposed change to the TSs will provide consistency with SQN's updated third 10-Year IST program as required by 10 CFR 50.55a(f). TVA's proposed change is recognized by the Nuclear Industry Technical Specification Task Force in TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a."

5.1 No Significant Hazards Consideration

TVA has evaluated whether or not a significant hazards consideration is involved with the proposed amendments 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 or consequences of an accident previously evaluated?

   Response: No.

   TVA's proposed change revises TS Surveillance Requirement (SR) 4.0.5 for SQN Units 1 and 2 to conform to the requirements of 10 CFR 50.55a(f) regarding inservice testing of pumps and valves for the third 10-Year interval. The current TSs reference the ASME Boiler and Pressure Vessel Code, Section XI, as the requirements for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. The proposed changes would replace current reference to Section XI of the Boiler and Pressure Vessel Code to the ASME OM Code, which is consistent with 10 CFR 50.55a(f) and accepted for use by the Nuclear Regulatory Commission (NRC). The proposed change incorporates updates to ASME code requirements that result in a net improvement in the measures for testing pumps and valves.

   The proposed change does not involve any hardware changes, nor does it affect the probability of any event initiators. There will be no change to normal plant operating parameters, engineered safety feature actuation setpoints, accident mitigation capabilities, or accident analysis assumptions or inputs.

   Therefore, the proposed 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 change incorporates ASME code requirements that result in a net improvement for testing pumps and valves. The proposed change does not involve a modification to the physical configuration of the plant (i.e., no new equipment will be installed) or change in the methods governing normal plant operation. The proposed change will not impose any new or different requirements or introduce a new accident initiator, accident precursor, or malfunction mechanism. Additionally, there is no change in

the types or increases in the amounts of any effluent that may be released off-site and there is no increase in individual or cumulative occupational exposure.

Equipment important to safety will continue to operate as designed. The changes do not result in any event previously deemed incredible being made credible. The changes do not result in adverse conditions or result in any increase in the challenges to safety systems.

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 change incorporates revisions to the ASME Code that result in a net improvement in the measures of testing. The safety function of the affected components will be maintained.

There are no new or significant changes to the initial conditions contributing to accident severity or consequences. The proposed amendment will not otherwise affect the plant protective boundaries, will not cause a release of fission products to the public, nor will it degrade the performance of any other structures, systems or components (SSCs) important to safety.

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

Based on the above, TVA concludes that the proposed amendment(s) 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

10 CFR 50.55a defines the requirements for applying industry codes to each licensed nuclear power facility. Licensees are required by 10 CFR 50.55a(f)(4)(i) to initially prepare programs to perform inservice testing of certain ASME Code Class 1, 2, and 3 pumps and valves during the initial 120-month interval. The regulations

require that programs be developed utilizing the latest edition and addenda incorporated into paragraph (b) of 10 CFR 50.55a on the date 12 months before the date of issuance of the operating license. 10 CFR 50.55a(f)(4)(ii) requires that IST conducted during successive 120-month intervals comply with the latest edition and addenda of the Code incorporated by reference in paragraph (b) of this section 12 months before the start of the 120-month interval. 10 CFR 50.55a(f)(5)(i) states; the IST program for a boiling or pressurized water-cooled nuclear power facility must be revised by the licensee as necessary to meet the requirements of paragraph (f)(4) of this section. 10 CFR 50.55a(f)(5)(ii) states; if a revised IST program for a facility conflicts with the TS for the facility, the licensee shall apply to the Commission for amendment of the TSs to conform the TSs to the revised program. The licensee shall submit this application as specified in 10 CFR 50.4 at least six months before the start of the period during which the provisions become applicable as determined by paragraph (f)(4) of this section.

TVA is in the process of updating SQN's IST program for the third 10-year interval, scheduled to begin June 1, 2006. TVA has identified updates to SQN's IST program that will conflict with certain TS provisions identified in TS SR 4.0.5.a, 4.0.5.b, 4.0.5.c, and 4.0.5.e. In order to comply with the regulations, TVA is submitting the enclosed license amendment.

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 CONSIDERATION

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 10 CFR 20, or would change an inspection or SR. 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 50.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the proposed amendment.

7.0 REFERENCES

1. 10 CFR 50.55a(f), "Inservice testing requirements."
2. American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants, 2001 Edition through 2003 Addenda.
3. Technical Specification Task Force TSTF 479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a."

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2

Proposed Technical Specification Changes (mark-up)

I. AFFECTED PAGE LIST

Unit 1

3/4 0-3

Unit 2

3/4 0-3

II. MARKED PAGES

See attached.

4.0.5 (Continued)

a. Provisions that inservice testing of ASME Code Class 1, 2 and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a;

b. The provisions of SR 4.0.2 are applicable to the frequencies for performing inservice inspection activities;

c. Inspection of each reactor coolant pump flywheel per the recommendation of Regulation Position c.4.b of Regulatory Guide 1.14, Revision 1, August 1975 or in lieu of Position c.4.b(1) and c.4.b(2), a qualified in-place ultrasonic examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (magnetic particle and/or liquid penetrant) of exposed surfaces of the removed flywheels may be conducted at 20-year intervals (the provisions of SR 4.0.2 are not applicable); and

d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirement of any TS.

Inservice Testing Program — the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code)

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

a. Provisions that inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with ~~Section XI of the ASME Boiler and Pressure Vessel Code~~ and applicable Addenda as required by 10 CFR 50.55a;

b. Testing Frequencies ~~specified in Section XI of the ASME Boiler and Pressure Vessel Code~~ and applicable Addenda as follows: — applicable to the ASME OM Code

OM

~~ASME Boiler and Pressure Vessel~~ 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

and other normal and accelerated frequencies specified in the Inservice Testing Program

c. The provisions of SR 4.0.2 are applicable to the above required Frequencies for performing inservice testing activities;

d. The provisions of SR 4.0.3 are applicable to inservice testing and activities; and

e. Nothing in the ASME ~~Boiler and Pressure Vessel~~ Code shall be construed to supersede the requirements of any TS.

OM

4.0.5 (Continued)

a. Provisions that inservice testing of ASME Code Class 1, 2 and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a;

b. The provisions of SR 4.0.2 are applicable to the frequencies for performing inservice inspection activities;

c. Inspection of each reactor coolant pump flywheel per the recommendation of Regulation Position c.4.b of Regulatory Guide 1.14, Revision 1, August 1975 or in lieu of Position c.4.b(1) and c.4.b(2), a qualified in-place ultrasonic examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (magnetic particle and/or liquid penetrant) of exposed surfaces of the removed flywheels may be conducted at 20-year intervals (the provisions of SR 4.0.2 are not applicable); and

d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirement of any TS.

the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code)

Inservice Testing Program

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

a. Provisions that inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with ~~Section XI of the ASME Boiler and Pressure Vessel Code~~ and applicable Addenda as required by 10 CFR 50.55a;

b. Testing frequencies ~~specified in section XI of the ASME Boiler and Pressure Vessel Code~~ and applicable Addenda ~~as follows~~:

applicable to the ASME OM Code

OM ASME ~~Boiler and Pressure Vessel~~ 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
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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

and other normal and accelerated frequencies specified in the Inservice Test Program

c. The provisions of SR 4.0.2 are applicable to the above required Frequencies for performing inservice testing activities;

d. The provisions of SR 4.0.3 are applicable to inservice testing and activities; and

e. Nothing in the ASME ~~Boiler and Pressure Vessel~~ Code shall be construed to supersede the requirements of any TS.

OM

ENCLOSURE 3

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2

Changes to Technical Specifications Bases Pages

I. AFFECTED PAGE LIST

Unit 1

B3/4 0-5
B3/4 0-6
B3/4 4-2
B3/4 4-4p
B3/4 4-4q

Unit 2

B3/4 0-5
B3/4 0-6
B3/4 4-2
B3/4 4-4n
B3/4 4-4o

II. MARKED PAGES

See attached.

4.0.4 SR 4.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

A provision is included to allow entry into a MODE or other specified condition in the Applicability when an LCO is not met due to Surveillance not being met in accordance with LCO 3.0.4.

However, in certain circumstances, failing to meet an SR will not result in SR 4.0.4 restricting a MODE change or other specified condition change. When a system, subsystem, division, component, device, or variable is inoperable or outside its specified limits, the associated SR(s) are not required to be performed, per SR 4.0.1, which states that surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 4.0.4 does not apply to the associated SR(s) since the requirement for the SR(s) to be performed is removed. Therefore, failing to perform the Surveillance(s) within the specified frequency does not result in an SR 4.0.4 restriction to changing MODES or other specified conditions of the Applicability. However, since the LCO is not met in this instance, LCO 3.0.4 will govern any restrictions that may (or may not) apply to MODE or other specified condition changes. SR 4.0.4 does not restrict changing MODES or other specified conditions of the Applicability when a Surveillance has not been performed within the specified frequency, provided the requirement to declare the LCO not met has been delayed in accordance with SR 4.0.3.

The provisions of SR 4.0.4 shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of SR 4.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in MODE or other specified condition in the Applicability associated with transitioning from MODE 1 to MODE 2, MODE 2 to MODE 3, MODE 3 to MODE 4, and MODE 4 to MODE 5.

4.0.5 This specification ensures that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class I, 2 and 3 pumps and valves will be performed in accordance with a periodically updated version of ~~Section XI of the~~ ASME ~~Boiler and Pressure Vessel~~ Code and Addenda as required by I0 CFR 50.55a.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by ~~Section XI~~ of the ASME ~~Boiler and Pressure Vessel~~ Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout these technical specifications and to remove any ambiguties relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME ~~Boiler and Pressure Vessel~~ Code and applicable Addenda. For example, the requirements of Specification 4.0.4 to perform surveillance activities prior to entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ASME ~~Boiler~~

4.0.5 (Continued)

~~and Pressure Vessel~~ Code provision which allows pumps to be tested up to one week after return to normal operation. ~~And for example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified function is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.~~

safety valves are OPERABLE, an operating RHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization.

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2735 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from a complete loss of load assuming no reactor trip until the first Reactor Protective System trip set point is reached (i.e., no credit is taken for a direct reactor trip on the loss of load) and also assuming no operation of the power operated relief valves or steam dump valves.

OM

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of ~~Section XI of the~~ ASME ~~Boiler and Pressure~~ Code.

The power operated relief valves (PORVs) and steam bubble function to relieve RCS pressure during all design transients up to and including the design step load decrease with steam dump. Operation of the PORVs minimizes the undesirable opening of the spring-loaded pressurizer code safety valves. Each PORV has a remotely operated block valve to provide positive shutoff capability should a relief valve become inoperable. The PORVs also function to remove non-condensibles or steam from the pressurizer.

The OPERABILITY of the power-operated relief valves (PORVs) and block valves is determined on the basis of their being capable of performing the following functions:

a. Manual control of PORVs to control reactor coolant system pressure. This is a function that is used for a steam generator tube rupture accident.

b. Maintaining the integrity of the reactor coolant pressure boundary. This is a function that is related to controlling identified leakage and ensuring the ability to detect unidentified reactor coolant pressure boundary leakage.

c. Manual control of the block valve to: (1) unblock an isolated PORV to allow it to be used for manual control of reactor coolant system pressure (Item A), and (2) isolate a PORV with excessive seat leakage (Item B).

d. Manual control of a block valve to isolate a stuck-open PORV.

Surveillance requirements (SR) provide assurance that the PORVs and block valves can perform their functions. The block valves are exempt from the SR

Action c:

Action c requires an evaluation of affected systems if a PIV is inoperable. The leakage may have affected system operability or isolation of a leaking flow path with an alternate valve may have degraded the ability of the interconnected system to perform its safety function.

SURVEILLANCE REQUIREMENTS

Surveillance 4.4.6.3

Performance of leakage testing on each RCS PIV or isolation valve used to satisfy Action a is required to verify that leakage is below the specified limit and to identify each leaking valve. The leakage limit of 0.5 gpm per inch of nominal valve diameter up to 5 gpm maximum applies to each valve. Leakage testing requires a stable pressure condition.

For the two PIVs in series, the leakage requirement applies to each valve individually and not to the combined leakage across both valves. If the PIVs are not individually leakage tested, one valve may have failed completely and not be detected if the other valve in series meets the leakage requirement. In this situation, the protection provided by redundant valves would be lost.

Testing is to be performed every 18 months, a typical refueling cycle, if the plant does not go into MODE 5 for at least 7 days. The 18 month frequency is consistent with 10 CFR 50.55a(g) (Ref. 7) as contained in the Inservice Testing Program, is within frequency allowed by the American Society of Mechanical Engineers (ASME) Code, ~~Section XI~~ (Ref. 6), and is based on the need to perform such surveillances under the conditions that apply during an outage and the potential for an unplanned transient if the surveillances were performed with the reactor at power.

OM

In addition, testing must be performed once after the valve has been opened by flow or exercised to ensure tight reseating. PIVs disturbed in the performance of this surveillance should also be tested unless documentation shows that an infinite testing loop cannot practically be avoided. Testing must be performed within 24 hours after the valve has been reseated. Within 24 hours is a reasonable and practical time limit for performing this test after opening or reseating a valve.

The leakage limit is to be met at the RCS pressure associated with MODES 1 and 2. This permits leakage testing at high differential pressures with stable conditions not possible in the MODES with lower pressures.

Entry into MODES 3 and 4 is allowed to establish the necessary differential pressures and stable conditions to allow for performance of this surveillance. The note that allows this provision is complementary to the frequency of prior to entry into MODE 2 whenever the unit has been in MODE 5 for 7 days or more, if leakage testing has not been performed in the previous 9 months. In addition, this surveillance is not required to be performed on the RHR System when the RHR System is aligned to the RCS in the shutdown cooling mode of operation. PIVs contained in the RHR shutdown cooling flow path must be leakage rate tested after RHR is secured and stable unit conditions and the necessary differential pressures are established.

REFERENCES

1. 10 CFR 50.2.

2. 10 CFR 50.55a(c).

3. 10 CFR 50, Appendix A, Section V, GDC 55.

4. WASH-1400 (NUREG-75/014), Appendix V, October 1975.

5. NUREG-0677, May 1980.

6. ASME~~, Boiler and Pressure Vessel~~ Code~~, Section XI~~.~~

7. 10 CFR 50.55a(g).

Operation and Maintenance (OM)

4.0.3 (Continued)

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specification limits and the entry into the ACTION requirements for the applicable Limiting Conditions for Operation begins immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the entry into the ACTION requirements or the applicable Limiting Conditions for Operation begins immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Allowed Outage Time of the ACTIONS, restores compliance with Specification 4.0.1.

4.0.4 SR 4.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

A provision is included to allow entry into a MODE or other specified condition in the Applicability when an LCO is not met due to Surveillance not being met in accordance with LCO 3.0.4.

However, in certain circumstances, failing to meet an SR will not result in SR 4.0.4 restricting a MODE change or other specified condition change. When a system, subsystem, division, component, device, or variable is inoperable or outside its specified limits, the associated SR(s) are not required to be performed, per SR 4.0.1, which states that surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 4.0.4 does not apply to the associated SR(s) since the requirement for the SR(s) to be performed is removed. Therefore, failing to perform the Surveillance(s) within the specified frequency does not result in an SR 4.0.4 restriction to changing MODES or other specified conditions of the Applicability. However, since the LCO is not met in this instance, LCO 3.0.4 will govern any restrictions that may (or may not) apply to MODE or other specified condition changes. SR 4.0.4 does not restrict changing MODES or other specified conditions of the Applicability when a Surveillance has not been performed within the specified frequency, provided the requirement to declare the LCO not met has been delayed in accordance with SR 4.0.3.

The provisions of SR 4.0.4 shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of SR 4.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in MODE or other specified condition in the Applicability associated with transitioning from MODE 1 to MODE 2, MODE 2 to MODE 3, MODE 3 to MODE 4, and MODE 4 to MODE 5.

4.0.5 This specification ensures that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves will be performed in accordance with a periodically updated version of ~~Section XI of the~~ ASME ~~Boiler and Pressure Vessel~~ Code and Addenda as required by 10 CFR 50.55a.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by ~~Section XI of~~ the ASME ~~Boiler and Pressure Vessel~~ Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

4.0.5 (Continued)

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME ~~Boiler and Pressure Vessel~~ Code and applicable Addenda. For example, the requirements of Specification 4.0.4 to perform surveillance activities prior to entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ASME ~~Boiler and Pressure Vessel~~ Code provision which allows pumps to be tested up to one week after return to normal operation. ~~And for example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified function is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.~~

3/4.4.2 DELETED

3/4.4.3 SAFETY AND RELIEF VALVES - OPERATING

The pressurizer code safety valves operate to prevent the RCS from being pressurized above its Safety Limit of 2735 psig. Each safety valve is designed to relieve 420,000 lbs per hour of saturated steam at the valve set point. The relief capacity of a single safety valve is adequate to relieve any over-pressure condition which could occur during shutdown. In the event that no safety valves are OPERABLE, an operating RHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization.

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2735 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from a complete loss of load assuming no reactor trip until the first Reactor Protective System trip set point is reached (i.e., no credit is taken for a direct reactor trip on the loss of load) and also assuming no operation of the power operated relief valves or steam dump valves.

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of ~~Section XI of the~~ ASME ~~Boiler and Pressure~~ Code. OM

The power operated relief valves (PORVs) and steam bubble function to relieve RCS pressure during all design transients up to and including the design step load decrease with steam dump. Operation of the PORVs minimizes the undesirable opening of the spring-loaded pressurizer code safety valves. Each PORV has a remotely operated block valve to provide positive shutoff capability should a relief valve become inoperable. The PORVs also function to remove non-condensibles or steam from the pressurizer.

The OPERABILITY of the power-operated relief valves (PORVs) and block valves is determined on the basis of their being capable of performing the following functions:

a. Manual control of PORVs to control reactor coolant system pressure. This is a function that is used for a steam generator tube rupture accident.

b. Maintaining the integrity of the reactor coolant pressure boundary. This is a function that is related to controlling identified leakage and ensuring the ability to detect unidentified reactor coolant pressure boundary leakage.

c. Manual control of the block valve to: (1) unblock an isolated PORV to allow it to be used for manual control of reactor coolant system pressure (Item A), and (2) isolate a PORV with excessive seat leakage (Item B).

Action c:

Action c requires an evaluation of affected systems if a PIV is inoperable. The leakage may have affected system operability or isolation of a leaking flow path with an alternate valve may have degraded the ability of the interconnected system to perform its safety function.

SURVEILLANCE REQUIREMENTS

Surveillance 4.4.6.3

Performance of leakage testing on each RCS PIV or isolation valve used to satisfy Action a is required to verify that leakage is below the specified limit and to identify each leaking valve. The leakage limit of 0.5 gpm per inch of nominal valve diameter up to 5 gpm maximum applies to each valve. Leakage testing requires a stable pressure condition.

For the two PIVs in series, the leakage requirement applies to each valve individually and not to the combined leakage across both valves. If the PIVs are not individually leakage tested, one valve may have failed completely and not be detected if the other valve in series meets the leakage requirement. In this situation, the protection provided by redundant valves would be lost.

Testing is to be performed every 18 months, a typical refueling cycle, if the plant does not go into MODE 5 for at least 7 days. The 18 month frequency is consistent with 10 CFR 50.55a(g) (Ref. 7) as contained in the Inservice Testing Program, is within frequency allowed by the American Society of Mechanical Engineers (ASME) Code, ~~Section XI~~ (Ref. 6), and is based on the need to perform such surveillances under the conditions that apply during an outage and the potential for an unplanned transient if the surveillances were performed with the reactor at power.

OM

In addition, testing must be performed once after the valve has been opened by flow or exercised to ensure tight reseating. PIVs disturbed in the performance of this surveillance should also be tested unless documentation shows that an infinite testing loop cannot practically be avoided. Testing must be performed within 24 hours after the valve has been reseated. Within 24 hours is a reasonable and practical time limit for performing this test after opening or reseating a valve.

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REFERENCES

1. 10 CFR 50.2.

2. 10 CFR 50.55a(c).

3. 10 CFR 50, Appendix A, Section V, GDC 55.

4. WASH-1400 (NUREG-75/014), Appendix V, October 1975.

5. NUREG-0677, May 1980.

6. ASME, ~~Boiler and Pressure Vessel~~ Code~~, Section XI~~. Operation and Maintenance (OM)

7. 10 CFR 50.55a(g).