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RBG-46925

June 29, 2009

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

SUBJECT: License Amendment Request
Technical Specification Change to Revise ASME Code Reference For Inservice Test Requirements
River Bend Station
Docket No. 50-458
License No. NPF-47

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Entergy Operations, Inc. (Entergy) hereby requests the following amendment for River Bend Station. Currently, Technical Specification (TS) 5.5.6, Inservice Testing Program, contains 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 (IST) of ASME Code Class 1, 2, and 3 pumps and valves. The proposed changes delete the references to Section XI of the Code and incorporate references to the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code). This request is consistent with changes identified in the Improved Standard Technical Specifications (ISTS) by Technical Specification Task Force Traveler (TSTF) No. 479 and 497.

The proposed changes to the referenced ASME Code are consistent with the implementation of the RBS third 10-year interval IST program in accordance with the requirements of 10 CFR 50.55a(f). The third 10-year interval began December 2, 2007.

The proposed change has been evaluated in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c) and it has been determined that the changes involve no significant hazards consideration. The bases for these determinations are included in the attached submittal.

An evaluation of the proposed change is provided in Attachment 1 and a markup of the affected TS pages are contained in Attachment 2 of this submittal. Markups of the affected TS BASES pages are contained in Attachment 3.

The proposed change does not include any new commitments.

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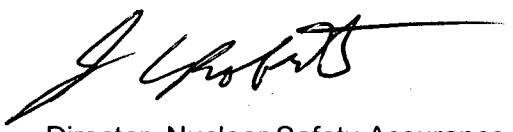
Entergy requests approval of the proposed amendment as soon as practical. Once approved, the amendment shall be implemented within 90 days. Although this request is neither exigent nor emergency, your prompt review is requested.

If you have any questions or require additional information, please contact David Lorfing at 225-381-4157.

I declare under penalty of perjury that the foregoing is true and correct. Executed on June 29, 2009.

Sincerely,



Director, Nuclear Safety Assurance
River Bend Station - Unit 1

JCR/DNL/bmb

Attachments:
1. Analysis of Proposed Technical Specification Change
2. Proposed Technical Specification Changes (mark-up)
3. Proposed Technical Specification BASES Changes (mark-up, for information only)

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Attachment 1

RBG- 46925

Analysis of Proposed Technical Specification Change

1.0 DESCRIPTION

This letter is a request to amend Operating License NPF-47 for River Bend Station (RBS).

Currently, Technical Specification (TS) 5.5.6, Inservice Testing Program (IST), contains references to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI. Entergy proposes to revise these references. This request is consistent with changes identified in the Improved Standard Technical Specifications (ISTS) by Technical Specification Task Force Traveler (TSTF) No. 479 and 497.

2.0 PROPOSED CHANGE

The proposed change will revise the references to ASME Section XI to incorporate references to the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) in TS Section 5.5.6. This change is administrative in nature. These changes are consistent with 10 CFR 50.55a(f) and TSTF-479 and TSTF-497.

In addition to the change to the references in TS 5.5.6, a revision to item b is included. River Bend TS 5.5.6, item b, currently allows the provisions of SR 3.0.2 concerning surveillance frequencies. This submittal adds the statement; "and other normal and accelerated frequencies specified as 2 years or less" to item b. This is an administrative revision consistent with TSTF-479 and 497. The revised item b now reads as follows:

> The provisions of SR 3.0.2 are applicable to the above required frequencies and other normal and accelerated frequencies specified as 2 years or less in the Inservice Testing Program for performing inservice testing activities;

Markups of the affected TS pages are included in Attachment 2.

Various sections of the TS Bases are also revised for consistency with the requirements of 10 CFR 50.55a(f)(4). Markups of the affected TS BASES pages are included in Attachment 3.

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 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 IST 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), TS 5.5.6 must be revised.

4.0 TECHNICAL ANALYSIS

The purposes of the Inservice Testing Programs are 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 powered facility. Licensees are required by 10 CFR 50.55a(f)(4)(i) to

initially prepare programs to perform inservice testing of certain ASME Section III, 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 prior to the date of issuance of the operating license subject to the limitations and modification identified in paragraph (b).

NRC regulations also require that the Inservice Testing Programs be revised during successive 120-month intervals to comply with the latest edition and addenda of the Code incorporated by reference in paragraph (b) 12 months prior to the start of the interval.

Section XI of the ASME Codes has been revised on a continuing basis over the years to provide updated requirements for the inservice inspection and inservice testing of components. Until 1990, the ASME Code requirements addressing the IST of 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 the inservice testing of pumps and valves. Since the establishment of the 1990 Edition of the OM Code, the rules for the inservice testing of pumps are no longer being updated in Section XI. As identified in NRC SECY-99-017 dated January 13, 1999, the NRC has generally considered the evolution of the ASME Code to result in a net improvement in the measures for inspecting piping and components and testing pumps and valves.

The ASME OM Code will replace Section XI rules for IST of pumps and valves that had been incorporated by reference. The ASME Section XI rules for IST of pumps and valves have been deleted.

Section 50.55a(f) "Inservice Testing Requirements," requires, in part, that ASME Class 1, 2, and 3 components must meet the requirements of the ASME OM Code. The ASME publishes a new edition of the ASME OM Code every 3 years, and a new addendum every year. The RBS third 10-year interval IST program was updated to comply with the 2001 Edition Addenda through 2003 of the ASME OM Code as required by 10 CFR 50.55a(f)(4)(ii). As a consequence, the TS 5.5.6 references to Section XI of the ASME Code for IST requirements results in references to a deleted portion of the ASME Code. The TS changes do not eliminate any IST and do not affect Entergy's responsibility to seek relief from Code test requirements when they are impractical. The changes will eliminate the ASME Code inconsistency between the IST program and the TS as required by 10 CFR 50.55a(f)(5)(ii).

The changes to items TS 5.5.6.b will allow the provisions of SR 3.0.2 to be applied to "other normal and accelerated frequencies" and also limit use to frequencies "specified as 2 years or less in the Inservice Testing Program." The changes are described as follows:

> For the first change, River Bend currently has the allowance to apply SR 3.0.2 to the specified ASME frequencies. This will include other frequencies associated in this program. This change is consistent with TSTF-479.
>
> For the second portion of the change to TS 5.5.6.b, this revision will limit these allowances to frequencies of 2 years or less as identified in TSTF-497.

5.0 REGULATORY ANALYSIS

5.1 Applicable Regulatory Requirements/Criteria

TS 5.5.6, Inservice Testing Program, establish the surveillance requirements for IST of ASME Class 1, 2, and 3 components for RBS. This TS currently references to ASME Section XI, as the source of these requirements.

The regulations in 10 CFR 50.55a(f)(4) establish the effective Code edition and addenda to be used by licensees for performing IST of pumps and valves. The regulations in 10 CFR 50.55a(f)(4)(ii) 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).

Pursuant to 10 CFR 50.55a(f)(4)(ii), Entergy submitted the third 10-year interval IST program for RBS to meet the requirements of the 2001 Edition and Addenda through 2003 of the ASME OM Code, to the NRC in a letter dated November 30, 2007 (Reference 2). The IST program for the third 10-year interval was updated to comply with the appropriate revisions of the ASME OM Code and addenda. The 2001 Edition and Addenda through 2003 is the new Code of Record for performing IST at RBS. As a consequence, the TS 5.5.6 reference to Section XI of the ASME Code results in a reference to a deleted portion of the Code.

According to 10 CFR 50.55a(f)(5)(ii), if a revised IST program for a facility conflicts with the TS for the facility, the licensee is required to apply to the NRC for amendment to the TS to conform the TS to the revised program.

Since TS 5.5.6 reference ASME Code, Section XI for the IST requirements for pumps and valves, the TS for RBS require revision to change the IST Code reference from ASME Code, Section XI to the ASME OM Code.

Additional administrative changes are made to TS 5.5.6 item b, for consistency with TSTF-479 and 497.

In conclusion, Entergy has determined that the proposed change does not require any exemptions or relief from regulatory requirements, other than the TS, and does not affect conformance with any GDC differently than described in the Safety Analysis Report (SAR).

5.2 No Significant Hazards Consideration

A change is proposed to the River Bend Station Technical Specification (TS) 5.5.6, Inservice Testing. The proposed change will revise the reference to Section XI of the ASME Code to the ASME OM Code as the sources of the Inservice Testing (IST) requirements for pumps and valves.

Entergy 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 or consequences of an accident previously evaluated?

   Response: No.

   The proposed change revises the Technical Specification Inservice Testing Program for consistency with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves which are classified as American Society of Mechanical Engineers (ASME) Code Class 1, Class 2 and Class 3. The proposed change incorporates revisions to the ASME Code that result in a net improvement in the measures for testing pumps and valves.

   The proposed changes revise TS 5.5.6 for RBS to conform to the requirements of 10 CFR 50.55a(f) regarding the IST of pumps and valves for the third 10-Year Interval. The current TS reference the ASME Boiler and Pressure Vessel Code, Section XI, requirements for the IST of ASME Code Class 1, 2, and 3 pumps and valves. The proposed changes would reference the ASME OM Code instead. This is consistent with 10 CFR 50.55a(f). The proposed changes are administrative in nature.

   The proposed change does not impact any accident initiators or analyzed events or assumed mitigation of accident or transient events. They do not involve the addition or removal of any equipment, or any design changes to the facility.

   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 revises the Technical Specification Inservice Testing Program for consistency with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves which are classified as American Society of Mechanical Engineers (ASME) Code Class 1, Class 2 and Class 3. The proposed change incorporates revisions to the ASME Code that result in a net improvement in the measures for testing pumps and valves.

   The proposed TS changes do not involve physical changes to the facility. In addition, the proposed changes have no affect on plant configuration, or method of operation of plant structures, systems, or components.

   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 revises the Technical Specification Inservice Testing Program for consistency with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves which are classified as American Society of Mechanical Engineers (ASME) Code Class 1, Class 2 and Class 3. The proposed change incorporates revisions to the ASME Code that result in a net improvement in the measures for testing pumps and valves.

The change does not involve a physical change to the plant or a change in the manner in which the plant is operated or controlled. The IST of the Class 1, 2, and 3 pumps and valves continue to meet the appropriate requirements.

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

Based on the above, Entergy concludes that the proposed amendment presents 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.

5.3 Environmental Considerations

The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 PRECEDENCE

The NRC has reviewed and approved similar requests for Turkey Point, Units 3 and 4 on July 22, 2004, and Susquehanna Steam Electric Station Units 1 and 2 on December 7, 2005.

7.0 REFERENCES

1. ASME Operation and Maintenance Code for Operation and Maintenance of Nuclear Power Plants, 2001 Edition through Addenda 2003.

2. Letter CNRO-2007-00044 from Entergy to USNRC dated November 30, 2007, regarding Inservice Testing Plan

Attachment 2

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Proposed Technical Specification Changes
(mark-up)

5.5 Programs and Manuals

5.5.4 Radioactive Effluent Controls Program (continued)

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary:

1. for noble gases: ≤ 500 mrem/yr to the total body and ≤ 3000 mrem/yr to the skin, and

2. for iodine-131, for iodine-133, for tritium, and for all radionuclides in particulate form with half-lives > 8 days: ≤ 1500 mrem/yr to any organ;

h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from the unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from the unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

j. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the cyclic and transient occurrences identified on USAR Table 3.9B-22 to ensure that the reactor vessel is maintained within the design limits.

5.5.6 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. Testing frequencies ~~specified in Section XI of the ASME Boiler and Pressure Vessel Code~~ applicable to the ASME Code for Operations and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as follows:

(continued)

ASME ~~Boiler and Pressure Vessel~~ OM 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 and to other normal and accelerated frequencies specified as 2 years or less in the Inservice Testing Program 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~~ OM Code shall be construed to supersede the requirements of any TS.

5.5.7 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in Regulatory Guide 1.52, Revision 2.

a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < 0.05% when tested in accordance with Regulatory Guide 1.52, Revision 2, and ANSI N510-1989 at the system flowrate specified below ± 10%:

ESF Ventilation System	Flowrate
SGTS	12,500 cfm
FBVS	10,000 cfm
CRFAS	4,000 cfm

(continued)

Attachment 3

RBG-46925

Proposed Technical Specification BASES Changes
(mark-up, for information only)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.4.3 (continued)

a reasonable time to complete the SR. If performed by method 2), valve OPERABILITY has been demonstrated for all installed S/RVs based upon the successful operation of a test sample of S/RVs.

1. Manual actuation of the S/RV, with verification of the response of the turbine control valves or bypass valves, by a change in the measured steam flow, or any other method suitable to verify steam flow (e.g., tailpipe temperature or pressure). Adequate reactor steam pressure must be available to perform this test to avoid damaging the valve. Also, adequate reactor steam flow must be passing through the main turbine or turbine bypass valves to continue to control reactor pressure when the S/RVs divert steam flow upon opening. Sufficient time is therefore allowed after the required pressure and flow are achieved to perform this test. Adequate pressure at which this test is to be performed is consistent with the pressure recommended by the valve manufacturer.

2. The sample population of S/RVs tested each refueling outage to satisfy SR 3.4.4.1 will be stroked in the relief mode during "as-found" testing to verify proper operation of the S/RV. The successful performance of the test sample of S/RVs provides reasonable assurance that the remaining installed S/RVs will perform in a similar fashion. After the S/RVs are replaced, the relief-mode actuator of the newly installed S/RVs will be uncoupled from the S/RV, and cycled to ensure that no damage has occurred to the S/RV during transportation and installation. Following cycling, the relief-mode actuator is recoupled and the proper connection to the S/RV lever is independently verified.

This verifies that each replaced S/RV will properly perform its intended function.

If the valve fails to actuate due only to the failure of the solenoid, but is capable of opening on overpressure, ~~the safety function of the~~ S/RV is considered OPERABLE.

The STAGGERED TEST BASIS frequency ensures that each solenoid for each S/RV relief-mode actuator is alternately tested. The frequency of the required relief-mode actuator testing was developed based on the S/RV tests required by the ASME ~~Boiler and Pressure Vessel Code, Section XI (ref. 1)~~ as implemented by the Inservice Testing Program of OM CODE FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS (REF. 4)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.4.3 (continued)

Specification 5.5.6. The testing frequency required by the Inservice Testing Program is based on operating experience and valve performance. Therefore, the frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. ASME, Boiler and Pressure Vessel Code, Section III and XI.
2. USAR, Section 5.2.2.2.3.
3. USAR, Section 15.
4. ASME OM CODE FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS.

BASES

BACKGROUND (continued)

c. High Pressure Core Spray System; and

d. Reactor Core Isolation Cooling System

The PIVs are listed in Reference 6.

APPLICABLE SAFETY ANALYSES

Reference 5 evaluated various PIV configurations, leakage testing of the valves, and operational changes to determine the effect on the probability of intersystem LOCAs. This study concluded that periodic leakage testing of the PIVs can substantially reduce the probability of an intersystem LOCA.

PIV leakage is not considered in any Design Basis Accident analyses. This Specification provides for monitoring the condition of the RCPB to detect PIV degradation that has the potential to cause a LOCA outside of containment. RCS PIV leakage satisfies Criterion 2 of the NRC Policy Statement.

LCO

RCS PIV leakage is leakage into closed systems connected to the RCS. Isolation valve leakage is usually on the order of drops per minute. Leakage that increases significantly suggests that something is operationally wrong and corrective action must be taken. Violation of this LCO could result in continued degradation of a PIV, which could lead to overpressurization of a low pressure system and the loss of the integrity of a fission product barrier.

The LCO PIV leakage limit is 0.5 gpm per nominal inch of valve size with a maximum limit of 5 gpm.

Reference 4 permits leakage testing at a lower pressure differential than between the specified maximum RCS pressure and the normal pressure of the connected system during RCS operation (the maximum pressure differential). The observed rate may be adjusted to the maximum pressure differential by assuming leakage is directly proportional to the pressure differential to the one-half power.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.6.1 (continued)

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.

The Frequency required by the Inservice Testing Program is within the ASME Code, ~~Section XI,~~ Frequency requirement. OM Therefore, this SR is modified by a Note that states the leakage Surveillance is only required to be performed in MODES 1 and 2. Entry into MODE 3 is permitted for leakage testing at high differential pressures with stable conditions not possible in the lower MODES.

REFERENCES

1. 10 CFR 50.2.
2. 10 CFR 50.55a(c).
3. 10 CFR 50, Appendix A, GDC 55.
4. ASME, ~~Boiler and Pressure Vessel Code, Section XI, Subsection IWV~~ OM CODE FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS, SUBSECTION ISTC
5. NUREG-0677, "The Probability of Intersystem LOCA: Impact Due to Leak Testing and Operational Changes," May 1980.
6. Technical Requirements Manual.
7. ~~ASME, Boiler and Pressure Vessel Code, Section XI, IWV-3420.~~ DELETED
8. NEDC-31339, "BWR Owners Group Assessment of ECCS Pressurization in BWRs," ~~November~~ 1986.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.1.2 (continued)

This SR is modified by a Note that allows LPCI subsystems to be considered OPERABLE during alignment and operation for decay heat removal with reactor steam dome pressure less than the RHR cut in permissive pressure in MODE 3, if capable of being manually realigned (remote or local) to the LPCI mode and not otherwise inoperable. This allows operation in the RHR shutdown cooling mode during MODE 3 if necessary.

SR 3.5.1.3

Verification every 31 days that ADS air accumulator supply pressure is ≥ 131 psig assures adequate air pressure for reliable ADS operation. The accumulator on each ADS valve provides pneumatic pressure for valve actuation. The designed pneumatic supply pressure requirements for the accumulator are such that, following a failure of the pneumatic supply to the accumulator, at least two valve actuations can occur with the drywell at 70% of design pressure (Ref. 13). The ECCS safety analysis assumes only one actuation to achieve the depressurization required for operation of the low pressure ECCS. This minimum required pressure of 131 psig is provided by the nonsafety related air supply system (SVV) with safety related backup from the penetration valve leakage control system (LSV), post LOCA, at a system design pressure of 120 psig. The 31 day Frequency takes into consideration administrative control over operation of the SVV and LSV Systems and alarms for low air pressure.

SR 3.5.1.4

The performance requirements of the 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,~~ OM requirements for the ECCS pumps) to verify that the ECCS pumps will develop the flow rates required by the respective analyses. The ECCS pump flow rates ensure that adequate core cooling is provided to satisfy the acceptance criteria of 10 CFR 50.46 (Ref. 10).

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.1.7 (continued)

OPERABILITY has been demonstrated for all installed ADS valves based upon the successful operation of a test sample of S/RVs.

1. Manual actuation of the ADS valve, with verification of the response of the turbine control valves or bypass valves, by a change in the measured steam flow, or any other method suitable to verify steam flow (e.g., tailpipe temperature or pressure). Adequate reactor steam pressure must be available to perform this test to avoid damaging the valve. Also, adequate reactor steam flow must be passing through the main turbine or turbine bypass valves to continue to control reactor pressure when the ADS valves divert steam flow upon opening. Sufficient time is therefore allowed after the required pressure and flow are achieved to perform this test. Adequate pressure at which this test is to be performed is consistent with the pressure recommended by the valve manufacturer.

2. The sample population of S/RVs tested each refueling outage to satisfy SR 3.4.4.1 will be stroked in the relief mode during "as-found" testing to verify proper operation of the S/RV. The successful performance of the test sample of S/RVs provides reasonable assurance that all ADS valves will perform in a similar fashion. After the S/RVs are replaced, the relief-mode actuator of the newly installed S/RVs will be uncoupled from the S/RV, and cycled to ensure that no damage has occurred to the S/RV during transportation and installation. Following cycling, the relief-mode actuator is recoupled and the proper connection to the S/RV lever is independently verified. This verifies that each replaced S/RV will properly perform its intended function.

SR 3.5.1.6 and the LOGIC SYSTEM FUNCTIONAL TEST performed in LCO 3.3.5.1 overlap this Surveillance to provide complete testing of the assumed safety function.

The STAGGERED TEST BASIS frequency ensures that both solenoids for each ADS valve relief-mode actuator are alternately tested. The frequency of the required relief-mode actuator testing was developed based on the tests required by ASME OM ~~, Part 1,~~ (ref. 16) as

code

(continued)

BASES

REFERENCES

1. USAR, Section 6.3.2.2.3.
2. USAR, Section 6.3.2.2.4.
3. USAR, Section 6.3.2.2.1.
4. USAR, Section 6.3.2.2.2.
5. USAR, Section 15.2.8.
6. USAR, Section 15.6.4.
7. USAR, Section 15.6.5.
8. 10 CFR 50, Appendix K.
9. USAR, Section 6.3.3.
10. 10 CFR 50.46.
11. USAR, Section 6.3.3.3.
12. Memorandum from R.L. Baer (NRC) to V. Stello, Jr. (NRC), "Recommended Interim Revisions to LCO's for ECCS Components," December 1, 1975.
13. USAR, Section 5.2.2.4.1.
14. NEDO-32291-A, "System Analyses for Elimination of Selected Response Time Testing Requirements," January 1994.
15. RBS Technical Requirements Manual.
16. ASME/~~ANSI OM-1987~~, "Operation and Maintenance of Nuclear Power Plants, ~~Part 1.~~"

OM CODE

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.6.1 (continued)

frequency of the required relief-mode actuator testing was developed based on the tests required by ASME OM, ~~Part 1~~, (ref. 3) as implemented by the Inservice Testing Program of ~~Specification~~ 5.5.6. ~~The testing~~ frequency required by the Inservice Testing Program is based on operating experience and valve performance. Therefore, the frequency was concluded to be acceptable from a ~~reliability standpoint.~~

SR 3.6.1.6.2

The LLS designed S/RVs are required to actuate automatically upon receipt of specific initiation signals. A system functional test is performed to verify that the mechanical portions (i.e., solenoids) of the automatic LLS function operate as designed when initiated ~~either by an actual or~~ simulated automatic initiation signal. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.6.4.4 overlaps this SR to provide complete testing of the safety function.

The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance ~~were performed~~ with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

This SR is modified by a Note that excludes valve actuation. This prevents a reactor pressure vessel pressure ~~blowdown~~.

REFERENCES

1. GESSAR-II, Appendix 3B, Attachment A, Section 3BA.8.

2. USAR, Section 5.2.2.

3. ASME/~~ANSI OM 1987~~, Operation and Maintenance of Nuclear Power Plants, ~~Part 1.~~

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.2.3.2

Verifying each RHR pump develops a flow rate ≥ 5050 gpm, with flow through the associated heat exchanger to the suppression pool ensures that pump performance has not degraded ~~during the cycle~~. ~~Flow is a~~ normal test of centrifugal pump performance required by ASME ~~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.

OM CODE

REFERENCES

1. USAR, Section 6.2.
2. ASME, ~~Boiler and Pressure Vessel Code, Section XI.~~ OM CODE FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS