



Nebraska Public Power District

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50.90

NLS2006013
March 7, 2006

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

Subject: License Amendment Request to Update the American Society of Mechanical Engineers Code Referenced in TS Section 5.5.6, Inservice Testing Program Cooper Nuclear Station, Docket No. 50-298, DPR-46

The purpose of this letter is for the Nebraska Public Power District (NPPD) to request an amendment to Facility Operating License DPR-46 in accordance with the provisions of 10 CFR 50.4 and 10 CFR 50.90 to revise the Cooper Nuclear Station (CNS) Technical Specifications (TS). The proposed license amendment would revise TS Section 5.5.6, "Inservice Testing Program," by changing the reference from "Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code" to "ASME Code for Operation and Maintenance of Nuclear Power Plants," or "OM Code." Based on current 10 CFR 50.55a, paragraphs (b) and (f)(4), the ASME OM Code has replaced Section XI of the ASME Boiler and Pressure Vessel Code as the code of reference for Inservice Testing (IST) Programs.

This license amendment request is based on the changes reflected in Technical Specification Task Force (TSTF) traveler TSTF-479-A, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a." This TSTF has been approved by the Nuclear Regulatory Commission (NRC), and the TS changes incorporated into Revision 3.1 of NUREG-1433, "Standard Technical Specifications for BWR4 Plants."

Attachment 1 provides a description of the TS changes, the basis for the amendment, the no significant hazards consideration evaluation pursuant to 10 CFR 50.91(a)(1), and the environmental impact evaluation pursuant to 10 CFR 51.22. Attachment 2 provides the proposed changes to the current CNS TS on marked up pages. Attachment 3 provides the proposed changes in final typed format. Attachment 4 provides conforming changes to the TS Bases for NRC information. There are no commitments in this submittal.

NPPD requests NRC approval of the proposed TS changes and issuance of the requested license amendment by June 1, 2006. The fourth ten-year IST interval for CNS started on March 1, 2006. The requested revision is needed for consistency of the TS with the revised IST Program. Since the revised IST program is based on the code referenced in 10 CFR 50.55a, this change to the TS is considered to be administrative. This has been discussed with the NRC Project Manager. The amendment will be implemented within 30 days following issuance.

A047

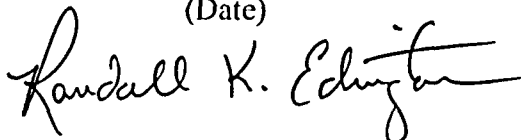
These proposed TS changes have been reviewed by the necessary safety review committees (Station Operations Review Committee and Safety Review and Audit Board). Amendments to the CNS Facility Operating License through Amendment 216, issued January 5, 2006, have been incorporated into this request. This request is submitted under oath or affirmation pursuant to 10 CFR 50.30(b).

By copy of this letter and its attachments, the appropriate State of Nebraska official is notified in accordance with 10 CFR 50.91(b)(1). Copies to the NRC Region IV office and the CNS Resident Inspector are also being provided in accordance with 10 CFR 50.4(b)(1).

Should you have any questions concerning this matter, please contact Paul Fleming, Licensing Manager, at (402) 825-2774.

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

Executed on 3/7/06
(Date)



Randall K. Edington
Vice President - Nuclear and
Chief Nuclear Officer

/rr

Attachments

cc: Regional Administrator w/attachments
USNRC - Region IV

Senior Project Manager w/attachments
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector w/attachments
USNRC - CNS

Nebraska Health and Human Services w/ attachments
Department of Regulation and Licensure

NPG Distribution w/o attachments

CNS Records w/attachments

NPPD Evaluation

**License Amendment Request to Update the American Society of Mechanical Engineers
Code Referenced in TS Section 5.5.6, Inservice Testing Program**

Cooper Nuclear Station, NRC Docket 50-298, DPR-46

Revised Technical Specification Pages

Page 5.0-10

- 1.0 Description
- 2.0 Proposed Changes
- 3.0 Background
- 4.0 Technical Analysis
- 5.0 Regulatory Safety Analysis
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 - 5.2 Applicable Regulatory Requirements Criteria
- 6.0 Environmental Consideration
- 7.0 References

1.0 Description

This letter is a request to amend Operating License DPR-46 for Cooper Nuclear Station (CNS).

The proposed changes would revise Technical Specification (TS) Section 5.5.6, "Inservice Testing Program," by replacing references to Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code with ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code). 10 CFR 50.55a requires that the Inservice Testing (IST) Program be updated to the latest Edition and Addenda of the code incorporated by reference in 10 CFR 50.55a(b) twelve months before the start of the 10-year interval. Section XI of the ASME Boiler and Pressure Vessel code has been replaced with the ASME OM Code as the code of reference for IST programs. Thus, the OM code is the code of reference for the IST Program for the next ten-year interval that began March 1, 2006.

In addition, the scope of Frequencies specified to be within the applicability of SR 3.0.2 is expanded by adding mention of other normal and accelerated Frequencies specified in the IST Program. This will eliminate any confusion regarding the applicability of SR 3.0.2 to IST Program Frequencies.

2.0 Proposed Changes

The following are the proposed revisions to TS Section 5.5.6, "Inservice Testing Program."

1. TS 5.5.6.a discusses the testing frequencies in the IST Program. The phrase "specified in Section XI of the ASME Boiler and Pressure Vessel Code" is replaced with "applicable to the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code)."

Also in TS 5.5.6.a, the term "Boiler and Pressure Vessel" in the heading of the table of Frequencies is replaced with "OM."

2. TS 5.5.6.b states that the provisions of SR 3.0.2 are applicable to the required Frequencies. The phrase "and other normal and accelerated Frequencies specified in the Inservice Testing Program" is added to TS 5.5.6.b.
3. In TS 5.5.6.d, "Boiler and Pressure Vessel" is replaced with "OM" as the referenced ASME code.

Conforming changes to the TS Bases will be required as part of amendment implementation. The changes are described below and the revised TS Bases are provided in Attachment 4 for information.

1. B 3.4.3, Safety Relief Valves (SRVs) and Safety Valves (SVs). Replace reference to ASME Section XI of the ASME Boiler and Pressure Vessel code with ASME code for Operation and Maintenance of Nuclear Power Plants.
2. B 3.5.1, Emergency Core Cooling Systems (ECCS) – Operating. Delete “Section XI” as modifier of ASME Code.
3. B 3.6.1.6, Low-Low Set (LLS) Valves. Replace reference to ASME Section XI of the ASME Boiler and Pressure Vessel code with ASME code for Operation and Maintenance of Nuclear Power Plants.
4. B 3.6.2.3, RHR Suppression Pool Cooling. Delete “Section XI” as modifier of ASME Code, and replace reference to ASME Section XI of the ASME Boiler and Pressure Vessel code with ASME code for Operation and Maintenance of Nuclear Power Plants.
5. B 3.8.1, AC Sources – Operating. Delete “Section XI” as modifier of ASME Code, and replace reference to ASME Section XI of the ASME Boiler and Pressure Vessel code with ASME code for Operation and Maintenance of Nuclear Power Plants.

3.0 Background

Currently TS Section 5.5.6 references Section XI of the ASME Boiler and Pressure Vessel Code as the code of reference for the CNS IST Program. That has been the appropriate code through the third 120-month interval of the IST Program.

10 CFR 50.55a(f)(4)(ii) requires that inservice testing conducted during successive 120-month intervals comply with the latest edition and addenda of the code incorporated by reference in 10 CFR 50.55a(b) twelve months before the start of the interval. As the next interval started March 1, 2006, the IST Program must comply with the requirements of the code incorporated by reference on March 1, 2005.

By final rule issued on September 22, 1999 (Reference 6) the NRC amended 10 CFR 50.55a(f)(4)(ii) to require that licensees update their IST program to the latest approved edition of the ASME OM Code incorporated by reference in 10 CFR 50.55a(b). The latest approved edition of the OM Code is the 2001 Edition, 2003 Addenda.

As a result the code referenced in TS Section 5.5.6 would conflict with the code on which the updated IST Program will be based. 10 CFR 50.55a(f)(5)(ii) states that if a revised IST program conflicts with the TS, the licensee shall apply to the Commission for amendment of the TS to conform the TS to the revised program. The requested TS revisions will make the code referenced in TS Section 5.5.6 consistent with the code on which the IST Program is based.

TSTF-479-A presented background information on this issue. The information presented in the Background section of the TSTF is applicable to CNS.

4.0 Technical Analysis

The current 10 CFR 50.55a reflects that the ASME OM Code has been incorporated by reference into 10 CFR 50.55a(b), with 10 CFR 50.55a(b)(3) referring to the 1995 Edition through the 2003 Addenda of the ASME OM Code. NPPD is revising the CNS IST Program for the fourth 120-month interval based on the requirements of the 2001 Edition, 2003 Addenda of the OM Code. The proposed changes to TS 5.5.6 are necessary for consistency with the revised IST Program.

The changes to TS Section 5.5.6 proposed in this amendment request have been incorporated into the comparable Section 5.5.7, "Inservice Testing Program," of NUREG-1433, Standard Technical Specifications for BWR4 Plants, Revision 3.1.

TSTF-479-A presented a Technical Analysis supporting the revisions to the IST Program section of NUREG-1433. The information presented in the Technical Analysis section of the TSTF is applicable to CNS.

Amendment numbers 228 and 204 to Susquehanna Steam Electric Station (SSES) Units 1 and 2, respectively, dated December 7, 2005, are considered suitable precedents for this requested license amendment. In these amendments, SSES TS 5.5.6, Inservice Testing Program, was revised by replacing reference to Section XI of the ASME Boiler and Pressure Vessel Code with reference to ASME Operation and Maintenance Code. (SSES did not propose all of the change reflected in TSTF-479-A). These SSES amendments are considered suitable precedents because both SSES and CNS must comply with 10 CFR 50.55a, and the IST program for both must be written to the requirements of the latest edition and addenda of the ASME OM code referenced in 10 CFR 50.55a(b). This proposed TS change involves no structure, system, or component (SSC) at SSES that might be different from a SSC at CNS.

5.0 Regulatory Safety Analysis

5.1 No Significant Hazards Consideration

10 CFR 50.91(a)(1) requires that licensee requests for operating license amendments be accompanied by an evaluation of no significant hazard posed by issuance of the amendment. Nebraska Public Power District (NPPD) has evaluated this proposed amendment with respect to the criteria given in 10 CFR 50.92 (c). The following is the evaluation required by 10 CFR 50.91(a)(1).

NPPD is requesting an amendment of the operating license for the Cooper Nuclear Station (CNS). The requested amendment revises the ASME code referenced in Technical Specification (TS) Section 5.5.6, "Inservice Testing Program," from Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, to the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code). The requested amendment

also proposes to revise a paragraph in TS Section 5.5.6 that discusses applicability of Surveillance Requirement SR 3.0.2, to state that other normal and accelerated Frequencies specified in the Inservice Testing (IST) Program are included in the SR 3.0.2 applicability.

TSTF-479-A, Rev. 0, contained an evaluation of no significant hazards consideration against the three criteria of 10 CFR 50.92(c). That evaluation is applicable to CNS. The following evaluation of the changes is based on the evaluation in the TSTF and supports a finding of “no significant hazards” for the proposed amendment.

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

Response: No

The proposed changes revise the CNS TS for the IST Program to be consistent with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves which are classified as ASME Code Class 1, Class 2, and Class 3. The proposed changes incorporate revisions to the ASME Code that result in a net improvement in the measures for testing pumps and valves.

The proposed changes do not impact any accident initiators, analyzed events, or assumed mitigation of accident or transient events. They do not involve addition or removal of any equipment, nor any design changes to the facility.

Based on the above, NPPD concludes that the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

Response: No

The proposed changes revise the CNS TS for the IST Program to be consistent with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves which are classified as ASME Code Class 1, Class 2, and Class 3. The proposed changes incorporate revisions to the ASME Code that result in a net improvement in the measures for testing pumps and valves.

The proposed changes do not involve a modification to the physical configuration of the plant (i.e., no new equipment will be installed) or a change in the methods governing normal plant operation. The proposed changes will not introduce a new accident initiator, accident precursor, or

malfunction mechanism. 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.

Based on the above NPPD concludes that these proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

3. Do the proposed changes involve a significant reduction in a margin of safety?

Response: No

The proposed changes revise the CNS TS for the IST Program to be consistent with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves which are classified as ASME Code Class 1, Class 2, and Class 3. The proposed changes incorporate revisions to the ASME Code that result in a net improvement in the measures for testing pumps and valves.

The safety function of the affected pumps and valves will be maintained. Based on the above, NPPD concludes that these proposed changes do not involve a significant reduction in a margin of safety.

Based on the responses to the above questions, NPPD 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.

5.2 Applicable Regulatory Requirements/Criteria

The following is based on the evaluation of applicable regulatory requirements and criteria addressed in TSTF-479-A, Rev. 0.

10 CFR 50.55a defines the requirements for applying industry codes to each licensed nuclear powered facility. 10 CFR 50.55a(f)(4)(i) requires licensees 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 these 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). 10 CFR 50.55a(f)(4)(ii) requires that inservice testing conducted during successive 120-month intervals must comply with requirements of the latest edition and addenda of the Code referenced in 10 CFR 50.55a(b) 12 months before the start of the 120-month interval.

These proposed TS changes will not reduce the leak-tightness of the containment.

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

10 CFR 51.22 provides criteria for, and identification of, licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment or environmental impact statement. 10 CFR 51.22(c)(9) identifies an amendment to an operating license for a reactor which changes an inspection or a surveillance requirement as a categorical exclusion provided that 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 amount of any effluents that may be released off-site, or (3) result in a significant increase in individual or cumulative occupational radiation exposure.

CNS review has determined that the proposed amendment, which would change an inspection or surveillance requirement, does not involve (1) a significant hazards consideration, (2) a significant change in the types or significant increase in the amounts of any effluent that might be released offsite, or (3) 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.

7.0 References

1. 10 CFR 50.55a.
2. TSTF-479-A, Revision 0, "Changes to Reflect Revisions of 10 CFR 50.55a," dated December 19, 2005.
3. NUREG-1433, "Standard Technical Specifications for BWR4 Plants," Revision 3.1.
4. ASME Code for Operation and Maintenance of Nuclear Power Plants.
5. Precedent: Amendment Numbers 228 and 204, dated December 7, 2005, to Susquehanna Steam Electric Station Units 1 and 2, respectively.
6. Federal Register Volume 64, No. 183, dated September 22, 1999 (pages 51370 through 51400).

Attachment 2

Proposed Technical Specification Revisions (Mark up)

Cooper Nuclear Station, NRC Docket No. 50-298, DPR-46

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 pumps and valves:

- a. ~~Testing Frequencies specified in Section XI of the ASME Boiler and Pressure Vessel Code~~ and applicable Addenda are as follows:

applicable to the ASME Code for Operation and Maintenance of Nuclear Power Plants (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 Test Program

- 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~~^{OM} Code shall be construed to supersede the requirements of any TS.

5.5.7 Ventilation Filter Testing Program (VFTP)

The VFTP shall establish the required testing of Engineered Safety Feature (ESF) filter ventilation systems. Tests described in Specifications 5.5.7.a, 5.5.7.b, and 5.5.7.c shall be performed once per 18 months for standby service or after 720 hours of

(continued)

Attachment 3

**Proposed Technical Specification Revisions
(Final Typed)**

Cooper Nuclear Station, NRC Docket No. 50-298, DPR-46

5.5 Programs and Manuals

5.5.6 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves:

- a. Testing Frequencies applicable to the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda are as follows:

<u>ASME OM Code and applicable Addenda terminology for 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 and other normal and accelerated Frequencies specified 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 OM Code shall be construed to supersede the requirements of any TS.

5.5.7 Ventilation Filter Testing Program (VFTP)

The VFTP shall establish the required testing of Engineered Safety Feature (ESF) filter ventilation systems. Tests described in Specifications 5.5.7.a, 5.5.7.b, and 5.5.7.c shall be performed once per 18 months for standby service or after 720 hours of

Attachment 4

**Proposed Technical Specification Bases Revisions
(Information Only)**

Cooper Nuclear Station, NRC Docket No. 50-298, DPR-46

INSERT 1

ASME code for Operation and Maintenance of Nuclear Power Plants

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.4.3.2

A manual actuation of each SRV (until the main turbine bypass valves have closed to compensate for SRV opening) is performed to verify that, mechanically, the valve is functioning properly and no blockage exists in the valve discharge line. This can also be demonstrated by the response of the turbine control valves or bypass valves, by a change in the measured steam flow, or by any other method suitable to verify steam flow. Adequate reactor steam dome pressure must be available to perform this test to avoid damaging the valve. Also, adequate steam flow must be passing through the main turbine or turbine bypass valves to continue to control reactor pressure and steam flow when the SRVs 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 ≥ 500 psig, consistent with the recommendations of the vendor. Adequate steam flow is represented by turbine bypass valves at least 30% open, or total steam flow $\geq 10^6$ lb/hr. Plant startup is allowed prior to performing this test because valve OPERABILITY and the setpoints for overpressure protection are verified, per ASME Code requirements, prior to valve installation. Therefore, this SR is modified by a Note that states the Surveillance is not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. The 12 hours allowed for manual actuation after the required pressure and steam flow are reached is sufficient to achieve stable conditions for testing and provides a reasonable time to complete the SR. If a valve fails to actuate due only to the failure of the solenoid but is capable of opening on overpressure, the safety function of the SRV is not considered inoperable.

Insert
1 →

The 18 month Frequency was developed based on the SRV tests required by the ~~ASME Boiler and Pressure Vessel Code, Section XI~~ (Ref. 6). Operating experience has shown that 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.

(continued)

BASES (continued)

- REFERENCES
1. ASME Boiler and Pressure Vessel Code, Section III.
 2. USAR, Section IV-4.9.
 3. NEDC-31628P, SRV Setpoint Tolerance Analysis for Cooper Nuclear Station, October 1988.
 4. USAR, Section XIV.
 5. 10 CFR 50.36(c)(2)(ii).
 6. ~~ASME, Boiler and Pressure Vessel Code, Section XI.~~ *Insert 1*
-
-

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.5.1.5 (continued)

the LPCI subsystem. Acceptable methods of de-energizing the valve include de-energizing breaker control power, racking out the breaker or removing the breaker.

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 3.5.1.6, SR 3.5.1.7, and SR 3.5.1.8

The performance requirements of the low pressure ECCS pumps are determined through application of the 10 CFR 50, Appendix K criteria (Ref. 7). 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 8. 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.

The flow tests for the HPCI System are performed at two different pressure ranges such that system capability to provide rated flow against a system head corresponding to reactor pressure is tested at both the higher and lower operating ranges of the system. The required system head

(continued)

BASES

ACTIONS

B.1 and B.2 (continued)

Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE
REQUIREMENTS

SR 3.6.1.6.1

A manual actuation of each LLS valve is performed to verify that the valve and solenoids are functioning properly and no blockage exists in the valve discharge line. This can be demonstrated by the response of the turbine control or bypass valve, by a change in the measured steam flow, or by any other method that is suitable to verify steam flow. Adequate reactor steam dome pressure must be available to perform this test to avoid damaging the valve. Adequate pressure at which this test is to be performed is ≥ 920 psig (consistent with the recommendations of the vendor). Also, adequate steam flow must be passing through the main turbine or turbine bypass valves to continue to control reactor pressure when the LLS valves divert steam flow upon opening. Adequate steam flow is represented by turbine bypass valves at least 30% open, or total steam flow $\geq 10^6$ lb/hr. The 18 month Frequency was based on the SRV tests required by the ~~ASME Boiler and Pressure Vessel Code, Section XI~~ (Ref. 3). Operating experience has shown that 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.

Insert 1

Since steam pressure is required to perform the Surveillance, however, and steam may not be available during a unit outage, the Surveillance may be performed during the startup following a unit outage. Unit startup is allowed prior to performing the test because valve OPERABILITY and the setpoints for overpressure protection are verified by Reference 3 prior to valve installation. After adequate reactor steam dome pressure and flow are reached, 12 hours is allowed to prepare for and perform the test.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.6.1.6.2

The LLS designated SRVs 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 LLS function operate as designed when initiated either by an actual or simulated automatic initiation signal. The LOGIC SYSTEM FUNCTIONAL TEST in LCO 3.3.6.3, "Low-Low Set (LLS) Instrumentation," 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. 10 CFR 50.36(c)(2)(ii).
2. NEDE-22197, Safety Relief Valve Low Low Set System and Lower MSIV Water Level Trip for Cooper Nuclear Station, Unit 1, December 1982.
3. ASME, Boiler and Pressure Vessel Code, Section XI. *Insert 1 B*

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.2.3.1 (continued)

position since these valves were verified to be in the correct position prior to locking, sealing, or securing. A valve is also allowed to be in the nonaccident position provided it can be aligned to the accident position within the time assumed in the accident analysis. This is acceptable since the RHR suppression pool cooling mode is manually initiated. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

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 system 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 ≥ 7700 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. 4). 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.

REFERENCES

1. USAR, Section XIV-6.
2. 10 CFR 36(c)(2)(ii).
3. NEDC 94-034B, C & D
4. ASME, Boiler and Pressure Vessel Code, Section XI. Insert 1

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.8.1.4 (continued)

The 31 day Frequency is adequate to ensure that a sufficient supply of fuel oil is available, since low level alarms are provided and facility operators would be aware of any large uses of fuel oil during this period.

SR 3.8.1.5

Microbiological fouling is a major cause of fuel oil degradation. There are numerous bacteria that can grow in fuel oil and cause fouling, but all must have a water environment in order to survive. Removal of water from the fuel oil day tanks once every 31 days eliminates the necessary environment for bacterial survival. This is the most effective means of controlling microbiological fouling. In addition, it eliminates the potential for water entrainment in the fuel oil during DG operation. Water may come from any of several sources, including condensation, ground water, rain water, contaminated fuel oil, and breakdown of the fuel oil by bacteria. Frequent checking for and removal of accumulated water minimizes fouling and provides data regarding the watertight integrity of the fuel oil system. The Surveillance Frequency is consistent with Regulatory Guide 1.137 (Ref. 11). This SR is for preventive maintenance. The presence of water does not necessarily represent a failure of this SR provided that accumulated water is removed during performance of this Surveillance.

SR 3.8.1.6

This Surveillance demonstrates that each required fuel oil transfer pump operates and automatically transfers fuel oil from the storage tanks to the associated day tank. It is required to support continuous operation of standby power sources. This Surveillance provides assurance that the fuel oil transfer pump is OPERABLE, the fuel oil piping system is intact, the fuel delivery piping is not obstructed, and the controls and control systems for automatic fuel transfer systems are OPERABLE.

The Frequency for this SR corresponds to the testing requirements for pumps as contained in the ASME Boiler and Pressure Vessel Code, Section XI, (Ref. 14).

Insert 1

(continued)

BASES

REFERENCES
(continued)

- 12. ANSI C84.1, 1970.
 - 13. USAR, Section VIII-5.2.
 - 14. ~~ASME Boiler and Pressure Vessel Code, Section XI.~~ *Insert 1*
 - 15. IEEE Standard 387, 1995.
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