



Nebraska Public Power District

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10 CFR 50.90

NLS2026043
September 24, 2026

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

Subject: Application to Revise Technical Specifications to Adopt TSTF-596, "Expand the Applicability of the Surveillance Frequency Control Program (SFCP)"
Cooper Nuclear Station, Docket 50-298, Renewed License No. DPR-46

Pursuant to 10 CFR 50.90, Nebraska Public Power District (NPPD) is submitting a request for an amendment to the Technical Specifications (TS) for Cooper Nuclear Station (CNS).

NPPD requests adoption of TSTF-596, "Expand the Applicability of the Surveillance Frequency Control Program (SFCP)," which is an approved change to the Standard Technical Specifications, into the CNS TS. TSTF-596 expands the applicability of the SFCP to include other periodic testing frequencies in the TS. The proposed change also revises the SFCP to reference additional regulatory mechanisms that may be used to control Surveillance Frequencies, such as 10 CFR 50.55a and 10 CFR 50.69. The proposed change revises Surveillance Requirements that reference the Inservice Testing Program to instead reference the SFCP.

Attachment 1 provides a description and assessment of the proposed changes. Attachment 2 provides the existing TS pages marked to show the proposed changes. Attachment 3 provides the existing TS Bases pages marked to show revised text associated with the proposed TS changes and is provided for information only.

NPPD requests that the amendment be reviewed under the Consolidated Line Item Improvement Process. Once approved, the amendment shall be implemented within 60 days.

There are no regulatory commitments made in this submittal.

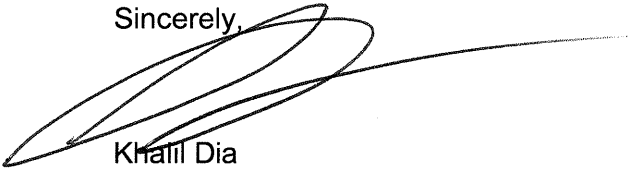
In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated State of Nebraska Official.

If you should have any questions regarding this submittal, please contact Steve Nelson, Regulatory Affairs and Compliance Manager, at (402) 825-5058.

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

Executed On: 9/24/2026
Date

Sincerely,



Khalil Dia
Site Vice President

/dv

Attachments: 1. Description and Assessment
2. Proposed Technical Specification Changes (Mark-Up)
3. Proposed Technical Specifications Bases Changes (Mark-Up) –
For Information Only

cc: Regional Administrator w/ attachments
USNRC - Region IV

Cooper Project Manager w/ attachments
USNRC - NRR Plant Licensing Branch IV

Senior Resident Inspector w/ attachments
USNRC - CNS

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

NPG Distribution w/ attachments

CNS Records w/ attachments

ATTACHMENT 1

Description and Assessment

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

1.0 DESCRIPTION

2.0 ASSESSMENT

2.1 Applicability of Safety Evaluation

2.2 Variations

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Analysis

3.2 Conclusion

4.0 ENVIRONMENTAL CONSIDERATION

1.0 DESCRIPTION

Nebraska Public Power District (NPPD) requests adoption of TSTF-596, "Expand the Applicability of the Surveillance Frequency Control Program (SFCP)," which is an approved change to the Standard Technical Specifications (STS), into the Cooper Nuclear Station (CNS) Technical Specifications (TS). TSTF-596 expands the applicability of the SFCP to include other periodic testing frequencies in the TS. The proposed change also revises the SFCP to reference additional regulatory mechanisms that may be used to control Surveillance Frequencies, such as 10 CFR 50.55a and 10 CFR 50.69. The proposed change revises Surveillance Requirements (SRs) that reference the Inservice Testing Program to instead reference the SFCP.

2.0 ASSESSMENT

2.1 Applicability of Safety Evaluation

NPPD has reviewed the safety evaluation for TSTF-596 provided to the Technical Specifications Task Force in a letter dated December 30, 2024. This review included the Nuclear Regulatory Commission (NRC) staff's evaluation, as well as the information provided in TSTF-596. NPPD has concluded that the justifications presented in TSTF-596 and the safety evaluation prepared by the NRC staff are applicable to CNS and justify this amendment for the incorporation of the changes to the CNS TS.

NPPD confirms that the SFCP shall contain a list of the frequencies controlled by the program, including the Frequencies of Surveillances that implement the requirements of 10 CFR 50.55a(f).

2.2 Variations

NPPD is proposing the following administrative variations from the TS changes described in TSTF-596 or the applicable parts of the NRC staff's safety evaluation. The CNS TS contain requirements that differ from the STS on which TSTF-596 was based but are encompassed in the TSTF-596 justification.

- NPPD proposes to vary from the TS changes described in TSTF-596 to acknowledge that Surveillance Frequencies may also be approved by NRC license amendment. Paragraph b.3 of the SFCP is revised to state that Frequencies may be changed as specifically approved by the NRC in addition to in accordance with NEI 04-10. This is an administrative change that is consistent with NRC prior approvals of amendments to change Surveillance Frequencies (ADAMS Accession Nos. ML26023A004 and ML25043A428).
- TSTF-596 revises STS SR 3.4.3.1. CNS has adopted TSTF-576 which changed TS 3.4.3 from the "Safety/Relief Valves and Safety Valves" to the "Overpressure Protection System (OPS)." As part of TSTF-576, SR 3.4.3.2 frequency was changed to "In accordance with the Inservice Testing Program." Therefore, TSTF-596 is applicable to SR 3.4.3.1 and SR 3.4.3.2.

- TSTF-596 revises STS 3.4.5, "RCS PIV Leakage." The CNS TS do not include an equivalent specification. Therefore, the TSTF-596 change is not required and is not included.
- TSTF-596 revises STS Bases 3.6.3.1, "Drywell Cooling System Fans." The CNS TS do not include an equivalent specification. Therefore, the TSTF-596 change is not required and is not included.
- TSTF-596 revises STS SR 3.5.1.7. The equivalent requirement in the CNS TS is SR 3.5.1.6.
- TSTF-596 revises STS SR 3.6.1.3.6. The equivalent requirement in the CNS TS is SR 3.6.1.3.5.
- TSTF-596 revises STS SR 3.6.1.3.8. The equivalent requirement in the CNS TS is SR 3.6.1.3.6.
- TSTF-596 revises STS SR 3.6.2.3.3. The equivalent requirement in the CNS TS is SR 3.6.2.3.2.
- TSTF-596 revises STS SR 3.6.2.4.3. The equivalent requirement in the CNS TS is SR 3.6.1.9.2.
- TSTF-596 revises STS 5.5.2, "Primary Coolant Sources Outside Containment." The equivalent specification in the CNS TS is titled, "Systems Integrity Monitoring Program."
- TSTF-596 revises the introductory paragraph of TS 5.5.7, "Ventilation Filter Testing Program (VFTP)." The introductory paragraph of CNS TS 5.5.7 is organized differently. The STS references Regulatory Guide 1.52, Revision 2, for the event-driven testing frequencies. The CNS states the same event-driven testing requirements in the TS.
- TSTF-596 revises STS 5.5.14, "Control Room Envelope (CRE) Habitability Program." The equivalent CNS specification is TS 5.5.13.
- TSTF-596 revises STS 5.5.14.d to replace a fixed frequency with the word "periodic." The CNS TS 5.5.13.d currently includes this change.
- TSTF-596 revises STS 5.5.16, "Surveillance Frequency Control Program." The equivalent CNS specification is TS 5.5.14.

The CNS TS Bases contain different references to the American Society of Mechanical Engineers Operations and Maintenance Code or to the Inservice Testing Program, and those references are revised to be consistent with the TS Bases changes made in TSTF-596.

The model application provided in TSTF-596 includes an attachment for revised (clean) TS pages reflecting the proposed changes. CNS is not including such an attachment due to the number of TS pages included in this submittal that have the potential to be affected by other unrelated license amendment requests and the proposed straight forward nature of the proposed changes. Providing only mark-ups of the proposed TS changes satisfies the

requirements of 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," in that the mark-ups fully describe the changes desired.

These differences are administrative and do not affect the applicability of TSTF-596 to the CNS TS.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Analysis

Nebraska Public Power District (NPPD) requests adoption of TSTF-596, "Expand the Applicability of the Surveillance Frequency Control Program (SFCP)," which is an approved change to the Standard Technical Specifications, into the Cooper Nuclear Station Technical Specifications (TS). TSTF-596 expands the applicability of the SFCP to include other periodic testing frequencies in the TS. The proposed change also revises the SFCP to reference additional regulatory mechanisms that may be used to control Surveillance Frequencies, such as 10 CFR 50.55a and 10 CFR 50.69. The proposed change revises Surveillance Requirements (SRs) that reference the Inservice Testing Program to instead reference the SFCP.

NPPD has evaluated if 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 amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change relocates periodic Frequencies for SRs to licensee control under the SFCP. Surveillance Frequencies are not an initiator to any accident previously evaluated. As a result, the probability of any accident previously evaluated is not significantly increased. The systems and components required by the Technical Specifications for which the Surveillance Frequencies are relocated are still required to be operable, meet the acceptance criteria for the SRs, and be capable of performing any mitigative function assumed in the accident analysis. As a result, the consequences of any accident previously evaluated are not significantly increased.

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

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

Response: No

No new or different accidents result from utilizing the proposed change. The changes do not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. In addition, the changes do not impose any new or different requirements.

The changes do not alter assumptions made in the safety analysis. The proposed changes are consistent with the safety analysis assumptions and current plant operating practice.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

Response: No

The proposed change is administrative in nature, does not negate any existing requirement, and does not adversely affect existing plant safety margins or the reliability of the equipment assumed to operate in the safety analysis. As such, there are no changes being made to safety analysis assumptions, safety limits or limiting safety system settings that would adversely affect plant safety as a result of the proposed change. Margins of safety are unaffected by relocation of the surveillance test intervals to a licensee-controlled program.

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

Based on the above, NPPD concludes that the proposed change 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.

3.2 Conclusion

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.

4.0 ENVIRONMENTAL CONSIDERATION

A review has determined the proposed change qualifies for a categorical exclusion from environmental review in accordance with 10 CFR 51.22. The proposed action is confined to changes to surveillance, inspection, or testing requirements as described in 10 CFR 51.22(d)(1). The proposed action does not disturb any previously undisturbed ground and there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, does not result in a significant increase in individual or cumulative public or occupational radiation exposure, and does not result in a significant increase in the potential for or consequences from radiological accidents. Therefore, pursuant to 10 CFR 51.22, neither an environmental assessment nor an environmental impact statement is required.

ATTACHMENT 2

Proposed Technical Specification Changes (Mark-Up)

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

Revised Pages

1.1-4
3.1-22
3.4-7
3.5-5
3.6-13
3.6-14
3.6-26
3.6-32
3.6-39
5.0-7
5.0-11
5.0-14
5.0-18
5.0-19

1.1 Definitions

DRAIN TIME (continued)

- c. The penetration flow paths required to be evaluated per paragraph b. are assumed to open instantaneously and are not subsequently isolated, and no water is assumed to be subsequently added to the RPV water inventory;
- d. No additional draining events occur; and
- e. Realistic cross-sectional areas and drain rates are used.

A bounding DRAIN TIME may be used in lieu of a calculated value.

~~INSERVICE TESTING PROGRAM — The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).~~

LEAKAGE

LEAKAGE shall be:

- a. Identified LEAKAGE
 - 1. LEAKAGE into the drywell, such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or
 - 2. LEAKAGE into the drywell atmosphere from sources that are both specifically located and known to not interfere with the operation of leakage detection systems;
- b. Unidentified LEAKAGE

All LEAKAGE into the drywell that is not identified LEAKAGE
- c. Total LEAKAGE

Sum of the identified and unidentified LEAKAGE; and
- d. Pressure Boundary LEAKAGE

LEAKAGE through a fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall. LEAKAGE past seals, packing, and gaskets is not pressure boundary LEAKAGE.

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
(continued)		Once within 24 hours after solution temperature is restored within the limits of Figure 3.1.7-2
SR 3.1.7.6	Verify each SLC subsystem manual valve in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position or can be aligned to the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.1.7.7	Verify each pump develops a flow rate ≥ 38.2 gpm at a discharge pressure ≥ 1300 psig.	In accordance with the Surveillance Frequency Control Program INSERVICE TESTING PROGRAM
SR 3.1.7.8	Verify flow through one SLC subsystem from pump into reactor pressure vessel.	In accordance with the Surveillance Frequency Control Program
SR 3.1.7.9	Verify all heat traced piping between storage tank and pump suction is unblocked.	In accordance with the Surveillance Frequency Control Program <u>AND</u> Once within 24 hours after solution temperature is restored within the limits of Figure

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.3.1	Verify the as-left OPS lift pressures of the required Safety Relief Valves (SRVs) and Safety Valves (SVs) are within $\pm 1\%$ of the nominal setpoint:	In accordance with the Surveillance Frequency Control Program INSERVICE TESTING PROGRAM
	Number of OPS SRVs	
	Nominal Setpoint (psig)	
	2	
	1080	
	3	
SR 3.4.3.2	Verify the as-found OPS list pressures of the required SRVs and SVs are within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program INSERVICE TESTING PROGRAM
	Number of OPS SVs	
	Nominal Setpoint (psig)	
	3	
	1240	

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE				FREQUENCY
SR 3.5.1.6	Verify the following ECCS pumps develop the specified flow rate against a system head corresponding to the specified reactor pressure.			In accordance with the Surveillance Frequency Control Program INSERVICE TESTING PROGRAM
		NO. OF PUMPS	SYSTEM HEAD CORRESPONDING TO A REACTOR PRESSURE OF	
	<u>SYSTEM</u>	<u>FLOW RATE</u>		
	Core			
	Spray	≥ 4720 gpm	1	≥ 113 psig
	LPCI	≥ 15,000 gpm	2	≥ 20 psig
SR 3.5.1.7	-----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. ----- Verify, with reactor pressure ≤ 1020 and ≥ 920 psig, the HPCI pump can develop a flow rate ≥ 4250 gpm against a system head corresponding to reactor pressure.			In accordance with the Surveillance Frequency Control Program
SR 3.5.1.8	-----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. ----- Verify, with reactor pressure ≤ 165 psig, the HPCI pump can develop a flow rate ≥ 4250 gpm against a system head corresponding to reactor pressure.			

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.1.3.3 -----NOTES----- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for PCIVs that are open under administrative controls. ----- Verify each primary containment manual isolation valve and blind flange that is located inside primary containment and not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed.	Prior to entering MODE 2 or 3 from MODE 4 if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days
SR 3.6.1.3.4 Verify continuity of the traversing incore probe (TIP) shear isolation valve explosive charge.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.5 Verify the isolation time of each power operated, automatic PCIV, except for MSIVs, is within limits.	In accordance with the Surveillance Frequency Control Program INSERVICE TESTING PROGRAM

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.6	Verify the isolation time of each MSIV is ≥ 3 seconds and ≤ 5 seconds.	In accordance with the Surveillance Frequency Control Program INSERVICE TESTING PROGRAM
SR 3.6.1.3.7	Verify each automatic PCIV actuates to the isolation position on an actual or simulated isolation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.8	Verify a representative sample of reactor instrumentation line EFCVs actuate to the isolation position on an actual or simulated instrument line break.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.9	Remove and test the explosive squib from each shear isolation valve of the TIP System.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.3.10	Verify leakage rate through each Main Steam line is ≤ 106 scfh when tested at ≥ 29 psig.	In accordance with the Primary Containment Leakage Rate Testing Program

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.9.1	Verify each RHR containment spray subsystem manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position or can be aligned to the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.1.9.2	Verify each required RHR pump develops a flow rate of > 7700 gpm through the associated heat exchanger while operating in the suppression pool cooling mode.	In accordance with the Surveillance Frequency Control Program INSERVICE TESTING PROGRAM
SR 3.6.1.9.3	Verify each spray nozzle is unobstructed.	Following maintenance which could result in nozzle blockage

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.3.1	Verify each RHR suppression pool cooling subsystem manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position or can be aligned to the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.2.3.2	Verify each RHR pump develops a flow rate > 7700 gpm through the associated heat exchanger while operating in the suppression pool cooling mode.	In accordance with the Surveillance Frequency Control Program INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.2.1	-----NOTES----- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for SCIVs that are open under administrative controls. ----- Verify each secondary containment isolation manual valve and blind flange that is not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.2.2	Verify the isolation time of each power operated automatic SCIV is within limits.	In accordance with the Surveillance Frequency Control Program INSERVICE TESTING PROGRAM
SR 3.6.4.2.3	Verify each automatic SCIV actuates to the isolation position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

5.5 Programs and Manuals

5.5.1 Offsite Dose Assessment Manual (ODAM) (continued)

markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5.2 Systems Integrity Monitoring Program

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include the Core Spray, High Pressure Coolant Injection, Residual Heat Removal, and Reactor Core Isolation Cooling. The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements; and
- b. Integrated leak test requirements for each system at a Frequency in accordance with the Surveillance Frequency Control Program ~~24-month intervals or less~~.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable at the Frequency specified in accordance with the Surveillance Frequency Control Program ~~24-month Frequency~~ for performing system leak test activities.

5.5.3 (Deleted)

(continued)

5.5 Programs and Manuals (continued)

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 ~~in accordance with the Surveillance Frequency Control Program once per 24 months for standby service~~ or after 720 hours of system operation; and, following significant painting, fire, or chemical release concurrent with system operation in any ventilation zone communicating with the system.

Tests described in Specifications 5.5.7.a and 5.5.7.b shall be performed after each complete or partial replacement of the HEPA filter train or charcoal adsorber filter; and after any structural maintenance on the system housing.

Tests described in Specifications 5.5.7.d and 5.5.7.e shall be performed ~~in accordance with the Surveillance Frequency Control Program once per 24 months~~.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

- a. Demonstrate for each of the ESF systems that an inplace test of the HEPA filters shows a penetration and system bypass < 1% when tested in accordance with Regulatory Guide 1.52, Revision 2, Section C.5.c, and ASME N510-1989 at the system conditions specified below.

<u>ESF Ventilation System</u>	<u>Flowrate (cfm)</u>
SGT System	1602 to 1958
Control Room Emergency Filter System	810 to 990

- b. Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass < 1% when tested in accordance with Regulatory Guide 1.52, Revision 2, Section C.5.d, and ASME N510-1989 at the system conditions specified below.

<u>ESF Ventilation System</u>	<u>Flowrate (cfm)</u>
SGT System	1602 to 1958
Control Room Emergency Filter System	810 to 990

(continued)

5.5 Programs and Manuals (continued)

5.5.9 Diesel Fuel Oil Testing Program

A diesel fuel oil testing program to implement required testing of both new fuel oil and stored fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with applicable ASTM Standards. The purpose of the program is to establish the following:

- a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:
 1. An API gravity or an absolute specific gravity within limits,
 2. A kinematic viscosity or Saybolt viscosity, when required, and a flash point within limits for ASTM 2D fuel oil, and
 3. A clear and bright appearance with proper color or a water and sediment content within limits;
- b. Within 31 days following addition of the new fuel oil to storage tanks verify the properties of the new fuel oil, other than those addressed in a., above, are within limits for ASTM 2D fuel oil; and
- c. Total particulate concentration of the fuel oil is ≤ 10 mg/l when tested **at a Frequency in accordance with the Surveillance Frequency Control Program every 31 days.**

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Diesel Fuel Oil Testing Program testing Frequencies.

5.5.10 Technical Specifications (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

- a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.
- b. Licensees may make changes to Bases without prior NRC approval provided the changes do not involve either of the following:
 1. A change in the TS incorporated in the license; or

(continued)

5.5 Programs and Manuals (continued)

5.5.13 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Emergency Filter (CREF) System, CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of either (a) 5 rem whole body or its equivalent to any part of the body for the duration of the loss-of-coolant accident, or (b) 5 rem total effective dose equivalent (TEDE) for the duration of the fuel handling accident. The program shall include the following elements:

- a. The definition of the CRE and CRE boundary.
- b. Requirements for maintaining the CRE boundary in its design condition including configuration control and preventive maintenance.
- c. Requirements for (i) determining the unfiltered air leakage past the CRE boundary into the CRE **at the periodic Frequencies in accordance with the Surveillance Frequency Control Program** and in accordance with the testing methods and at the **event-driven F**requencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0. No exceptions to Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0, are proposed.
- d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by the CREF System, operating at the flow rate required by the Ventilation Filter Testing Program, at a Frequency **in accordance with the Surveillance Frequency Control Program of 24 months**. The results shall be trended and used as part of the periodic assessment of the CRE boundary.
- e. The quantitative limits on unfiltered air leakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air leakage measured by the testing described in paragraph c. The unfiltered air leakage limit for radiological challenges is the leakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air leakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.

(continued)

5.5 Programs and Manuals

5.5.13 Control Room Envelope Habitability Program (continued)

- f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered air leakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

5.5.14 Surveillance Frequency Control Program

This program provides controls for Surveillance Frequencies ~~and the frequencies of other periodic testing required by these Technical Specifications (herein also referred to as Surveillance Frequencies)~~. The program shall ensure that Surveillance Requirements ~~and other required testing~~ specified in these Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation ~~and other requirements~~ are met.

- a. The Surveillance Frequency Control Program shall contain a list of Frequencies ~~of those Surveillance Requirements for which the Frequency is~~ controlled by the program.
- b. Changes to the Frequencies listed in the Surveillance Frequency Control Program shall be made ~~in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1.:~~
 - 1. ~~In accordance with the requirements of 10 CFR 50.55a for testing required by 10 CFR 50.55a(f);~~
 - 2. ~~In accordance with the requirements of 10 CFR 50.69(d)(2) for testing permitted under 10 CFR 50.69(b)(1)(v) in lieu of testing required by 10 CFR 50.55a(f);~~
 - 3. ~~Otherwise,~~ in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1, ~~or as specifically approved by the NRC.~~
- c. The provisions of Surveillance Requirements 3.0.2 and 3.0.3 are applicable to the Frequencies established in the Surveillance Frequency Control Program ~~except:-~~
 - 1. ~~For testing required by 10 CFR 50.55a(f), Surveillance Requirement 3.0.2 is only applicable as permitted by that regulation; and~~
 - 2. ~~Surveillance Requirement 3.0.3 is only applicable to other required testing when invoked by a Chapter 5 Specification.~~

ATTACHMENT 3

Proposed Technical Specifications Bases Changes (Mark-Up) – For Information Only

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

Revised Page

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B 3.6-50
B 3.6-54
B 3.6-66
B 3.6-80
B 3.6-81
B 3.8-18
B 3.8-22

BASES

SR 3.0.2 (continued)

When a Section 5.5, "Programs and Manuals," Specification states that the provisions of SR 3.0.2 are applicable, a 25% extension of the testing interval, whether stated in the Specification or incorporated by reference, is permitted.

The 25% extension does not significantly degrade the reliability that results from performing the Surveillance at its specified Frequency. This is based on the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the SRs. The exceptions to SR 3.0.2 are those Surveillances for which the 25% extension of the interval specified in the Frequency does not apply. These exceptions are stated in the individual Specifications. The requirements of regulations take precedence over the TS. Examples of where SR 3.0.2 does not apply are the Containment Leakage Rate Testing Program required by 10 CFR 50, Appendix J, and the inservice testing of pumps and valves in accordance with ~~the requirements of 10 CFR 50.55a(f) applicable American Society of Mechanical Engineers Operation and Maintenance Code, as required by 10 CFR 50.55a~~. These programs establish testing requirements and Frequencies in accordance with the requirements of the regulations. The TS cannot in and of themselves extend a test interval specified in the regulations, directly or by reference.

As stated in SR 3.0.2, the 25% extension also does not apply to the initial portion of a periodic Completion Time that requires performance on a "once per..." basis. The 25% extension applies to each performance after the initial performance. The initial performance of the Required Action, whether it is a particular Surveillance or some other remedial action, is considered a single action with a single Completion Time. One reason for not allowing the 25% extension to this Completion Time is that such an action usually verifies that no loss of function has occurred by checking the status of redundant or diverse components or accomplishes the function of the inoperable equipment in an alternative manner.

The provisions of SR 3.0.2 are not intended to be used repeatedly to extend Surveillance intervals (other than those consistent with refueling intervals) or periodic Completion Time intervals beyond those specified.

SR 3.0.3

SR 3.0.3 establishes the flexibility to defer declaring affected equipment inoperable or an affected variable outside the specified limits when a Surveillance has not been performed within the specified Frequency. A delay period of up to 24 hours or up to the limit of the specified Frequency, whichever is greater, applies from the point in time that it is discovered that the Surveillance has not been performed in accordance

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.1.7.6 verifies that each valve in the system is in its correct position, but does not apply to the squib (i.e., explosive) valves. Verifying the correct alignment for manual valves in the SLC System flow path provides assurance that the proper flow paths will exist for system operation. A valve is also allowed to be in the nonaccident position provided it can be aligned to the accident position from the control room, or locally by a dedicated operator at the valve control. This is acceptable since the SLC System is a manually initiated system. This Surveillance also does not apply to valves that are locked, sealed, or otherwise secured in position since they are verified to be in the correct position prior to locking, sealing, or securing. This verification of valve alignment 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 Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.1.7.5

This Surveillance requires an examination of the sodium pentaborate solution by using chemical analysis to ensure that the proper concentration of boron in the storage tank is maintained per Figure 3.1.7-1. SR 3.1.7.5 must be performed anytime boron or water is added to the storage tank solution to determine that the boron solution concentration is within the specified limits. SR 3.1.7.5 must also be performed anytime the temperature is restored to within the limits of Figure 3.1.7-2, to ensure that no significant boron precipitation occurred. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.1.7.7

Demonstrating that each SLC System pump develops a flow rate ≥ 38.2 gpm at a discharge pressure ≥ 1300 psig, by recirculating demineralized water to the test tank, ensures that pump performance has not degraded during the fuel cycle. This minimum pump flow rate requirement ensures that, when combined with the sodium pentaborate solution concentration requirements, the rate of negative reactivity insertion from the SLC System will adequately compensate for the positive reactivity effects encountered during power reduction, cooldown of the moderator, and xenon decay. This test is in accordance with the requirements of 10 CFR

BASES

50.55a(f) (Ref. 6), and confirms one point on the pump design curve and is indicative of overall performance. Such ~~inservice~~ tests confirm component OPERABILITY, and detect incipient failures by indicating abnormal performance. ~~The Frequency of this Surveillance is in accordance with the INSERVICE TESTING PROGRAM.~~

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 6).

SR 3.1.7.8 and SR 3.1.7.9

These Surveillances ensure that there is a functioning flow path from the boron solution storage tank to the RPV, including the firing of an explosive valve. The replacement charge for the explosive valve shall be from the same manufactured batch as the one fired or from another batch that has been certified by having one of that batch successfully fired. The Surveillance may be performed in separate steps to prevent injecting boron into the RPV. An acceptable method for verifying flow from the pump to the RPV is to pump demineralized water from a test tank through one SLC subsystem and into the RPV. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

Demonstrating that all heat traced piping between the boron solution storage tank and the suction inlet to the injection pumps is unblocked ensures that there is a functioning flow path for injecting the sodium pentaborate solution. An acceptable method for verifying that the suction piping is unblocked is to manually initiate the system, except the explosive valves, and pump from the storage tank to the test tank. Upon completion of this verification, the pump suction piping must be flushed with demineralized water to ensure piping between the storage tank and pump suction is unblocked. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

In performing SR 3.1.7.3, it is determined that the temperature of this piping has fallen below the specified minimum, SR 3.1.7.9 must be performed once within 24 hours after the piping temperature is restored to within the limits of Figure 3.1.7-2.

BASES

REFERENCES

1. 10 CFR 50.62.
 2. USAR, Section III-9.
 3. 10 CFR 50.36(c)(2)(ii).
 4. NUREG-1465, "Accident Source Terms for Light-Water Nuclear Power Plants, February 1995."
 5. 10 CFR 50.67, "Accident Source Term."
 6. 10 CFR 50.55a(f).
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BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.4.3.1

This Surveillance verifies that the SVs and SRVs credited by the OPS have their as-left settings within 1% of the nominal opening pressure setpoint. The OPS may credit less than the full complement of installed SVs and SRVs and the SR only applies to those SVs and SRVs required to meet the LCO. The verification of the SVs and SRVs as-left setting is performed in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 4) ~~INSERVICE TESTING PROGRAM~~. The nominal setpoint shall correspond to ambient conditions of the valves at nominal operating temperatures and pressures. The SVs and SRVs are reset to $\pm 1\%$ during the Surveillance to allow for drift.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 4).

SR 3.4.3.2

This Surveillance verifies that the as-found lift pressures of the SVs and SRVs credited by the OPS are consistent with the assumptions of the overpressure analysis. The OPS may credit less than the full complement of installed SVs and SRVs and the SR only applies to those SVs and SRVs required to meet the LCO. Any valve not credited for SR 3.4.3.1 may not be credited for this Surveillance in the same operating cycle. The measurement of the SVs and SRVs lift pressures must be performed in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 4) ~~INSERVICE TESTING PROGRAM~~. The OPS SVs and SRVs as found lift pressures credited by the OPS are specified in the COLR.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 4).

BASES

REFERENCES

1. USAR, Section IV-4.
 2. ASME Boiler and Pressure Vessel Code, Section III
 3. USAR, Section XIV.
 4. 10 CFR 50.55a(f).
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BASES

SURVEILLANCE REQUIREMENTS (continued)

The specified Frequency is once during reactor startup before THERMAL POWER is > 25% RTP. However, this SR is modified by a Note that states the Surveillance is only required to be performed if the last performance was more than 31 days ago. Therefore, implementation of this Note requires this test to be performed during reactor startup before exceeding 25% RTP. Verification during reactor startup prior to reaching > 25% RTP is an exception to the normal ~~INSERVICE TESTING PROGRAM~~ generic valve cycling Frequency ~~required to be performed in accordance with 10 CFR 50.55a(f) (Ref. 13)~~, 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 for Operation and Maintenance of Nuclear Power Plants requirements for the ECCS pumps)~~ required to be performed in accordance with 10 CFR 50.55a(f) (Ref. 13) 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 should overcome the RPV pressure and associated discharge line losses. Adequate reactor pressure must be available to perform these tests. Additionally, adequate steam flow must be passing through the main turbine or turbine bypass valves to continue to control reactor pressure when the HPCI System diverts steam flow. Therefore, sufficient time is allowed after adequate pressure and flow are achieved to perform these tests. Adequate reactor steam pressure must be ≥ 920 psig to perform SR 3.5.1.7 and ≥ 145 psig to perform SR 3.5.1.8.

BASES

SURVEILLANCE REQUIREMENTS (continued)

Adequate steam flow is represented by turbine bypass valves at least 30% open, or total steam flow $\geq 10^6$ lb/hr. Reactor startup is allowed prior to performing the low pressure Surveillance test because the reactor pressure is low and the time allowed to satisfactorily perform the Surveillance test is short. The reactor pressure is allowed to be increased to normal operating pressure since it is assumed that the low pressure test has been satisfactorily completed and there is no indication or reason to believe that HPCI is inoperable.

Therefore, SR 3.5.1.7 and SR 3.5.1.8 are modified by Notes that state the Surveillances are not required to be performed until 12 hours after the reactor steam pressure and flow are adequate to perform the test. The 12 hours allowed for the flow tests after required pressure and flow are reached are sufficient to achieve stable conditions for testing and provides a reasonable time to complete the SRs. For SR 3.5.1.8, while adequate pressure can be reached prior to the required Applicability for HPCI, the 12 hour allowance of the Note would not apply until entering the Applicability (> 150 psig) with adequate steam flow.

The Surveillance Frequency for SR 3.5.1.6 and SR 3.5.1.7 is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 13). ~~The Frequency for SR 3.5.1.6 is in accordance with the INSERVICE TESTING PROGRAM requirements.~~ The Frequency for ~~SR 3.5.1.7 and~~ SR 3.5.1.8 is controlled under the Surveillance Frequency Control Program.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.5.1.11

A manual actuation of each ADS valve is performed to verify that the valve and solenoid are functioning properly and that no blockage exists in the SRV discharge lines. This is demonstrated by the response of the turbine control or bypass valve or by a change in the measured 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 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 SR. Adequate pressure at which this SR 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. Reactor startup is allowed prior to performing this SR because valve OPERABILITY and the setpoints for overpressure protection are verified, *in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 13)*~~per ASME 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 is reached is sufficient to achieve stable conditions and provides adequate time to complete the Surveillance. SR 3.5.1.10 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 Surveillance Frequency is controlled under the Surveillance Frequency Control Program *in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 13)*.

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|------------|--------------------------|
| REFERENCES | 1. USAR, Section VI-4.3. |
| | 2. USAR, Section VI-4.4. |

BASES

REFERENCES (continued)

3. USAR, Section VI-4.1.
 4. USAR, Section VI-4.2.
 5. USAR, Section XIV-6.
 6. USAR, Appendix G.
 7. 10 CFR 50, Appendix K.
 8. 10 CFR 50.46.
 9. NEDC-32687P, Revision 1, "Cooper Nuclear Station SAFER/GESTR-LOCA Loss-of-Coolant Accident Analysis," March 1997.
 10. 10 CFR 50.36(c)(2)(ii).
 11. Memorandum from R.L. Baer (NRC) to V. Stello, Jr. (NRC), "Recommended Interim Revisions to LCOs for ECCS Components," December 1, 1975.
 12. NEDE-24956, "BWR ADS Pneumatic System Comparison to NUREG-0737 Requirement II.K.3.2.8."
 13. 10 CFR 50.55a(f).
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BASES

SURVEILLANCE REQUIREMENTS (continued)

30% open, or total steam flow $> 10^6$ lb/hr. Reactor startup is allowed prior to performing the low pressure Surveillance because the reactor pressure is low and the time allowed to satisfactorily perform the Surveillance is short. The reactor pressure is allowed to be increased to normal operating pressure since it is assumed that the low pressure Surveillance has been satisfactorily completed and there is no indication or reason to believe that RCIC is inoperable. Therefore, these SRs are modified by Notes that state the Surveillances are not required to be performed until 12 hours after the reactor steam pressure and flow are adequate to perform the test. The 12 hours allowed for the flow tests after the required pressure and flow are reached are sufficient to achieve stable conditions for testing and provides a reasonable time to complete the SRs. For SR 3.5.3.4, while adequate pressure can be reached prior to the required Applicability for RCIC, the 12 hour allowance of the Note would not apply until entering the Applicability (>150 psig) with adequate steam flow.

The Surveillance Frequency for SR 3.5.3.3 is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 5). The Surveillance Frequency for SR 3.5.3.4 is controlled under the Surveillance Frequency Control Program.

SR 3.5.3.5

The RCIC System is required to actuate automatically in order to verify its design function satisfactorily. This Surveillance verifies that, with a required system initiation signal (actual or simulated), the automatic initiation logic of the RCIC System will cause the system to operate as designed, including actuation of the system throughout its emergency operating sequence; that is, automatic pump startup and actuation of all automatic valves to their required positions. This test also ensures the RCIC System will automatically restart on an RPV low water level (Level 2) signal received subsequent to an RPV high water level (Level 8) trip and that the suction is automatically transferred from the ECST to the suppression pool. The LOGIC SYSTEM FUNCTIONAL TEST performed in LCO 3.3.5.2 overlaps this Surveillance to provide complete testing of the assumed design function.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

SURVEILLANCE REQUIREMENTS (continued)

This SR is modified by Note 1 that says the Surveillance is not required to be performed until 12 hours after the reactor steam pressure and flow are adequate to perform the test. The time allowed for this test after required pressure and flow are reached is sufficient to achieve stable conditions for testing and provides a reasonable time to complete the SR. Adequate reactor pressure must be available to perform this test. Additionally, adequate steam flow must be passing through the main turbine or turbine bypass valves to continue to control reactor pressure when the RCIC System diverts steam flow. Thus, sufficient time is allowed after adequate pressure and flow are achieved to perform this test. Adequate reactor steam pressure is 145 psig. Adequate steam flow is represented by turbine bypass valves at least 30% open, or a total steam flow of 10^6 lb/hr. Reactor startup is allowed prior to performing this test because the reactor pressure is low and the time allowed to satisfactorily perform the test is short. For SR 3.5.3.3, while adequate pressure can be reached prior to the required Applicability for RCIC, the 12 hour allowance of the Note would not apply until entering the Applicability (>150 psig) with adequate steam flow.

This SR is modified by Note 2 that excludes vessel injection during the Surveillance. Since all active components are testable and full flow can be demonstrated by recirculation through the test line, coolant injection into the RPV is not required during the Surveillance.

REFERENCES

1. USAR, Appendix F, Section F-2.2.1.
2. USAR, Section IV-7.
3. 10 CFR 50.36(c)(2)(ii).
4. Memorandum from R.L. Baer (NRC) to V. Stello, Jr. (NRC), "Recommended Interim Revisions to LCOs for ECCS Components," December 1, 1975.
5. 10 CFR 50.55a(f).

BASES

SURVEILLANCE REQUIREMENTS (continued)

controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated.

SR 3.6.1.3.4

The traversing incore probe (TIP) shear isolation valves are actuated by explosive charges. Surveillance of explosive charge continuity provides assurance that TIP valves will actuate when required. Other administrative controls, such as those that limit the shelf life of the explosive charges, must be followed. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.6.1.3.5

Verifying the isolation time of each power operated automatic PCIV is within limits is required to demonstrate OPERABILITY. MSIVs may be excluded from this SR since MSIV full closure isolation time is demonstrated by SR 3.6.1.3.6. The isolation time test ensures that the valve will isolate in a time period less than or equal to that assumed in the safety analyses. The isolation time ~~and Frequency~~ of this SR ~~are-is~~ in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 13) ~~the INSERVICE TESTING PROGRAM.~~

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 13).

SR 3.6.1.3.6

Verifying that the isolation time of each MSIV is within the specified limits is required to demonstrate OPERABILITY. The isolation time test ensures that the MSIV will isolate in a time period that does not exceed the times assumed in the DBA and transient analyses. This ensures that the calculated radiological consequences of these events remain within 10 CFR 100 limits. ~~The Frequency of this SR is in accordance with the requirements of the INSERVICE TESTING PROGRAM.~~

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 13).

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.3.7

Automatic PCIVs close on a primary containment isolation signal to prevent leakage of radioactive material from primary containment following a DBA. This SR ensures that each automatic PCIV will actuate to its isolation position on a primary containment isolation signal. The LOGIC SYSTEM FUNCTIONAL TEST in LCO 3.3.6.1, "Primary Containment Isolation Instrumentation," overlaps this SR to provide complete testing of the safety function. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.6.1.3.8

This SR requires a demonstration that a representative sample of reactor instrumentation line excess flow check valves (EFCVs) are OPERABLE by verifying that each valve actuates to the isolation position on an actual or simulated instrument line break. The representative sample consists of an approximately equal number of EFCVs, such that each EFCV is tested at least once every 10 years (nominal). This SR provides assurance that the instrumentation line EFCVs will perform so that predicted radiological consequences will not be exceeded during the postulated instrument line break event. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

The nominal 10 year interval is based on other performance-based testing programs, such as 10 CFR 50.55a(f) ~~Inservice Testing (snubbers)~~ and Option B to 10 CFR 50, Appendix J. Furthermore, any EFCV failures will be evaluated to determine if additional testing in that test interval is warranted to ensure overall reliability is maintained. Operating experience has demonstrated that these components are highly reliable and that failures to isolate are very infrequent. Therefore, testing of a representative sample was concluded to be acceptable from a reliability standpoint.

BASES

SURVEILLANCE REQUIREMENTS (continued)

the inboard Main Steam drain line penetration (penetration X-8, with Containment isolation valves MS-MOV-MO74 and MS-MOV-MO77). The aggregate leakage of the Main Steam Pathway must be ≤ 212 scfh when tested at ≥ 29 psig or the equivalent leakage rate of ≤ 300 scfh when tested at $\geq P_a$ (58 psig). The leakage rate to be measured is the Main Steam Pathway "minimum path" leakage (the lesser actual pathway leakage of the two Containment isolation valves in each penetration; i.e., the MSIVs in penetrations X-7A through X-7D, and MS-MOV-MO74 and MS-MOV-MO77 in penetration X-8). The leakage limit is based on the analyses of References 11 and 12. The Frequency is specified in the Primary Containment Leakage Rate Testing Program.

REFERENCES

1. USAR, Chapter XIV.
2. Amendment 25 to the FSAR.
3. NEDC 96-006, "Estimate of Steam Tunnel's HELB," dated March 30, 1996.
4. USAR Section IV-4.9.
5. 10 CFR 50.36(c)(2)(ii).
6. USAR, Table V-2-2.
7. USAR, Burns and Roe Drawing 4259, Sheets 1 and 1A, and Burns and Roe Drawing 4260, Sheets 2A and 2B (Incorporated by Reference).
8. USAR, Section V-2.0.
9. USAR, Section XIV-6.3.
10. 10 CFR 50, Appendix J, Option B.
11. NEDC 07-082, "Radiological Dose Analysis for a Loss of Coolant Accident (LOCA) at Cooper Nuclear Station."
12. NEDC 07-087, "AST Reduced Pressure MS Pathway Leakage Limits."
13. 10 CFR 50.55a(f).

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 Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

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 for Operation and Maintenance of Nuclear Power Plants.~~
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BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.7.2

Each vacuum breaker must be cycled to ensure that it opens properly to perform its design function and returns to its fully closed position. This ensures that the safety analysis assumptions are valid. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 4).

SR 3.6.1.7.3

Demonstration of vacuum breaker opening setpoint is necessary to ensure that the safety analysis assumption regarding vacuum breaker full open differential pressure of ≤ 0.5 psid is valid. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 4).

REFERENCES

1. Bodega Bay Preliminary Hazards Summary Report, Appendix I, Docket 50-205, December 28, 1962.
 2. USAR, Section V-2.3.6.
 3. 10 CFR 50.36(c)(2)(ii).
 4. 10 CFR 50.55a(f).
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BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.8.3

Verification of the vacuum breaker setpoint for opening is necessary to ensure that the safety analysis assumption regarding vacuum breaker full open differential pressure of 0.5 psid is valid. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program **in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 3).**

REFERENCES

1. Bodega Bay Preliminary Hazards Summary Report, Appendix I, Docket 50-205, December 28, 1962.
 2. USAR, Section XIV-6.3.
 3. ~~Deleted~~ 10 CFR 50.55a(f).
 4. USAR, Section V-2.3.6.
 5. 10 CFR 50.36(c)(2)(ii).
 6. FSAR Question No. 5.17.
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BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.9.1 (continued)

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.6.1.9.2

Verifying each required 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. It is tested in the pool cooling mode to demonstrate pump OPERABILITY without spraying down equipment in the drywell. Flow is a normal test of centrifugal pump performance in accordance with the requirements of 10 CFR 50.55a(f) required by the ASME Code, Section XI (Ref. 4). This test confirms one point on the pump performance curve and is indicative of overall performance. Such inservice tests 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.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 4).

SR 3.6.1.9.3

This Surveillance is performed following maintenance which could result in nozzle blockage by introduction of air to verify that the spray nozzles are not obstructed and that flow will be provided when required. The Frequency is adequate to detect degradation in performance due to the passive nozzle design and its normally dry state and has been shown to be acceptable through operating experience.

REFERENCES

1. USAR, Chapter XIV, Section 6.3.
2. USAR, Chapter V, Section 2.
3. EE 01-035, EQ Temperature Profile in Containment based on Small Steam Line Break and DBA-LOCA Analysis.
4. 10 CFR 50.55a(f) ASME Code for Operation and Maintenance of Nuclear Power Plants.

BASES

SURVEILLANCE REQUIREMENTS (continued)

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 ~~in accordance with the requirements of 10 CFR 50.55a(f) required by ASME Code~~ (Ref. 4). This test confirms one point on the pump design curve, and the results are indicative of overall performance. Such ~~inservice~~ tests 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.~~

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 4).

REFERENCES

1. USAR, Section XIV-6.
 2. 10 CFR 36(c)(2)(ii).
 3. NEDC 94-034B, C & D
 4. ~~10 CFR 50.55a(f) ASME Code for Operation and Maintenance of Nuclear Power Plants.~~
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BASES

SURVEILLANCE REQUIREMENTS (continued)

reasons. Therefore, the probability of misalignment of these isolation devices, once they have been verified to be in the proper position, is low.

A second Note has been included to clarify that SCIVs that are open under administrative controls are not required to meet the SR during the time the SCIVs are open. These controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for secondary containment isolation is indicated.

SR 3.6.4.2.2

Verifying that the isolation time of each power operated automatic SCIV is within limits is required to demonstrate OPERABILITY. The isolation time test ensures that the SCIV will isolate in a time period less than or equal to that assumed in the safety analyses. The isolation time ~~and Frequency of this SR are~~ in accordance with the ~~INSERVICE TESTING PROGRAM~~ requirements of 10 CFR 50.55a(f) (Ref. 7).

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10CFR 50.55a(f) (Ref. 7).

SR 3.6.4.2.3

Verifying that each automatic SCIV closes on a secondary containment isolation signal is required to minimize leakage of radioactive material from secondary containment following a DBA or other accidents. This SR ensures that each automatic SCIV will actuate to the isolation position on a secondary containment isolation signal. The LOGIC SYSTEM FUNCTIONAL TEST in LCO 3.3.6.2, "Secondary Containment Isolation Instrumentation," overlaps this SR to provide complete testing of the safety function. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. USAR, Section V-3.0.
2. USAR, Section XIV-6.0.
3. USAR, Section XIV-6.3.

BASES

REFERENCES (continued)

4. USAR, Section XIV-6.4
 5. 10 CFR 50.36(c)(2)(ii).
 6. Technical Requirements Manual.
 7. 10 CFR 50.55a(f).
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BASES

SURVEILLANCE REQUIREMENTS (continued)

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. Periodic removal of water from the fuel oil day tanks 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 controlled under the Surveillance Frequency Control Program. 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 Surveillance Frequency is controlled under the Surveillance Frequency Control Program in accordance with the requirements of 10 CFR 50.55a(f) (Ref. 16).

SR 3.8.1.8

Transfer of each 4.16 kV critical bus power supply from the normal offsite circuit to the alternate offsite circuit demonstrates the OPERABILITY of the alternate circuit distribution network to power the shutdown loads. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

This SR is modified by a Note. The reason for the Note is that, during operation with the reactor critical, performance of this SR could cause perturbations to the electrical distribution systems that could challenge continued steady state operation and, as a result, plant safety systems. Credit may be taken for unplanned events that satisfy this SR.

BASES

REFERENCES (continued)

11. Regulatory Guide 1.137.
 12. ANSI C84.1, 1970.
 13. USAR, Section VIII-5.2.
 14. Not used.
 15. IEEE Standard 387, 1995.
 16. 10 CFR 50.55a(f).
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