



Nebraska Public Power District

"Always there when you need us"

50.90

NLS2021056
November 16, 2021

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

Subject: Application to Revise Technical Specifications to Adopt TSTF-551, "Revise
Secondary Containment Surveillance Requirements"
Cooper Nuclear Station, Docket No. 50-298, License No. DPR-46

Dear Sir or Madam:

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

The proposed change revises TS 3.6.4.1, "Secondary Containment," Surveillance Requirement (SR) 3.6.4.1.1. The SR is revised to address conditions during which the secondary containment pressure may not meet the SR pressure requirements. In addition, SR 3.6.4.1.3 is modified to acknowledge that secondary containment access openings may be open for entry and exit.

Attachment 1 provides a description and assessment of the proposed changes. Attachment 2 provides the existing TS page marked up to show the proposed changes. Attachment 3 provides revised (clean) TS page. Attachment 4 provides existing TS Bases pages marked up to show the associated TS Bases changes and is provided for information only.

Approval of the proposed amendment is requested by November 15, 2022. Once approved, the amendment shall be implemented within 60 days.

There are no regulatory commitments made in this submittal.

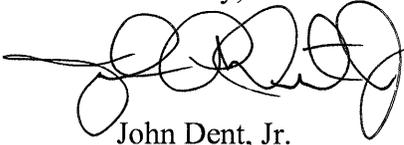
The proposed TS changes have been reviewed by the necessary safety review committees (Station Operations Review Committee and Safety Review and Audit Board). In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," a copy of this application, with attachments, is being provided to the designated State of Nebraska Official.

If you should have any questions regarding this submittal, please contact Linda Dewhirst, Regulatory Affairs and Compliance Manager, at (402) 825-5416.

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

Executed On: 11/16/2021
Date

Sincerely,



John Dent, Jr.
Vice President and
Chief Nuclear Officer

/dv

- Attachments:
1. Description and Assessment
 2. Proposed Technical Specifications Change (Mark-up)
 3. Revised Technical Specifications Page
 4. Proposed Technical Specifications Bases Changes (Mark-up) - 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, 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

The proposed change revises Technical Specification (TS) 3.6.4.1, "Secondary Containment," Surveillance Requirement (SR) 3.6.4.1.1. The SR is revised to allow conditions during which the secondary containment pressure may not meet the SR pressure requirements. In addition, SR 3.6.4.1.3 is modified to acknowledge that secondary containment access openings may be open for entry and exit.

2.0 ASSESSMENT

2.1 Applicability of Safety Evaluation

Nebraska Public Power District (NPPD) has reviewed the safety evaluation for TSTF-551 provided to the Technical Specifications Task Force (TSTF) in a letter dated September 21, 2017 (Accession No. ML17236A367). This review included a review of the Nuclear Regulatory Commission (NRC) staff's evaluation, as well as the information provided in TSTF-551. NPPD has concluded that the justifications presented in TSTF-551 and the safety evaluation prepared by the NRC staff are applicable to Cooper Nuclear Station (CNS) and justify this amendment for the incorporation of the changes to the CNS TS.

The radiological consequence analysis for CNS was approved by the NRC on September 15, 2009 (Accession No. ML092310349) and is documented in the USAR Section XIV-6.3. NPPD has confirmed that the brief, inadvertent, simultaneous opening of both an inner and outer personnel access door during normal entry and exit conditions, and their prompt closure by normal means, is bounded by the radiological dose consequence analysis. In the unlikely event that an accident would occur when both personnel access doors are open for entry or exit, the brief time required to close one of the doors is small compared to the 300 seconds assumed in the accident analysis for reducing the post-accident secondary containment pressure to less than 0 inches of vacuum water gauge, and will not result in an increase in any onsite or offsite dose.

2.2 Variations

NPPD is proposing the following variations from the TS changes described in TSTF-551 or the applicable parts of the NRC staff's safety evaluation. These variations do not affect the applicability of TSTF-551 or the NRC staff's safety evaluation to the proposed license amendment.

The CNS TS do not contain an SR equivalent to the STS 3.6.4.1.4 modified by TSTF-551. Therefore, the revision of the SR 3.6.4.1.4 is not applicable.

The traveler and safety evaluation discuss the applicable regulatory requirement and guidance, including the 10 CFR 50, Appendix A, General Design Criteria (GDC). CNS was not licensed to the 10 CFR 50, Appendix A, GDC. The CNS equivalents of the referenced GDC are located in Appendix F of the CNS Updated Safety Analysis Report (USAR). The USAR concludes that

CNS meets the intent of the criteria contained in the 1971 10 CFR 50 Appendix A Final Rule. This difference does not alter the conclusion that the proposed change is applicable to CNS.

The final safety evaluation for TSTF-551 discusses that the NRC staff review determined that there are two design basis accidents that take credit for the secondary containment and are possibly impacted by the brief, inadvertent, and simultaneous opening of both an inner and outer access doors during normal entry and exit conditions: loss of coolant accident and the fuel handling accident (FHA) in secondary containment. The CNS FHA does not credit the secondary containment for the mitigation of FHAs occurring beyond 24 hours following reactor shutdown. However, the ability to use these systems to mitigate an FHA beyond this time period has been retained as a defense in depth measure. This difference does not alter the conclusion that the proposed change is applicable to CNS.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Analysis

Nebraska Public Power District (NPPD) requests adoption of TSTF-551, "Revise Secondary Containment Surveillance Requirements," which is an approved change to the standard technical specifications, into the Cooper Nuclear Station Technical Specifications (TS). The proposed change revises TS Surveillance Requirement (SR) 3.6.4.1.1. The SR is revised to permit conditions during which the secondary containment may not meet the SR acceptance criterion for a period of up to 4 hours if an analysis demonstrates that one standby gas treatment (SGT) subsystem remains capable of establishing the required secondary containment vacuum. In addition, SR 3.6.4.1.3 is modified to acknowledge that secondary containment access openings may be open for entry and exit.

NPPD has evaluated the proposed change against the criteria of 10 CFR 50.92(c) to determine if the proposed change results in any significant hazards. The following is the evaluation of each of the 10 CFR 50.92(c) criteria:

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

Response: No

The proposed change addresses conditions during which the secondary containment SRs are not met. The secondary containment is not an initiator of any accident previously evaluated. As a result, the probability of any accident previously evaluated is not increased. The consequences of an accident previously evaluated while utilizing the proposed changes are no different than the consequences of an accident while utilizing the existing four-hour Completion Time for an inoperable secondary containment. In addition, the proposed Note for SR 3.6.4.1.1 provides an alternative means to ensure the secondary containment safety function is met. As a result, the consequences of an 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 change create the possibility of a new or different kind of accident from any previously evaluated?

Response: No

The proposed change does not alter the protection system design, create new failure modes, or change any modes of operation. The proposed change does not involve a physical alteration of the plant; and no new or different kind of equipment will be installed. Consequently, there are no new initiators that could result in a new or different kind of accident.

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 change involve a significant reduction in a margin of safety?

Response: No

The proposed change addresses conditions during which the secondary containment SRs are not met. Conditions in which the secondary containment vacuum is less than the required vacuum are acceptable provided the conditions do not affect the ability of the SGT System to establish the required secondary containment vacuum under post-accident conditions within the time assumed in the accident analysis. This condition is incorporated in the proposed change by requiring an analysis of actual environmental and secondary containment pressure conditions to confirm the capability of the SGT System is maintained within the assumptions of the accident analysis. Therefore, the safety function of the secondary containment is not affected. The allowance for both an inner and outer secondary containment door to be open simultaneously for entry and exit does not affect the safety function of the secondary containment as the doors are promptly closed after entry or exit, thereby restoring the secondary containment boundary.

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

Based on the above, 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.

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. ENVIRONMENTAL CONSIDERATION

The proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

Attachment 2

Proposed Technical Specifications Change (Mark-up)

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

Revised Page

3.6-35

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.4.1.1</p> <p>-----NOTE----- <u>Not required to be met for 4 hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required secondary containment vacuum.</u></p> <p>Verify secondary containment vacuum is ≥ 0.25 inch of vacuum water gauge.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.6.4.1.2</p> <p>Verify all secondary containment equipment hatches are closed and sealed.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.6.4.1.3</p> <p>Verify one secondary containment access door in each access opening is closed, <u>except when the access opening is being used for entry and exit.</u></p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.6.4.1.4</p> <p>Verify each SGT subsystem can maintain ≥ 0.25 inch of vacuum water gauge in the secondary containment for 1 hour at a flow rate ≤ 1780 cfm.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

Attachment 3

Revised Technical Specifications Page

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

Revised Page

3.6-35

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	<p>-----NOTE----- Not required to be met for 4 hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required secondary containment vacuum. -----</p> <p>Verify secondary containment vacuum is ≥ 0.25 inch of vacuum water gauge.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.3	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.4	Verify each SGT subsystem can maintain ≥ 0.25 inch of vacuum water gauge in the secondary containment for 1 hour at a flow rate ≤ 1780 cfm.	In accordance with the Surveillance Frequency Control Program

Attachment 4

**Proposed Technical Specifications Bases Changes (Mark-up) -
Information Only**

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

Revised Pages

B 3.6-73

B 3.6-74

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.1

This SR ensures that the secondary containment boundary is sufficiently leak tight to preclude exfiltration under expected wind conditions. ~~Momentary transients on installed instrumentation due to gusty wind conditions are considered acceptable and are not cause for failure to meet this SR.~~

The SR is modified by a Note which states the SR is not required to be met for up to 4 hours if an analysis demonstrates that one SGT subsystem remains capable of establishing the required secondary containment vacuum. Use of the Note is expected to be infrequent but may be necessitated by situations in which secondary containment vacuum may be less than the required containment vacuum, such as, but not limited to, wind gusts or failure or change of operating normal ventilation subsystems. These conditions do not indicate any change in the leak tightness of the secondary containment boundary. The analysis should consider the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured secondary containment vacuum, etc.) to determine whether, if an accident requiring secondary containment to be OPERABLE were to occur, one train of SGT could establish the assumed secondary containment vacuum within the time assumed in the accident analysis. If so, the SR may be considered met for a period up to 4 hours. The 4 hour limit is based on the expected short duration of the situations when the Note would be applied.

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

SR 3.6.4.1.2 and SR 3.6.4.1.3

Verifying that secondary containment equipment hatches ~~and one access door in each access opening~~ are closed ensures that the infiltration of outside air of such a magnitude as to prevent maintaining the desired negative pressure does not occur ~~and~~. ~~Verifying that all such openings are closed~~ provides adequate assurance that exfiltration from the secondary containment will not occur. SR 3.6.4.1.2 also requires equipment hatches to be sealed. In this application, the term "sealed" has no connotation of leak tightness. ~~Maintaining secondary containment OPERABILITY requires verifying one door in the access opening is closed. However, each secondary containment access door is normally kept closed, except when the access opening is being used for normal transient entry and exit or when maintenance is being performed on an~~

BASES

~~access:~~

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

SR 3.6.4.1.3

Verifying that one secondary containment access door in each access opening is closed provides adequate assurance that exfiltration from the secondary containment will not occur. An access opening contains at least one inner and one outer door. The intent is to not breach the secondary containment, which is achieved by maintaining the inner or outer portion of the barrier closed except when the access opening is being used for entry and exit.

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

SR 3.6.4.1.4

The SGT System exhausts the secondary containment atmosphere to the environment through appropriate treatment equipment. SR 3.6.4.1.4 demonstrates that one SGT subsystem can maintain ≥ 0.25 inches of vacuum water gauge for 1 hour at a flow rate ≤ 1780 cfm. The 1 hour test period allows secondary containment to be in thermal equilibrium at steady state conditions. Therefore, this test is used to ensure secondary containment boundary integrity. Since this SR is a secondary containment test, it need not be performed with each SGT subsystem. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.
