

June 13, 2023

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

Calvert Cliffs Nuclear Power Plant, Units 1 and 2
Renewed Facility Operating License Nos. DPR-53 and DPR-69
NRC Docket Nos. 50-317 and 50-318

Subject: License Amendment Request to Adopt TSTF-59-A, "Incorporate [Combustion Engineering] NPSD-994 Recommendations into the [Safety Injection Tanks] Specification," Revision 1

Reference: TSTF-59-A, Revision 1, "Incorporate CE NPSD-994 recommendations into the SITs specification," dated 06/16/99 (ADAMS Accession No. ML040440152)

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Constellation Energy Generation, LLC (CEG) requests approval of changes to Renewed Facility Operating License Nos. DPR-53 and DPR-69 for Calvert Cliffs Nuclear Power Plant, Units 1 and 2 (CCNPP).

The proposed changes incorporate the NRC-approved Technical Specification Task Force (TSTF) Improved Standard Technical Specifications Change Traveler TSTF-59-A, "Incorporate [Combustion Engineering] NPSD-994 Recommendations into the [Safety Injection Tank] Specification," Revision 1 (Reference). The changes modify TS 3.5.1 Condition A to add the condition where one SIT is inoperable due to the inability to verify level or pressure. The changes also extend the Condition B allowed outage time (AOT) from 1 hour to 24 hours when one Safety Injection Tank (SIT) is inoperable for reasons other than Condition A.

Attachment 1 provides an evaluation of the proposed changes, including an analysis of the significant hazards consideration. Attachment 2 provides a markup of the affected TS pages. Attachment 3 provides a markup of the affected TS Bases pages. TS Bases changes are provided for information only and will be incorporated in accordance with the TS Bases Control Program upon implementation of the approved amendments.

The proposed changes have been reviewed by the CCNPP Plant Operations Review Committee in accordance with the requirements of the CEG Quality Assurance Program.

CEG requests approval of the proposed amendments by June 13, 2024. Once approved, the amendments shall be implemented within 90 days. This implementation period will provide adequate time for the affected station documents to be revised using the appropriate change control mechanisms.

There are no regulatory commitments contained in this submittal.

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In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), CEG is notifying the State of Maryland of this application for license amendment by transmitting a copy of this letter and its attachments to the designated State Official.

Should you have any questions concerning this submittal, please contact Ms. Wendi E. Para at (267) 533-5208.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 13th day of June 2023.

Respectfully,



David P. Helker
Sr. Manager - Licensing
Constellation Energy Generation, LLC

Attachments: 1. Evaluation of Proposed Changes
2. Proposed Technical Specifications Changes (Mark-Up)
3. Proposed Technical Specifications Bases Pages (Mark-Up) (For Information Only)

cc: USNRC Region I, Regional Administrator
USNRC Senior Resident Inspector, Calvert Cliffs Nuclear Power Plant
USNRC Project Manager, NRR – Calvert Cliffs Nuclear Power Plant
S. Seaman, State of Maryland

ATTACHMENT 1

Evaluation of Proposed Changes

Subject: License Amendment Request to Adopt TSTF-59-A, “Incorporate [Combustion Engineering] NPSD-994 Recommendations into the [Safety Injection Tanks] Specification,” Revision 1, as revised by CEOG-ED-52

- 1.0 SUMMARY DESCRIPTION

- 2.0 DETAILED DESCRIPTION
 - 2.1 Optional Changes and Variations

- 3.0 REGULATORY EVALUATION
 - 3.1 Applicability of Published Safety Evaluation
 - 3.2 No Significant Hazards Consideration
 - 3.3 Conclusions

- 4.0 ENVIRONMENTAL CONSIDERATION

- 5.0 REFERENCES

1.0 SUMMARY DESCRIPTION

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Constellation Energy Generation, LLC (CEG) requests approval of changes to Renewed Facility Operating License Nos. DPR-53 and DPR-69 for Calvert Cliffs Nuclear Power Plant, Units 1 and 2 (CCNPP).

The proposed changes incorporate the NRC-approved Technical Specification Task Force (TSTF) Improved Standard Technical Specifications Change Traveler License Amendment Request to Adopt TSTF-59-A, "Incorporate [Combustion Engineering] NPSD-994 Recommendations into the [Safety Injection Tanks] Specification," Revision 1 (hereafter referred to as TSTF-59-A and CE NPSD-994, respectively) (References 5.1 and 5.2). The changes modify TS 3.5.1 Condition A to add the condition where one SIT is inoperable due to the inability to verify level or pressure. The changes also extend the Condition B allowed outage time (AOT) from 1 hour to 24 hours when one Safety Injection Tank (SIT) is inoperable for reasons other than Condition A.

NOTE: CEOG-ED-52 is an editorial amendment to TSTF-59-A, Revision 1 which corrected the CE NPSD-994, "Joint Application Report for Safety Injection Tank AOT/STI Extension" approval date to reflect May 1995 instead of April 1995.

2.0 DETAILED DESCRIPTION

NRC-approved TSTF-59-A changes modify Improved Standard Technical Specifications (ISTS) to extend the AOT to 24 hours when one SIT is inoperable in specific conditions. The changes are based on the analysis in CE NPSD-994 which justifies the AOT extension by a series of deterministic and probabilistic findings that the 24-hour Completion Time has no effect on risk as compared to shorter periods for restoring the SIT to OPERABLE status. This TSTF is only approved for use by Combustion Engineering (CE) plants.

The proposed changes modify TS 3.5.1, Safety Injection Tanks (SITs), Condition A to add the condition where the SIT is inoperable due to the inability to verify level or pressure. The applicable TS Required Action A.1 is modified to require restoration of the SIT to operable status. The associated Completion Time remains unchanged (72 hours). The proposed changes also modify the Completion time of Condition B to increase the AOT from 1 hour to 24 hours. The remaining Conditions, Required Actions, and Completion Times in the Technical Specifications are unchanged.

As described in the proposed TS Bases changes, the changes to TS 3.5.1 are justified because the combination of redundant level and pressure instrumentation for any single SIT provides sufficient information so that it is not worthwhile to always attempt to correct drift associated with one instrument, with the resulting radiation exposures during entry into containment, as there is sufficient time to repair one in the event that a second one became inoperable. Because these instruments do not initiate a safety action, it is reasonable to extend the allowable outage time for them. While technically inoperable, the SIT will be available to fulfill its safety function during this time and, thus, this Completion Time results in a negligible increase in risk. In addition, CE NPSD-994 provides a series of deterministic and probabilistic findings that support the 24-hour Completion Time as having no effect on risk as compared to shorter periods for restoring the SIT to OPERABLE status. Since risk analyses demonstrate that the increased risk of operating with a single SIT out of service is negligible, increasing the AOT can be beneficial by possibly avoiding unplanned shutdowns associated with an inoperable SIT. Unnecessary plant shutdowns associated with the outage of non-risk-significant equipment are undesirable

because Mode changes have the potential to increase the risk above that of steady-state operation.

A corresponding change is made to the TS 3.5.1 Bases for Actions A and B to add the discussion above and associated references.

2.1 Optional Changes and Variations

TSTF-59-A added two applicable references noted in the proposed TS Bases changes. The references are incorporated into the proposed CCNPP TS Bases changes; however, the reference numbering has been adjusted to align with the existing TS Bases reference numbers for CCNPP. This change is considered to be administrative and does not impact the applicability of TSTF-59-A to CCNPP.

3.0 REGULATORY EVALUATION

3.1 Applicability of Published Safety Evaluation

TSTF-59-A was approved by the NRC as documented in a letter from William Beckner (NRC) to James Davis (NEI), dated July 26, 1999 (Reference 5.3). TSTF-59-A has been adopted by many plants as part of complete conversion to the Improved Standard Technical Specifications or in combination with other TSTF changes. An example of a plant-specific NRC approval of the changes in TSTF-59-A is the October 2, 2000 NRC issuance of Amendment No. 191 for the Palisades Plant (Reference 5.4). Note that this approval also included additional changes not covered under TSTF-59-A.

CEG has concluded that the justifications presented in TSTF-59-A, the associated approval letter prepared by the NRC staff, and the industry examples are applicable to CCNPP, Units 1 and 2 and justify the proposed amendments for incorporation into the associated TS and TS Bases.

3.2 No Significant Hazards Consideration

Constellation Energy Generation, LLC (CEG), proposes changes to Renewed Facility Operating License Nos. DPR-53 and DPR-69 for Calvert Cliffs Nuclear Power Plant, Units 1 and 2 (CCNPP).

The proposed changes incorporate the NRC-approved Technical Specification Task Force (TSTF) Improved Standard Technical Specifications Change Traveler TSTF-59-A, "Incorporate [Combustion Engineering] NPSD-994 Recommendations into the [Safety Injection Tanks] Specification," Revision 1 as revised by CEOG-ED-52. The changes modify TS 3.5.1 Condition A to add the condition where one SIT is inoperable due to the inability to verify level or pressure. The changes also extend the Condition B allowed outage time (AOT) from 1 hour to 24 hours when one Safety Injection Tank (SIT) is inoperable for reasons other than Condition A.

CEG has evaluated whether or not a significant hazards consideration is involved with the proposed amendments by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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

Response: No.

The Safety Injection Tanks (SITs) are passive components in the Emergency Core Cooling System (ECCS). The SITs are not an accident initiator in any accident previously evaluated. Therefore, the proposed changes do not involve an increase in the probability of an accident previously evaluated.

SITs were designed to mitigate the consequences of Loss of Coolant Accidents (LOCA). These proposed changes do not affect any of the assumptions used in deterministic LOCA analysis. Hence, the consequences of accidents previously evaluated do not change. In addition, in order to fully evaluate the effect of the SIT Allowable Outage Time (AOT) extension, probabilistic safety analysis (PSA) methods were utilized. The results of these analyses show no significant increase in the core damage frequency or large early release frequency or resulting dose. As a result, from a PSA standpoint, there would be no significant increase in the consequences of an accident previously evaluated. These analyses are detailed in CE NPSD-994, Combustion Engineering Owners Group "Joint Applications Report for Safety Injection Tank AOT/STI Extension" and reflected in the proposed allowed outage time changes presented in TSTF-59-A.

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

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

Response: No.

The proposed changes do not change the design, configuration, or method of operation of the plant. The proposed configuration (one SIT out of service) is already permitted by the CCNPP Technical Specifications.

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

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

Response: No.

The proposed changes do not affect the limiting conditions for operation or their bases that are used in the deterministic analyses to establish the margin of safety. The proposed configuration (one SIT out of service) is already permitted by the CCNPP Technical Specifications. PSA evaluations were used to evaluate these changes. The results of these analyses show no significant increase in the core damage frequency or large early release frequency. These evaluations are detailed in CE NPSD-994.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

3.3 Conclusions

Based on the above, CEG concludes that the proposed amendments present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.0 ENVIRONMENTAL CONSIDERATION

The proposed license amendments change requirements 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 changes do 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 changes meet 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 changes.

5.0 REFERENCES

- 5.1 TSTF-59-A, Revision 1, "Incorporate CE NPSD-994 Recommendations into the SITs Specification," dated 06/16/99 (ADAMS Accession No. ML040440152)
- 5.2 CE NPSD-994, "Joint Applications Report for Safety Injection Tank AOT/STI Extension," May 1995. (ADAMS Accession No. ML17228B190)
- 5.3 Letter from W. D. Beckner (NRC) to J. Davis (NEI), dated 07/26/1999 (ADAMS Accession No. 9907300113)
- 5.4 Letter from NRC to Palisades Plant, Amendment No. 191, Completion Times for Safety Injection Tanks and Low Pressure Safety Injection, dated 10/02/00 (Accession No. ML003756143)

ATTACHMENT 2

Proposed Technical Specifications Changes (Mark-Up)

Calvert Cliffs Nuclear Power Plant, Units 1 and 2

Renewed Facility Operating License Nos. DPR-53 and DPR-69

NRC Docket Nos. 50-317 and 50-318

Revised Technical Specifications Page

3.5.1-1

3.5 EMERGENCY CORE COOLING SYSTEM (ECCS)

3.5.1 Safety Injection Tanks (SITs)

LCO 3.5.1 Four SITs shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

| CONDITION | | REQUIRED ACTION | | COMPLETION TIME |
|-----------|-----------------------------------------------------------------------------|-----------------|----------------------------------------------------------|-------------------|
| A. | One SIT inoperable due to boron concentration not within limits. | A.1 | Restore boron concentration to within limits. | 72 hours |
| B. | One SIT inoperable for reasons other than Condition A. | B.1 | Restore SIT to OPERABLE status. | 1 hour |
| C. | Required Action and associated Completion Time of Condition A or B not met. | C.1 | Be in MODE 3. | 6 hours |
| | | C.2 | Be in MODE 4. | 12 hours |
| D. | Two or more SITs inoperable. | D.1 | Enter LCO 3.0.3. | Immediately |

Restore SIT to OPERABLE status.

OR
One SIT inoperable due to the inability to verify level or pressure

24 hours

ATTACHMENT 3

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

Calvert Cliffs Nuclear Power Plant, Units 1 and 2

Renewed Facility Operating License Nos. DPR-53 and DPR-69

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Revised Technical Specifications Bases Pages

B 3.5.1-6

B 3.5.1-8

BASES

allows RCS cooldown and depressurization without discharging the SITs into the RCS or requiring depressurization of the SITs.

ACTIONS

A.1

If the boron concentration of one SIT is not within limits it must be returned to within the limits within 72 hours. In this condition, ability to maintain subcriticality or minimum boron precipitation time may be reduced, but the reduced concentration effects on core subcriticality during reflood are minor. Boiling of the ECCS water in the core during reflood concentrates the boron in the saturated liquid that remains in the core. In addition, the volume of the SIT is still available for injection. Since the boron requirements are based on the average boron concentration of the total volume of three SITs, the consequences are less severe than they would be if an SIT were not available for injection. Thus, 72 hours is allowed to return the boron concentration to within limits.

Insert 1 →

B.1

~~If one SIT is inoperable, for reasons other than boron concentration, the SIT must be returned to OPERABLE status within one hour. In this Condition, the required contents of three SITs cannot be assumed to reach the core during a LOCA. Due to the severity of the consequences should a LOCA occur in these conditions, the one hour Completion Time to open the valve, remove power from the valve, or restore proper water volume or nitrogen cover pressure, ensures that prompt action will be taken to return the inoperable accumulator to OPERABLE status. The Completion Time minimizes the exposure of the plant to a LOCA in these conditions.~~

Insert 2 →

C.1 and C.2

If the SIT cannot be restored to OPERABLE status within the associated Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power

Insert 1

The combination of redundant level and pressure instrumentation for any single SIT provides sufficient information so that it is not worthwhile to always attempt to correct drift associated with one instrument, with the resulting radiation exposures during entry into containment, as there is sufficient time to repair one in the event that a second one became inoperable. Because these instruments do not initiate a safety action, it is reasonable to extend the allowable outage time for them. While technically inoperable, the SIT will be available to fulfill its safety function during this time and, thus, this Completion Time results in a negligible increase in risk.

Insert 2

If one SIT is inoperable, for reasons other than boron concentration or the inability to verify level or pressure, the SIT must be returned to OPERABLE status within 24 hours. In this Condition, the required contents of three SITs cannot be assumed to reach the core during a LOCA as is assumed in Appendix K (Ref 4).

CE NPSD-994 (Ref 5) provides a series of deterministic and probabilistic findings that support the 24 hour Completion Time as having no affect on risk as compared to shorter periods for restoring the SIT to OPERABLE status.

BASES

prior to startup from outages. A sample of the SIT is required, to verify boron concentration, if 10 inches or greater of inleakage has occurred since last sampled.

Sampling the affected SIT (by taking the sample at the discharge of the operating HPSI pump) within one hour prior to a 1% volume increase of normal tank volume, will ensure the boron concentration of the fluid to be added to the SIT is within the required limit prior to adding inventory to the SIT(s).

SR 3.5.1.5

Verification that power is removed from each SIT isolation valve operator, by maintaining the feeder breaker open under administrative control, when the pressurizer pressure is ≥ 2000 psig ensures that an active failure could not result in the undetected closure of an SIT motor-operated isolation valve. If this were to occur, only two SITs would be available for injection, given a single failure coincident with a LOCA. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

This SR allows power to be supplied to the motor-operated isolation valves when RCS pressure is < 2000 psig, thus allowing operational flexibility by avoiding unnecessary delays to manipulate the breakers during unit startups or shutdowns. Even with power supplied to the valves, inadvertent closure is prevented by the RCS pressure interlock associated with the valves. Should closure of a valve occur in spite of the interlock, the safety injection signal provided to the valves would open a closed valve in the event of a LOCA.

REFERENCES

1. Institute of Electrical and Electronic Engineers Standard 279-1971, "IEEE Standard: Criteria for Protection Systems for Nuclear Power Generating Stations"
2. Updated Final Safety Analysis Report (UFSAR)
3. 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Plants"

Insert 3



Insert 3

4. 10 CFR 50 Appendix K.
5. CE NPSD-994, "CEOG Joint Applications Report for Safety Injection Tank AOT/STI Extension," May 1995.