Wolf Creek
Nuclear Operating Corporation

Michael T. Boyce
Vice President Engineering

June 20, 2023
ET 23-0009

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

References: 1) Letter ET 22-0006, dated December 1, 2022, from M. T. Boyce, WCNOC, to USNRC, "Application to Revise Technical Specifications to Adopt TSTF-577-A, Revision 1, "Revised Frequencies for Steam Generator Tube Inspections""

2) Letter ET 23-0002, dated February 7, 2023, from M. T. Boyce, WCNOC, to USNRC, "Supplement to License Amendment Request to Adopt TSTF-577-A, Revision 1, "Revised Frequencies for Steam Generator Tube Inspections""

Subject: Docket No. 50-482: Additional Supplement to License Amendment Request to Adopt TSTF-577-A, Revision 1, "Revised Frequencies for Steam Generator Tube Inspections"

Commissioners and Staff:

This letter is a supplement to Reference 1 in which Wolf Creek Nuclear Operating Corporation (WCNOC) submitted an application to revise the Wolf Creek Generating Station (WCGS) Technical Specifications (TS) to adopt TSTF-577-A Revision 1, "Revised Frequencies for Steam Generator Tube Inspections." During the Nuclear Regulatory Commission's (NRC) review of the documentation, a number of discrepancies were identified in the TS mark-ups and clean pages of the Reference. Specifically, the word "the" is missing from the phrase "…including analysis methodology…" in paragraph 5.6.10.d of page 5.0-28 of the TS clean pages. Additionally, TS page 5.0-29 of the clean pages should show Amendment Nos. 123, 142, 158, 159, 164, and 179 with a strike out with the proposed Amendment No. 235 and the new TS page 5.0-33 as proposed in the submittal should only show Amendment No. 235. Lastly, the deviation presented in Section 2.2 of Reference 1 that requested the word "affect" being changed to "affected" in TS 5.5.9.d.3 (TS page 5.0-14) was previously changed in Amendment No. 199. Therefore, the change as proposed in the TS mark-up is not necessary as the change was already made, and the associated Section 2.2 deviation listed in Reference 1 should be removed.

To address these discrepancies, Attachment I to this letter provides the corrected Section 2.2 of Reference 1 and removes the deviation involving the word “affected” on TS page 5.0-14. Attachment II to this letter provides the corrected TS mark-up for page 5.0-14 with the word “affected” addressed. Attachment III to this letter provides the corrected TS clean pages for pages 5.0-28, 5.0-29 and 5.0-33. The supplement provided in this correspondence alters the description of Section 2.2 of Reference 1 but does not alter the conclusions reached. In accordance with 10 CFR 50.91, *“Notice for public comment; State consultation,”* a copy of this letter, with attachments, is being provided to the designated Kansas State official.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-8831 x8687, or Dustin Hamman at (620) 364-4204.

Sincerely,

Michael T. Boyce

MTB/jkt

Attachments:
- I Corrected Evaluation of Proposed Change for Section 2.2
- II Corrected Technical Specification Mark-Up for Page 5.0-14
- III Corrected Technical Specification Clean Pages 5.0-28, 5.0-29, and 5.0-33

cc: S. S. Lee (NRC), w/a
R. J. Lewis, (NRC), w/a
J. Meinholdt (KDHE), w/a
G. E. Werner (NRC), w/a
Senior Resident Inspector (NRC), w/a

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

Michael T. Boyce, of lawful age, being first duly sworn upon oath says that he is Vice President Engineering of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the contents thereof; that he has executed the same for and on behalf of said Corporation with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By _____
Michael T. Boyce
Vice President Engineering

SUBSCRIBED and sworn to before me this 20th day of June, 2023.

JENNA SLOCUM
Notary Public - State of Kansas
My Appointment Expires 12/5/26

_____
Notary Public

Expiration Date 12/5/2026

Corrected Evaluation of Proposed Change for Section 2.2

1.0 DESCRIPTION

Wolf Creek Nuclear Operating Corporation (WCNOC) requests adoption of Technical Specification Task Force (TSTF)-577-A, Revision 1, "Revised Frequencies for Steam Generator Tube Inspections," which is an approved change to the Standard Technical Specifications (STS), into the Wolf Creek Generating Station (WCGS) Technical Specifications (TS). The TS related to steam generator (SG) tube inspections and reporting are revised based on operating history.

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

WCNOC has reviewed the safety evaluation for TSTF-577-A, Revision 1, provided to the Technical Specifications Task Force in a letter dated April 14, 2021. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-577-A, Revision 1. As described herein, WCNOC has concluded that the justifications presented in TSTF-577-A, Revision 1, and the safety evaluation prepared by the NRC staff are applicable to WCGS and justify this amendment for the incorporation of the changes to the WCGS TS.

The current SG TS requirements are based on TSTF-510, Revision 2, "Revision to Steam Generator Program Inspection Frequencies and Tube Sample Selection." The SG tubes are made from Thermally Treated Alloy 600 (Alloy 600TT).

The initial inspection period described in the proposed TS 5.5.9, "Steam Generator (SG) Program," paragraph d.2, will be performed during Refueling Outage 26 scheduled for Spring 2024 with a 100% inspection in each steam generator.

2.2 Optional Changes and Variations

WCNOC is proposing the following variations from the TS changes described in TSTF-577-A, Revision 1, or the applicable parts of the NRC staff's safety evaluation:

- The WCGS TS utilize different numbering than the Standard Technical Specifications on which TSTF-577-A, Revision 1, was based. Specifically, the Steam Generator Tube Inspection Report is Specification 5.6.10 in the WCGS TS instead of Specification 5.6.7.

- The current WCGS TS 5.6.10 first paragraph references the title of TS 5.5.9, "Steam Generator (SG) Program," without placing the title in quotes. For consistency with TSTF-577-A, Revision 1, and the STS, the title is placed in quotes.

These changes are administrative and do not affect the applicability of TSTF-577-A, Revision 1, to the WCGS TS.

The WCGS SG Program TS currently contains a provision for an alternate tube plugging criteria. The description of the alternate tube plugging criteria in the proposed change is equivalent to the description in the current TS.

Corrected Technical Specification Mark-Up for Page 5.0-14

5.5 Programs and Manuals

5.5.9 Steam Generator (SG) Program (continued)

~~each inspection period as defined in a, b, and c below. If a degradation assessment indicates the potential for a type of degradation to occur at a location not previously inspected with a technique capable of detecting this type of degradation at this location and that may satisfy the applicable tube plugging criteria, the minimum number of locations inspected with such a capable inspection technique during the remainder of the inspection period may be prorated. The fraction of locations to be inspected for this potential type of degradation at this location at the end of the inspection period shall be no less than the ratio of the number of times the SG is scheduled to be inspected in the inspection period after the determination that a new form of degradation could potentially be occurring at this location divided by the total number of times the SG is scheduled to be inspected in the inspection period. Each inspection period defined below may be extended up to 3 effective full power months to include a SG inspection outage in an inspection period and the subsequent inspection period begins at the conclusion of the included SG inspection outage.~~

~~a) After the first refueling outage following SG installation, inspect 100% of the tubes during the next 120 effective full power months. This constitutes the first inspection period.~~

~~b) During the next 96 effective full power months, inspect 100% of the tubes. This constitutes the second inspection period; and~~

~~c) During the remaining life of the SGs, inspect 100% of the tubes every 72 effective full power months. This constitutes the third and subsequent inspection periods.~~

3. If crack indications are found in any ~~portion of the~~ SG tube **excluding any region that is exempt from inspection by alternate repair criteria**~~not excluded above~~, then the next inspection for each affected and potentially affected SG for the degradation mechanism that caused the crack indication shall **be at the next** ~~not exceed 24 effective full power months or one~~ refueling outage**, but may be deferred to the following refueling outage if the 100% inspection of all SGs was performed with enhanced probes as described in paragraph d.2** ~~(whichever results in more frequent inspections)~~. If definitive information, such as from examination of a pulled tube, diagnostic non-destructive testing, or engineering evaluation indicates that a crack-like indication is not associated with a crack(s), then the indication need not be treated as a crack.

Revised Technical Specification Clean Pages 5.0-28, 5.0-29 and 5.0-33

5.6 Reporting Requirements

5.6.10 Steam Generator Tube Inspection Report

A report shall be submitted within 180 days after the initial entry into MODE 4 following completion of an inspection performed in accordance with the Specification 5.5.9, "Steam Generator (SG) Program." The report shall include:

a. The scope of inspections performed on each SG;

b. The nondestructive examination techniques utilized for tubes with increased degradation susceptibility;

c. For each degradation mechanism found:

1. The nondestructive examination technique utilized;

2. The location, orientation (if linear), measure size (if available), and voltage response for each indication. For tube wear at support structures less than 20 percent through-wall, only the total number of indications needs to be reported;

3. A description of the condition monitoring assessment and results, including the margin to the tube integrity performance criteria and comparison with the margin predicted to exist at the inspection by the previous forward-looking tube integrity assessment; and

4. The number of tubes plugged during the inspection outage.

d. An analysis summary of the tube integrity conditions predicted to exist at the next scheduled inspection (the forward-looking tube integrity assessment) relative to the applicable performance criteria, including the analysis methodology, inputs, and results;

e. The number and percentage of tubes plugged to date, and the effective plugging percentage in each SG;

f. The results of any SG secondary side inspections;

g. The primary to secondary LEAKAGE rate observed in each SG (if it is not practical to assign the LEAKAGE to an individual SG, the entire primary to secondary LEAKAGE should be conservatively assumed to be from one SG) during the cycle preceding the inspection which is the subject of the report;

(continued)

5.6 Reporting Requirements

5.6.10 Steam Generator Tube Inspection Report (continued)

h. The calculated accident induced leakage rate from the portion of the tubes below 15.21 inches from the top of the tubesheet for the most limiting accident in the most limiting SG. In addition, if the calculated accident induced leakage rate from the most limiting accident is less than 2.50 times the maximum operational primary to secondary leak rate, the report should describe how it was determined; and

i. The results of monitoring for the tube axial displacement (slippage). If slippage is discovered, the implications of discovery and corrective action shall be provided.

5.7 High Radiation Area

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation: (continued)

e. Except for individuals qualified in radiation protection procedures or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them.

f. Such individual areas that are within a larger area, such as PWR containment, where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.