

Terry J. Garrett Vice President Engineering

July 10, 2008

ET 08-0038

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

> Subject: Docket No. 50-482: Application to Revise Technical Specification 5.6.6, "Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)"

Gentlemen:

Pursuant to 10 CFR 50.90, Wolf Creek Nuclear Operating Corporation (WCNOC) hereby requests an amendment to Facility Operating License No. NPF-42 for the Wolf Creek Generating Station (WCGS).

The proposed amendment would revise the Technical Specification (TS) requirements consistent with the Nuclear Regulatory Commission (NRC) approved Revision 0 to Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-419, "Revise PTLR Definition and References in ISTS 5.6.6, RCS PTLR." The proposed change would reference only the Topical Report number and title in TS 5.6.6, "Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)." This would allow the use of currently approved Topical Reports to determine the pressure and temperature limits in the PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR) without having to submit an amendment to the Operating License. The change would not alter the NRC reviewed and approved analytical methods used to determine the pressure and temperature limits or Low Temperature Overpressure Protection (LTOP) System setpoints.

Attachment I provides an evaluation of the proposed change. Attachment II provides the existing TS pages marked up to show the proposed changes. Attachment III provides revised (clean) TS pages. Attachment IV provides a summary of the regulatory commitments made in this submittal.

It has been determined that this amendment application does not involve a significant hazard consideration as determined per 10 CFR 50.92. Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of this amendment.

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This amendment application was reviewed by the Plant Safety Review Committee. In accordance with 10 CFR 50.91, a copy of this amendment application, with attachments, is being provided to the designated Kansas State official.

This amendment request does not request the adoption of WCAP-14040-A, Rev. 4, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves." However, WCNOC intends to adopt WCAP-14040-A, Rev. 4 in February 2009 when 20 effective full power years (EFPY) will be attained. As such, WCNOC requests approval of the proposed amendment by January 11, 2009. It is anticipated that the license amendment, as approved, will be effective upon issuance and will be implemented within 90 days from the date of issuance. Please contact me at (620) 364-4084 or Mr. Richard Flannigan at (620) 364-4117 for any questions you may have regarding this application.

Sincerely,

Terry J. Garrett

TJG/rlt

Attachments: 1

Evaluation of Proposed Change

Proposed Technical Specification Changes (Mark-up)

III Retyped Technical Specification Pages

IV Regulatory Commitments

cc: E. E. Collins (NRC), w/a T. A. Conley (KDHE), w/a V. G. Gaddy (NRC), w/a B. K. Singal (NRC), w/a Senior Resident Inspector (NRC), w/a ET 08-0038 Page 3 of 3

STATE OF KANSAS)) SS COUNTY OF COFFEY)

Terry J. Garrett, 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 Terry J. Sarrett

Vice President Engineering

SUBSCRIBED and sworn to before me this 0^{Hy} day of $\int u \gamma$, 2008.

RHONDA L. TIEMEYER OFFICIA MY COMMISSION EXPIRES January 11, 2010

Notary Public

<u>1,2010 11,2010 11,2010 11,2010 11,2010 11,2010 11,2010</u> Expiration Date

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EVALUATION OF PROPOSED CHANGE

- 1. SUMMARY DESCRIPTION
- 2. DETAILED DESCRIPTION
- 3. TECHNICAL EVALUATION

4. REGULATORY EVALUATION

- 4.1 Applicable Regulatory Requirements/Criteria
- 4.2 Precedent
- 4.3 Significant Hazards Consideration
- 4.4 Conclusion
- 5. ENVIRONMENTAL CONSIDERATION
- 6.0 REFERENCES

1. SUMMARY DESCRIPTION

This evaluation supports a request to amend Operating License NPF-42 for the Wolf Creek Generating Station (WCGS).

The proposed amendment would modify Technical Specification (TS) requirements related to the Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR) consistent with Nuclear Regulatory Commission (NRC) approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-419, "Revise PTLR Definition and References in ISTS 5.6.6, RCS PTLR," Revision 0. In addition, the proposed amendment would delete a reference related to TS 5.6.6 that is no longer needed.

2. DETAILED DESCTIPTION

Consistent with Revision 0 of TSTF-419, the proposed TS changes include:

- 1. The definition of PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR) is revised to delete the reference to the specifications containing the limits specified in the PTLR.
- 2. The requirement in TS 5.6.6, "Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)," to use analytical methods to determine the RCS pressure and temperature and Cold Overpressure Mitigation System (COMS) power operated relief valve (PORV) setpoints that have been previously reviewed and approved by the NRC specified by date and revision number is revised to allow the use of previously reviewed and approved analytical methods that are specified by number and title only.

Additional proposed TS changes include:

- 1. The addition of "LTOP arming" into TS 5.6.6a. as a RCS pressure and temperature limit established and documented in the PTLR. The deletion of "and Cold Overpressure Mitigation System" from TS 5.6.6b. These changes revise TS 5.6.6 to be consistent with Revision 3.1 of NUREG-1431, "Standard Technical Specifications Westinghouse Plants."
- 2. The deletion of TS 5.6.6.b.1 which references an NRC letter dated December 2, 1999 and titled "Wolf Creek Generating Station, Acceptance for Referencing of Pressure Temperature Limits Report (TAC No. MA4572)" (Reference 6.4). This document and its supporting Safety Evaluation (Reference 6.5) were the basis for the original relocation of the PTLR and Low Temperature Overpressure Protection (LTOP) System/COMS curves from the Technical Specifications. This document is an unneeded reference in specifying the analytical methods used to determine the limits in TS 5.6.6.b. Precedent for the deletion of this reference is discussed in Section 4.2, Precedents.
- NRC Generic Letter 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," dated January 31, 1996, allows a licensee to relocate the pressure and temperature (P/T) limit curves from their plant Technical Specifications (TS) to a PTLR or a similar document. The LTOP System limits were also allowed to be relocated to the same document. Generic Letter 96-03 required the methodology used to determine the P/T and LTOP System limit parameters to comply with the specific requirements of Appendices G and H to Part 50 of Title 10 of the Code of Federal Regulations

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(10 CFR), to be documented in an NRC approved topical report or in a plant specific submittal, and to be incorporated by reference into the TS. Subsequent changes in the methodology would then be required to be approved by a license amendment.

By letter dated May 23, 2002, the Westinghouse Owners Group (WOG) submitted Topical Report WCAP-14040, Revision 3, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves," for NRC staff review and approval. This Topical Report was developed to define a methodology for reactor pressure vessel (RPV) P/T limit curve development and, consistent with the guidance provided in NRC Generic Letter (GL) 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," for the development of plant specific PTLRs. A prior revision, WCAP-14040-NP-A, Revision 2, had previously been approved as a PTLR methodology as documented in the NRC staff's safety evaluation dated October 16, 1995. WCAP-14040, Revision 3, was submitted for NRC staff approval to reflect recent changes in the WOG methodology. Given the scope of the changes incorporated in WCAP-14040, Revision 3, and a significant amount of rewriting which was done to improve clarity of some sections, the NRC staff reviewed the Topical Report in its entirety and published the NRC staff's safety evaluation dated February 27, 2004.

The WOG subsequently republished this approved TR as WCAP-14040-A, Revision 4, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves," incorporating the NRC staff's final safety evaluation and adding an Appendix B, "Correspondence with the NRC."

This amendment request does not request the adoption of WCAP-14040-A, Rev. 4, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves." However, Wolf Creek Nuclear Operating Corporation (WCNOC) intends to adopt WCAP-14040-A, Rev. 4 in February 2009 when 20 effective full power years (EFPY) will be attained.

3. TECHNICAL EVALUATION

The current definition of PTLR identifies the specifications in which the pressure and temperature limits are addressed. Specification 5.6.6a requires that the individual specifications that address RCS pressure and temperature limits be referenced. The proposed changes to the definition will eliminate the duplication between the definition of PTLR and Section 5.6.6a.

The revision to TS 5.6.6 to allow the Topical Reports to be identified by number and title will allow WCNOC to use a current NRC-approved Topical Report to determine the P/T limits in the PTLR without having to submit an amendment to the operating license each time the Topical Report is revised. The PTLR would provide the specific information identifying the particular approved Topical Report(s) used to determine the P/T limits or LTOP System limits. This arrangement still provides assurance that only the approved versions of the referenced Topical Reports will be used for the determination of the P/T limits or LTOP System limits since the complete citation will be provided in the PTLR.

The requirement to operate within the limits in the PTLR is specified in and controlled by the Technical Specifications. The figures, values, and parameters associated with the P/T limits and LTOP System setpoints are located in the PTLR and the methodology for their development must be reviewed and approved by the NRC. The proposed changes do not change the

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requirements associated with the review and approval of the methodology or the requirement to operate within the limits specified in the PTLR.

4. **REGULATORY EVALUATION**

4.1 Applicable Regulatory Requirements/Criteria

The NRC has established requirements in 10 CFR Part 50 to protect the integrity of the reactor coolant pressure boundary in nuclear power plants. The acceptability of a facility's proposed PTLR methodology is based on the NRC regulations and guidance discussed below.

Appendix G to 10 CFR Part 50 requires that facility P/T limit curves for the RPV be at least as conservative as those obtained by applying the methodology of Appendix G to Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code.

Appendix H to 10 CFR Part 50 establishes requirements related to the facility RPV material surveillance programs.

Regulatory Guide 1.99, Revision 2, contains methodologies for determining the increase in transition temperature and the decrease in upper-shelf energy resulting from neutron radiation.

Generic Letter 92-01, Revision 1, requested that licensees submit their RPV data for their plants to the staff for review, and Generic Letter 92-01, Revision 1, Supplement 1, requested that licensees provide and assess data from other licensees that could affect their RPV integrity evaluations.

NUREG 0800 Standard Review Plan (SRP) Section 5.3.2 provides an acceptable method of determining the P/T limit curves for ferritic materials in the beltline of the RPV based on the linear elastic fracture mechanics (LEFM) methodology of Appendix G to Section XI of the ASME Code.

The attributes of the vessel fluence methodology are described in Regulatory Guide 1.190, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence." Regulatory Guide 1.190 is based on General Design Criteria (GDC) 14, 30 and 31 of Appendix A to 10 CFR Part 50. In this context, GDC 14 relates to an extremely low probability of leakage from the pressure coolant boundary; GDC 30 relates to the design of the reactor coolant boundary; and GDC 31 relates to material embrittlement and the effect of irradiation.

The review requirements for the LTOP System transients are described in SRP Section 5.2.2. SRP Section 5.2.2 is based on GDC 15 as it relates to the reactor coolant boundary design margin and GDC 31 as it relates to embrittlement and the effect of irradiation.

Generic Letter 96-03 addresses the technical information necessary for a licensee's implementation of a PTLR. Generic Letter 96-03 establishes the information which should be included in an acceptable PTLR methodology (which will be used to develop the PTLR), and the information which should be included with the PTLR itself. These information criteria are principally addressed in a table contained in Attachment 1 of Generic Letter 96-03 entitled, "Requirements for Methodology and PTLR," and are subdivided into seven technical elements which must be addressed by the licensee. Generic Letter 96-03 also addresses the appropriate

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modification to the administrative controls section of a facility's TS which are necessary to implement a PTLR. TSTF-419 provides guidance on an alternative set of TS administrative control section changes which may be made to implement a PTLR in accordance with Attachment I of Generic Letter 96-03.

4.2 <u>Precedent</u>

This change is generally consistent with the changes to the Improved Technical Specifications described in TSTF-419, Revision 0 (Reference 6.1) and the NRC Staff's model safety evaluation (SE) (Reference 6.3). Plants which have received approval for similar changes, in whole or in part, include:

- Callaway (ADAMS Accession number ML063240407)
- Comanche Peak (ADAMS Accession number ML070320825)
- Sequoyah (ADAMS Accession number ML042600465)
- Diablo Canyon (ADAMS Accession number ML041400243)
- Fort Calhoun (ADAMS Accession number ML032300305)

Precedent for the deletion of TS 5.6.6b.1 which references an NRC letter dated December 2, 1999 and titled "Wolf Creek Generating Station, Acceptance for Referencing of Pressure Temperature Limits Report (TAC No. MA4572)" (Reference 6.4) is contained in the Callaway Plant license amendment referenced above. Specifically, Union Electric Company's response on November 20, 2006 titled "Additional Information Regarding Application for License Amendment to Revise Technical Specification 5.6.6; Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR)" (ULNRC-05346) addressed the deletion of this document (Reference 6.6).

The additional changes to TS 5.6.6a. and TS 5.6.6b are consistent with NUREG-1431, Rev. 3.1 (Reference 6.7)

4.3 Significant Hazards Consideration

WCNOC has reviewed and concurs with the determination of whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10CFR50.92, 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 changes to reference the Topical Report number and title do not alter the use of the analytical methods used to determine the P/T limits or LTOP System setpoints that have been reviewed and approved by the NRC. This method of referencing Topical Reports would allow the use of current Topical Reports to support limits in the PTLR without having to submit an amendment to the Operating License. Implementation of revisions to Topical Reports would still receive regulatory reviews and where required receive NRC review and approval. The proposed changes to add "LTOP arming" into TS 5.6.6a. as a RCS pressure and temperature limit established and documented in the PTLR and deletion of "and Cold Overpressure Mitigation System" from TS 5.6.6b are administrative changes for consistency.

The proposed changes do not adversely affect accident initiators or precursors nor alter the design assumptions, conditions, or configuration of the facility or the manner in which the plant is operated and maintained. The proposed changes do not alter or prevent the ability of structures, systems, and components (SSCs) from performing their intended function to mitigate the consequences of an initiating event within the assumed acceptance limits. The proposed changes do not affect the source term, containment isolation, or radiological release assumptions used in evaluating the radiological consequences of an accident previously evaluated. Further, the proposed changes do not increase the types or amounts of radioactive effluent that may be released offsite, nor significantly increase individual or cumulative occupational/public radiation exposures. The proposed changes are consistent with safety analysis assumptions and resultant consequences. Therefore, the proposed changes do 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

The proposed changes to reference the Topical Report number and title do not alter the use of the analytical methods used to determine the P/T limits or LTOP System setpoints that have been reviewed and approved by the NRC. This method of referencing Topical Reports would allow the use of current Topical Reports to support limits in the PTLR without having to submit an amendment to the Operating License. Implementation of revisions to Topical Reports would still receive regulatory reviews and where required receive NRC review and approval. The proposed changes to add "LTOP arming" into TS 5.6.6a. as a RCS pressure and temperature limit established and documented in the PTLR and deletion of "and Cold Overpressure Mitigation System" from TS 5.6.6b are administrative changes for consistency. 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 or eliminate any existing 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 previously evaluated.

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

Response: No

The proposed changes to reference the Topical Report number and title do not alter the use of the analytical methods used to determine the P/T limits or LTOP System setpoints that have been reviewed and approved by the NRC. This method of referencing Topical Reports would allow the use of current Topical Reports to support limits in the PTLR without having to submit an amendment to the Operating License. Implementation of revisions to Topical Reports would still receive regulatory reviews and where required receive NRC review and approval. The proposed changes to add "LTOP arming" into TS 5.6.6a. as a RCS pressure and temperature limit established and documented in the PTLR and deletion of "and Cold Overpressure Mitigation System" from TS 5.6.6b are administrative changes for consistency. The proposed changes do not alter the manner in which safety limits, limiting safety system

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settings or limiting conditions for operation are determined. The setpoints at which protective actions are initiated are not altered by the proposed changes. Sufficient equipment remains available to actuate upon demand for the purpose of mitigating an analyzed event. Therefore, it is concluded that this change does not involve a significant reduction in the margin of safety.

Based on the above evaluations, WCNOC concludes that the proposed amendment(s) 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.

4.4 <u>Conclusion</u>

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include technical specifications as part of the license. The TSs ensure the operational capability of structures, systems, and components that are required to protect the health and safety of the public. The Nuclear Regulatory Commission's (NRC) regulatory requirements related to the content of the TSs are contained in Section 50.36 of Title 10 of the Code of Federal Regulations (10 CFR 50.36), which requires that the TSs include items in the following specific categories: (1) safety limits, limiting safety systems settings, and limiting control settings; (2) limiting conditions for operation (LCO); (3) surveillance requirements; (4) design features; and (5) administrative controls. In accordance with 10 CFR 50.36(c)(5), administrative controls are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the plant in a safe manner.

Generic Letter 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," dated January 31, 1996, allows relocation of the pressure temperature (P/T) curves from their plant TSs to a PTLR or similar document. The LTOP System limits were also allowed to be relocated to the same document. The methodology used to determine the P/T and LTOP System limits must comply with the specific requirements of Appendices G and H to 10 CFR Part 50, be documented in an NRC-approved topical report or an NRC-approved plant-specific submittal, and be incorporated by reference into the TSs.

5. ENVIRONMENTAL CONSIDERATION

WCNOC has evaluated the proposed change and has determined that the change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amount of effluent that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.

6. **REFERENCES**

- 6.1 Technical Specification Task Force (TSTF) Improved Standard Technical Specifications Change Traveler, TSTF-419, "Revise PTLR Definition and References in ISTS 5.6.6, RCS PTLR," Revision 0 (ADAMS Accession number ML012690234).
- 6.2 NRC letter of March 21, 2002 to NEI approving traveler TSTF-419 and providing the model safety evaluation (ADAMS Accession number ML020800488).
- 6.3 NRC Letter of February 27, 2004 to NEI; "Final Safety Evaluation for Topical Report WCAP-14040, Revision 3, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves" (ADAMS Accession number ML040620297).
- 6.4 NRC Letter dated December 2, 1999 titled "Wolf Creek Generating Station, Acceptance for Referencing of Pressure Temperature Limits Report (TAC No. MA4572)" (ADAMS Accession number ML993400486).
- 6.5 Safety Evaluation by the Office of Nuclear Reactor Regulation; Review of the Pressure Temperature Limits Report and Methodology for the Relocation of Reactor Coolant System (RCS) Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits; Wolf Creek Nuclear Operating Corporation; Wolf Creek Generating Station; Docket 50-482. Dated December 2, 1999 (ADAMS Accession number ML 993400490).
- 6.6 Union Electric (Callaway Plant) letter dated November 20, 2006 titled "Additional Information Regarding Application for License Amendment to Revise Technical Specification 5.6.6; Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR)" (ULNRC-05346) (ADAMS Accession number ML063320558).
- 6.7 NUREG 1431, Rev. 3.1, "Standard Technical Specifications Westinghouse Plants."

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ATTACHMENT II

PROPOSED TECHNICAL SPECIFICATION CHANGES (MARK-UP)

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1.1 Definitions (continued)

PHYSICS TESTS

PRESSURE AND

REPORT (PTLR)

TEMPERATURE LIMITS

PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are:

- a. Described in Chapter 14, of the USAR;
- b. Authorized under the provisions of 10 CFR 50.59; or
- c. Otherwise approved by the Nuclear Regulatory Commission.

The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates and the power operated relief valve lift settings and the Low Temperature Overpressure Protection (LTOP) System arming temperature, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.6. (Plant operation within these operating limits is addressed in LCO 3.4.3, "RC8 Pressure and Temperature (P/T) Limits," and LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System."

QUADRANT POWER TILT RATIO (QPTR)

RATED THERMAL POWER

SYSTEM (RTS) RESPONSE

(RTP)

TIME

REACTOR TRIP

QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.

RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3565 MWt.

The RTS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and the methodology for verification have been previously reviewed and approved by the NRC.

Wolf Creek - Unit 1

1.1-5

(continued)

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5.6 Reporting Requirements

5.6.6 Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)

- a. RCS pressure and temperature limits for heat up, cooldown, low temperature operation, criticality, hydrostatic testing, and PORV lift settings as well as heatup and cooldown rates shall be established and documented in the PTLR for the following:
 - 1. Specification 3.4.3, "RCS Pressure and Temperature (P/T) Limits," and
 - 2. Specification 3.4.12, "Low Temperature Overpressure Protection System."
- b. The analytical methods used to determine the RCS pressure and temperature and Cold Overpressure Mitigation System limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

NRC letter dated December 2, 1999, "Wolf Creek Generating Station, Acceptance for Referencing of Pressure Temperature Limits Report (TAC No. MA4572)," and

WCAP-14040 A, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves," January 1996.

- c. The PTLR shall be provided to the NRC upon issuance for each reactor vessel fluence period and for any revision or supplement thereto.
- 5.6.7 Not Used.

5.6.8 PAM Report

When a report is required by Condition B or F of LCO 3.3.3, "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

5.6.9 Not Used.

(continued)

Wolf Creek - Unit 1

5.0-25 Amendment No. 123, 130, 142, 157, 158, 164 Attachment III to ET 08-0038 Page 1 of 3

ATTACHMENT III

RETYPED TECHNICAL SPECIFICATION PAGES

1.1 Definitions (continued)

PHYSICS TESTS

PRESSURE AND

REPORT (PTLR)

RATIO (QPTR)

REACTOR TRIP

(RTP)

TIME

TEMPERATURE LIMITS

QUADRANT POWER TILT

RATED THERMAL POWER

SYSTEM (RTS) RESPONSE

PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are:

- a. Described in Chapter 14, of the USAR;
- b. Authorized under the provisions of 10 CFR 50.59; or
- c. Otherwise approved by the Nuclear Regulatory Commission.

The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates and the power operated relief valve lift settings and the Low Temperature Overpressure Protection (LTOP) System arming temperature, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.6.

QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.

RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3565 MWt.

The RTS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and the methodology for verification have been previously reviewed and approved by the NRC. and the start

Definitions 1.1 ŧ

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1.1 Definitions (continued)	
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming:
neatrup, port-brown and die testing, ELOP annen, and besteowie rates afrañ be fier the maiovang:	An annule consequent box of using 2021 a: box finserted except for the single RCCA of highest reactivity duited worth, which is assumed to be fully withdrawn. With any RCCA not capable of being fully inserted, the reactivity
່ ສະວະປະໂຫງ ຄະເຫັນອອກດາ bng a	determination of SDM; and
rature Overpressee ≥ 36 c	b. In MODES 1 and 2; the fuel and moderator temperatures are changed to the hot zero power temperatures.
SLAVE RELAYSTESTOSWeise SLAVE RELAYSTESTOSweise Instruction getweild bioOrgotostand bioOrgotostand ROA Hole of getwei seen ofgetweiter of the control	A SLAVE RELAY TEST shall consist of energizing all slave relays in the channel required for channel OPERABILITY and verifying the OPERABILITY of each required slave relay. The SLAVE RELAY TEST shall include, a continuity check of associated required testable actuation devices. The SLAVE RELAY TEST may be performed by means of any series of sequential, overlapping, or total steps.
STAGGERED TEST BASIS® 10	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during <i>n</i> Surveillance Frequency intervals, where <i>n</i> is the total number of systems, subsystems, channels, or other designated components in the associated function.
THERMAL POWER Manual of the state of the sta	THERMAE POWER shall be the total reactor core heat
TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT)	A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of all devices in the channel required for trip actuating device OPERABILITY. The TADO shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the necessary accuracy. The TADOT may be performed by
	means of any series of sequential, overlapping, or total channel steps.

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Wolf Creek - Unit 1

, · 1.1-6 (1991) - 2097330594 -Amendment No. 123, 170 |

6.6 <u>Re</u>	enter Sector Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS
<u>RE</u>	EPORT (REPORT of application at volgen ant
а	Control of the solution by a solution of the s
	temperature operation, criticality hydrostatic testing, LTOP arming and PORV lift settings as well as heatup and cooldown rates shall be
	established and gocumented in the PILR for the following:
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	2. bns Specification 3.4.12; #Low,Temperature Overpressure Protection
b. Nore is guist NYT TYT	The analytical methods used to determine the RCS pressure and temperature limits shall be those previously reviewed and approved by the NRC specifically those described in the following document:
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0.0.8 <u>P7</u>	hen a report is required by Condition B or F of LCO 3.3.3, "Post Accident
5.6.8 <u>P4</u> W Ma	onitoring (PAM) Instrumentation, a report shall be submitted within the
5.6.8 , <u>P4</u> W M(fol	In a report is required by Condition B or F of LCO 3.3.3, "Post Accident onitoring (PAM) Instrumentation," a report shall be submitted within the lowing 14 days. The report shall outline the preplanned alternate method of
5.6.8 , <u>P4</u> W Ma fol ma	Then a report is required by Condition B or F of LCO 3.3.3, "Post Accident onitoring (PAM) Instrumentation," a report shall be submitted within the llowing 14 days. The seport shall outline the preplanned alternate method of onitoring, the cause of the inoperability, and the plans and schedule for
5.6.8 <u>P4</u> W Ma fol ma	Then a report is required by Condition B or F of LCO 3.3.3, "Post Accident onitoring (RAM) Instrumentation," a report shall be submitted within the llowing 14 days. The seport shall outline the preplanned alternate method of onitoring, the cause of the inoperability, and the plans and schedule for storing the instrumentation channels of the Function to OPERABLE status.
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5.6 Reporting Requirements

5.6.10 <u>Steam Generator Tube Inspection Report</u>

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; 33
- b. Active degradation mechanisms found;

c. Nondestructive examination techniques utilized for each degradation mechanism;

- d. Location, orientation (if linear), and measured sizes (if available) of service induced indications;
- e. Number of tubes plugged during the inspection outage for each active degradation mechanism;
- f. Total number and percentage of tubes plugged to date; and
- g. The results of condition monitoring, including the results of tube pulls and in-situ testing.

 Following completion of an inspection performed in Refueling Outage 16 (and any inspections performed in the subsequent operating cycle), the number of indications and location, size, orientation, whether initiated on primary or secondary side for each service-induced flaw within the thickness of the tubesheet, and the total of the circumferential components and any circumferential overlap below 17 inches from the top of the tubesheet as determined in accordance with TS 5.5.9c.1;

- i. Following completion of an inspection performed in Refueling Outage 16 (and any inspections performed in the subsequent operating cycle), the primary to secondary LEAKAGE rate observed in each SG (if it is not practical to assign 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; and
- j. Following completion of an inspection performed in Refueling Outage 16 (and any inspections performed in the subsequent operating cycle), the calculated accident leakage rate from the portion of the tube below 17 inches from the top of the tubesheet for the most limiting accident in the most limiting SG.

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REGULATORY COMMITMENTS

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The following table identifies those actions committed to by WCNOC in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

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