

Industry/TSTF Standard Technical Specification Change Traveler

Revise PTLR Definition and References in ISTS 5.6.6, RCS PTLR

Classification: 1) Technical Change

Priority 3)Low

NUREGs Affected: ☒ 1430 ☒ 1431 ☐ 1432 ☒ 1433 ☒ 1434

Description:

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.

The requirement in ITS 5.6.6, "Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)," to identify the NRC staff approval document by date is revised to allow the Topical Report(s) to be identified by number and title. A requirement is added to the Reviewers Note to specify the complete citation in the PTLR for each Topical Report, include the report number, title, revision, date, and any supplements.

Justification:

BACKGROUND

NRC Generic Letter 96-06, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," dated January 31, 1996, allows licensees to relocate the pressure temperature (P/T) limit curves from their plant technical specifications (TS) to a pressure temperature limits report (PTLR) or a similar document. The Low Temperature Overpressure Protection (LTOP) System limits were also allowed to be relocated to the same document. The methodology used to determine the P/T and LTOP System limit parameters must comply with the specific requirements of Appendices G and H to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR), be documented in an NRC approved topical report or in a plant-specific submittal, and be incorporated by reference into the TS. Subsequent changes in the methodology must be approved by a license amendment.

Similar changes to NUREG-1432, Rev. 2, are addressed in TSTF-408.

PROPOSED CHANGE

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 ITS 5.6.6, "Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)," to identify the NRC staff approval document by date is revised to allow the Topical Report(s) to be identified by number and title. A requirement is added to the Reviewers Note to specify the complete citation in the PTLR for each Topical Report, include the report number, title, revision, date, and any supplements.

9/16/2001

JUSTIFICATION

1. The 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 eliminate duplication between the definition of PTLR and Section 5.6.6.
2. The revision to ITS 5.6.6 to allow the Topical Reports to be identified by number and title would allow licensees to use current Topical Reports to support limits in the PTLR without having to submit an amendment to facility operating license every time the Topical Report is revised. The PTLR would provide specific information identifying the particular approved Topical Reports used to determine the P/T limits or LTOP System limits. This still provides the 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. This proposed change is consistent with TSTF-363, "Revise Topical Report references in ITS 5.6.5, COLR," which was approved by the NRC on April 13, 2000.

The requirement to operate within the limits in the PTLR is specified in and controlled by the technical specifications. Only the figures, values, and parameters associated with the P/T limits and LTOP setpoints are relocated to the PTLR. The methodology for their development must be reviewed and approved by the NRC. The proposed changes do not change the requirements associated with the review and approval of the methodology or the requirement to operate within the limits specified in the PTLR.

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

In accordance with the criteria set forth in 10 CFR 50.92, the proposed changes to NUREG-1431 have been evaluated and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion:

Standard I - Involves a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated

The proposed changes to reference only the Topical Report Number and title do not alter the use of the analytical methods used to determine the P/T limits or LTOP 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 be reviewed in accordance with 10 CFR 50.59 and where required receive NRC review and approval.

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, it is concluded that this change does not increase the probability of occurrence of an accident previously evaluated.

9/16/2001

Standard II - Create the Possibility of a New or Different Kind of Accident from any Previously Evaluated

The proposed changes to reference only the Topical Report Number and title do not alter the use of the analytical methods used to determine the P/T limits or LTOP 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 be reviewed in accordance with 10 CFR 50.59 and where required receive NRC review and approval.

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.

Standard III - Involve a Significant Reduction in the Margin of Safety

The proposed changes to reference only the Topical Report Number and title do not alter the use of the analytical methods used to determine the P/T limits or LTOP 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 be reviewed in accordance with 10 CFR 50.59 and where required receive NRC review and approval. The proposed changes do not alter the manner in which safety limits, limiting safety system 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.

Industry Contact:	Wideman, Steve	(316) 364-4037	stwidem@wcnoc.com
NRC Contact:	Tjader, Bob	(301) 415-1187	trt@nrc.gov

Revision History

OG Revision 0	Revision Status: Active	Next Action: NRC
----------------------	--------------------------------	-------------------------

Revision Proposed by: Wolf Creek

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 02-May-01

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 02-May-01

9/16/2001

OG Revision 0**Revision Status: Active****Next Action: NRC****TSTF Review Information**

TSTF Received Date: 02-May-01

Date Distributed for Review: 02-May-01

OG Review Completed: ☒ BWOG ☒ WOG ☒ CEOG ☒ BWROG

TSTF Comments:

(No Comments)

TSTF Resolution: Approved Date: 02-May-01

NRC Review Information

NRC Received Date: 15-Sep-01

NRC Comments:

(No Comments)

Final Resolution: NRC Action Pending

Final Resolution Date:

Incorporation Into the NUREGs

File to BBS/LAN Date:

TSTF Informed Date:

TSTF Approved Date:

NUREG Rev Incorporated:

Affected Technical Specifications

1.0 Definitions - PTLR

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

9/16/2001

INSERT 1

TSTF 419

[Identify the Topical Report(s) by number and title or identify the NRC Safety Evaluation for a plant specific methodology by NRC letter and date. The PTLR will contain the complete identification for each of the TS referenced Topical Reports used to prepare the PTLR (i.e., report number, title, revision, date, and any supplements).]

1.1 Definitions

MASTER RELAY TEST	A MASTER RELAY TEST shall consist of energizing each required master relays in the channel required for channel OPERABILITY and verifying the OPERABILITY of each required master relay. The MASTER RELAY TEST shall include a continuity check of each associated required slave relay. The MASTER RELAY TEST may be performed by means of any series of sequential, overlapping, or total steps.
MODE	A MODE shall correspond to any one inclusive combination of core reactivity condition, power level, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.
OPERABLE - OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	<p>PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are:</p> <ul style="list-style-type: none">a. Described in Chapter [14, Initial Test Program] of the FSAR,b. Authorized under the provisions of 10 CFR 50.59, orc. Otherwise approved by the Nuclear Regulatory Commission.
PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	<p>The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates and the LTOP 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. <u>Plant operation within these operating</u></p>

1.1 Definitions

PRESSURE AND TEMPERATURE LIMITS REPORT (continued)

limits is addressed in LCO 3.4.3, "RCS Pressure and Temperature (P/T) Limits," and LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System."

QUADRANT POWER TILT RATIO (QPTR)

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.

RATED THERMAL POWER (RTP)

RTP shall be a total reactor core heat transfer rate to the reactor coolant of [2893] MWt.

REACTOR TRIP SYSTEM (RTS) RESPONSE TIME

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 methodology for verification have been previously reviewed and approved by the NRC.

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:

- a. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. However, with all RCCAs verified fully inserted by two independent means, it is not necessary to account for a stuck RCCA in the SDM calculation. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM, and
- b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the [nominal zero power design level].

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (continued)

- b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

[Identify the Topical Report(s) by number and title or identify the staff Safety Evaluation Report for a plant specific methodology by NRC letter and date. The COLR will contain the complete identification for each of the TS referenced topical reports used to prepare the COLR (i.e., report number, title, revision, date, and any supplements).]
- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

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, and hydrostatic testing, LTOP arming, and PORV lift settings as well as heatup and cooldown rates shall be established and documented in the PTLR for the following:

[The individual specifications that address RCS pressure and temperature limits must be referenced here.]

- b. 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 documents:

INSERT 1

[~~Identify the NRC staff approval document by date.~~]

- c. The PTLR shall be provided to the NRC upon issuance for each reactor vessel fluence period and for any revision or supplement thereto.

1.1 Definitions

OPERABLE - OPERABILITY (continued)

perform its specified safety function(s) are also capable of performing their related support function(s).

PHYSICS TESTS

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, Initial Test Program] of the FSAR,
- b. Authorized under the provisions of 10 CFR 50.59, or
- c. Otherwise approved by the Nuclear Regulatory Commission.

PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)

The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, 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, "RCS Pressure and Temperature (P/T) Limits," and LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System."

QUADRANT POWER TILT (QPT)

QPT shall be defined by the following equation and is expressed as a percentage of the Power in any Core Quadrant (P_{quad}) to the Average Power of all Quadrants (P_{avg}).

$$QPT = 100 [(P_{quad} / P_{avg}) - 1]$$

RATED THERMAL POWER (RTP)

RTP shall be a total reactor core heat transfer rate to the reactor coolant of [2544] MWt.

REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME

The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until electrical power is interrupted at the control rod drive trip breakers. The response time may be measured by means of any series of sequential,

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (continued)

- b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:
- [Identify the Topical Report(s) by number and title or identify the staff Safety Evaluation Report for a plant specific methodology by NRC letter and date. The COLR will contain the complete identification for each of the TS referenced topical reports used to prepare the COLR (i.e., report number, title, revision, date, and any supplements).]
- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling System (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

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, and hydrostatic testing as well as heatup and cooldown rates shall be established and documented in the PTLR for the following:
- [The individual specifications that address RCS pressure and temperature limits must be referenced here.]
- b. 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 documents:

INSERT 1

~~[Identify the NRC staff approval document by date.]~~

- c. The PTLR shall be provided to the NRC upon issuance for each reactor vessel fluence period and for any revision or supplement thereto.

1.1 Definitions

MINIMUM CRITICAL POWER RATIO (MCPR)	The MCPR shall be the smallest critical power ratio (CPR) that exists in the core [for each class of fuel]. The CPR is that power in the assembly that is calculated by application of the appropriate correlation(s) to cause some point in the assembly to experience boiling transition, divided by the actual assembly operating power.
MODE	A MODE shall correspond to any one inclusive combination of mode switch position, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.
OPERABLE - OPERABILITY	A system, subsystem, division, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	<p>PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation.</p> <p>These tests are:</p> <ol style="list-style-type: none">Described in Chapter [14, Initial Test Program] of the FSAR,Authorized under the provisions of 10 CFR 50.59, orOtherwise approved by the Nuclear Regulatory Commission.
PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	<p>The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, 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 3.4.10, "RCS Pressure and Temperature (P/T) Limits."</p>

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (continued)

- b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

[Identify the Topical Report(s) by number and title or identify the staff Safety Evaluation Report for a plant specific methodology by NRC letter and date. The COLR will contain the complete identification for each of the TS referenced topical reports used to prepare the COLR (i.e., report number, title, revision, date, and any supplements).]

- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

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, and hydrostatic testing as well as heatup and cooldown rates shall be established and documented in the PTLR for the following:

[The individual specifications that address RCS pressure and temperature limits must be referenced here.]

- b. 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 documents:

INSERT 1

~~[Identify the NRC staff approval document by date.]~~

- c. The PTLR shall be provided to the NRC upon issuance for each reactor vessel fluence period and for any revision or supplement thereto.

1.1 Definitions

MINIMUM CRITICAL POWER RATIO (MCPR)	The MCPR shall be the smallest critical power ratio (CPR) that exists in the core [for each class of fuel]. The CPR is that power in the assembly that is calculated by application of the appropriate correlation(s) to cause some point in the assembly to experience boiling transition, divided by the actual assembly operating power.
MODE	A MODE shall correspond to any one inclusive combination of mode switch position, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.
OPERABLE - OPERABILITY	A system, subsystem, division, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	<p>PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation.</p> <p>These tests are:</p> <ol style="list-style-type: none">Described in Chapter [14, Initial Test Program] of the FSAR,Authorized under the provisions of 10 CFR 50.59, orOtherwise approved by the Nuclear Regulatory Commission.
PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	<p>The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, 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. <u>Plant operation within these operating limits is addressed in LCO 3.4.10, "RCS Pressure and Temperature (P/T) Limits."</u></p>

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (continued)

- b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:
- [Identify the Topical Report(s) by number and title or identify the staff Safety Evaluation Report for a plant specific methodology by NRC letter and date. The COLR will contain the complete identification for each of the TS referenced topical reports used to prepare the COLR (i.e., report number, title, revision, date, and any supplements).]
- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.6.6

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

- a. RCS pressure and temperature limits for heatup, cooldown, low temperature operation, criticality, and hydrostatic testing as well as heatup and cooldown rates shall be established and documented in the PTLR for the following:
- [The individual specifications that address RCS pressure and temperature limits must be referenced here.]
- b. 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 documents:

INSERT 1

~~[Identify the NRC staff approval document by date.]~~

- c. The PTLR shall be provided to the NRC upon issuance for each reactor vessel fluence period and for any revision or supplement thereto.