



10 CFR 50.90

LR-N20-0013
LAR H20-03

August 19, 2020

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

Hope Creek Generating Station
Renewed Facility Operating License No. NPF-57
NRC Docket No. 50-354

Subject: Application to Adopt TSTF-427, Revision 2, "Allowance for Non Technical Specification Barrier Degradation on Supported System OPERABILITY"

References:

1. TSTF-427, Revision 2, "Allowance for Non Technical Specification Barrier Degradation on Supported System OPERABILITY," dated May 3, 2006 (ML061240055).
2. Notice of Availability of Model Application Concerning Technical Specification Improvement to Modify Requirements Regarding the Addition of LCO 3.0.9 on the Unavailability of Barriers Using the Consolidated Line Item Improvement Process, dated October 3, 2006 (71 Fed. Reg. 58444).

In accordance with the provisions of 10 CFR 50.90, PSEG Nuclear LLC (PSEG) is submitting a request for an amendment to the Technical Specifications (TS) for Hope Creek Generating Station. The proposed amendment would modify TS requirements for unavailable barriers by adding Limiting Condition for Operation (LCO) 3.0.9. The proposed changes are consistent with NRC approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-427, Revision 2, "Allowance for Non-Technical Specification Barrier Degradation on Supported System OPERABILITY," dated May 3, 2006 (Reference 1). The availability of this TS improvement was announced in the *Federal Register* on October 3, 2006 (71 FR 58444) as part of the Consolidated Line Item Improvement Process (CLIIP) (Reference 2).

Attachment 1 provides a description of the proposed changes. Attachment 2 provides a summary of commitments made in this submittal. Enclosure 1 provides the existing TS pages marked up to show the proposed changes. Enclosure 2 provides the existing TS Bases pages marked up to show the proposed changes (for information only).

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PSEG is not providing Revised Technical Specification Pages with this submittal. The pages will be provided in support of final NRC approval.

Approval of the proposed amendment is requested within one year of submittal acceptance. Once approved, the amendment shall be implemented within 120 days.

In accordance with 10 CFR 50.91, a copy of this application is being provided to the designated State of New Jersey Official.

If you have any questions or require additional information, please contact Mr. Lee Marabella at 856-339-1208.

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

Executed on 8/19/20
(Date)

Respectfully,



Edward T. Casulli
Site Vice President
Hope Creek Generating Station

Attachment 1: Description and Assessment

Attachment 2: Summary of Commitments

Enclosure 1: Proposed Technical Specification Changes (Mark-Up)

Enclosure 2: Proposed Technical Specification Bases Changes (Mark-Up for information only)

cc: Administrator, Region I, NRC
NRC Project Manager, Hope Creek
NRC Senior Resident Inspector, Hope Creek
Mr. P. Mulligan, Chief, NJBNE
PSEG Corporate Commitment Tracking Coordinator
Site Compliance Commitment Tracking Coordinator

Attachment 1
Description and Assessment

1.0 DESCRIPTION

The proposed amendment would modify Technical Specification (TS) requirements for unavailable barriers by adding Limiting Condition for Operation (LCO) 3.0.9. The proposed changes are consistent with NRC-approved Technical Specification Task Force (TSTF) Standard Technical Specifications change TSTF-427, Revision 2, "Allowance for Non Technical Specification Barrier Degradation on Supported System OPERABILITY." The availability of this TS improvement was announced in the Federal Register on October 3, 2006 (71 FR 58444) as part of the Consolidated Line Item Improvement Process (CLIP).

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

PSEG Nuclear LLC (PSEG) has reviewed the safety evaluation (71 FR 58444) dated October 3, 2006 as part of the CLIP. This included a review of the NRC evaluation, as well as information provided to support TSTF-427. PSEG has concluded that the justifications presented in the TSTF-427 proposal and the corresponding NRC safety evaluation are applicable to Hope Creek Generating Station and justify this amendment for the incorporation of the changes to the Hope Creek TS.

2.2 Optional Changes and Variations

PSEG is not proposing any variations or deviations from the TS changes described in the TSTF-427 Revision 2 or the NRC staff's model safety evaluation dated October 3, 2006.

The mark-up of the TS Bases associated with LCO 3.0.9 as presented in TSTF-427, is included in Enclosure 2 for information purposes. The LCO 3.0.9 Bases in TSTF-427 indicate that risk assessments will be conducted using the procedures and guidance endorsed by Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." In the Federal Register dated November 27, 2012 (77 FR 70846), the NRC provided notice that Regulatory Guide 1.182 had been withdrawn and the subject matter had been incorporated into Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." The TSTF issued a letter (Reference 1) noting which approved TSTF travelers are affected and described the effect of withdrawal of Regulatory Guide 1.182. An NRC letter (Reference 2) endorsed the TSTF's approach in the handling of future license amendment requests. As such, PSEG is referencing Regulatory Guide 1.160 in the TS Bases associated with this amendment request.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Analysis

PSEG has reviewed the proposed no significant hazards consideration determination (NSHCD) published in the Federal Register as part of the Consolidated Line Item Improvement Process (CLIP). PSEG has concluded that the proposed NSHCD presented in the Federal Register notice is applicable to Hope Creek Generating Station and is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a), "Notice for public comment."

3.2 Verification and Commitments

As discussed in the notice of availability published in the Federal Register on October 3, 2006 for this TS improvement, plant-specific verifications will be performed as follows:

1. PSEG commits to the guidance of NUMARC 93-01 (Reference 3) Section 11, which provides guidance and details on the assessment and management of risk during maintenance.
2. PSEG will revise procedures to ensure that the risk assessment and management process described in NEI 04-08 (Reference 4) is used whenever a barrier is considered unavailable and the requirements of LCO 3.0.9 are to be applied, in accordance with an overall configuration risk management program (CRMP) to ensure that potentially risk-significant configurations resulting from maintenance and other operational activities are identified and avoided.

3.3 Precedent

TSTF-427 has been approved for several nuclear facilities. A few representative approvals are provided below.

1. Letter from B. Purnell (U.S. Nuclear Regulatory Commission) to President and Chief Nuclear Officer (CNO) Exelon Nuclear, "Braidwood Station, Units 1 and 2; Byron Station, Unit Nos. 1 and 2; Clinton Power Station, Unit No. 1; Dresden Nuclear Power Station, Units 2 and 3; James A. Fitzpatrick Nuclear Power Plant; LaSalle County Station, Units 1 and 2; Limerick Generating Station, Units 1 and 2; Nine Mile Point Nuclear Station, Unit 1; Peach Bottom Atomic Power Station, Units 2 and 3; Quad Cities Nuclear Power Station, Units 1 and 2; and R. E. Ginna Nuclear Power Plant - Issuance Of Amendments Based On Technical Specifications Task Force Traveler TSTF-427, "Allowance For Non Technical Specification Barrier Degradation On Supported System Operability," Revision 2 (EPID L-2019-LLA-0132) dated July 10, 2020 (ML20141L636).
2. Letter from T. Wengert (U.S. Nuclear Regulatory Commission) to ANO Site Vice President Arkansas Nuclear One (Entergy Operations, Inc.), "Arkansas Nuclear One, Unit 1 - Issuance of Amendment to Adopt TSTF-427, 'Allowance for Non

Technical Specification Barrier Degradation on Supported System Operability' (CAC No. MG0132; EPID L-2017-LLA-0301),"dated February 26, 2018 (ML 18033A 175).

3. Letter from T. Wengert (U.S. Nuclear Regulatory Commission) to ANO Site Vice President Arkansas Nuclear One (Entergy Operations, Inc.), "Arkansas Nuclear One, Unit 2 - Issuance of Amendment to Adopt TSTF-427, 'Allowance for Non Technical Specification Barrier Degradation on Supported System Operability' (CAC No. MG0131; EPID L-2017-LLA-0302)," dated February 26, 2018 (ML18051A589).
4. Letter from S. Lingam (U.S. Nuclear Regulatory Commission) to Vice President, Operations (Entergy Operations, Inc.), "Grand Gulf Nuclear Station, Unit 1 - Issuance of Amendment to Adopt Technical Specifications Task Force (TSTF)-427, Revision 2, 'Allowance for Non Technical Specification Barrier Degradation on Supported System Operability,' (CAC No. MF8692)," dated June 7, 2017 (ML17116A032).

4.0 ENVIRONMENTAL EVALUATION

PSEG has reviewed the environmental evaluation included in the model safety evaluation dated October 3, 2006 as part of the CLIP. PSEG has concluded that the staff's findings presented in that evaluation are applicable to Hope Creek Generating Station and the evaluation is hereby incorporated by reference for this application.

5.0 REFERENCES

1. Letter from the Technical Specifications Task Force to U.S. Nuclear Regulatory Commission, "Revision of References to Regulatory Guide 1.182 in Approved Travelers," TSTF-14-10, dated September 16, 2014 (ML14259A575).
2. Letter from A. Mendiola (U.S. Nuclear Regulatory Commission) to Technical Specifications Task Force (TSTF), "U.S. Nuclear Regulatory Commission Response to the TSTF Letter Regarding References to Regulatory Guide 1.182 in Approved Travelers," dated February 26, 2015 (ML15033A152).
3. NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants".
4. NEI 04-08, "Allowance for Non-Technical Specification Barrier Degradation on Supported System OPERABILITY (TSTF-427)," dated March 2006 (ML061220426).

Attachment 2 Summary of Commitments

The following table identifies commitments made in this document. (Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.)

COMMITMENT	COMMITTED DATE OR OUTAGE	COMMITMENT TYPE	
		One-Time Action (Yes/No)	Programmatic (Yes/No)
1. PSEG commits to the guidance of NUMARC 93-01, Section 11, which provides guidance and details on the assessment and management of risk during maintenance.	120 days following approval	No	Yes
2. PSEG will revise procedures to ensure that the risk assessment and management process described in NEI 04-08 is used whenever a barrier is considered unavailable and the requirements of LCO 3.0.9 are to be applied, in accordance with an overall configuration risk management program (CRMP) to ensure that potentially risk-significant configurations resulting from maintenance and other operational activities are identified and avoided.	120 days following approval	No	Yes

Enclosure 1

Proposed Technical Specification Changes (Mark-Up)

3/4.0 APPLICABILITY

LIMITING CONDITION FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding Specifications is required during the OPERATIONAL CONDITIONS or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met, and except as provided in LCO 3.0.8.

, and LCO 3.0.9

3.0.2 Noncompliance with a Specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals. If the Limiting Condition for Operation is restored prior to expiration of the specified time intervals, completion of the Action requirements is not required.

3.0.3 When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in an OPERATIONAL CONDITION in which the Specification does not apply by placing it, as applicable, in:

1. At least STARTUP within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual Specifications.

This Specification is not applicable in OPERATIONAL CONDITIONS 4 or 5.

3.0.4 When an LCO is not met, entry into an OPERATIONAL CONDITION or other specified condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the OPERATIONAL CONDITION or other specified condition in the Applicability for an unlimited period of time; or
- b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the OPERATIONAL CONDITION or other specified condition in the Applicability, and establishment of risk management actions, if appropriate (exceptions to this Specification are stated in the individual Specifications); or
- c. When an allowance is stated in the individual value, parameter, or other Specification.

This Specification shall not prevent changes in OPERATIONAL CONDITIONS or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

APPLICABILITY

LIMITING CONDITION FOR OPERATION (Continued)

3.0.5 Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

3.0.6 Not used.

3.0.7 Not used.

3.0.8 Inoperability of Snubbers

When one or more required snubbers are unable to perform their associated support function(s), any affected supported LCO(s) are not required to be declared not met solely for this reason if risk is assessed and managed, and:

- a. the snubbers not able to perform their associated support function(s) are associated with only one train or subsystem of a multiple train or subsystem supported system or are associated with a single train or subsystem supported system and are able to perform their associated support function within 72 hours; or
- b. the snubbers not able to perform their associated support function(s) are associated with more than one train or subsystem of a multiple train or subsystem supported system and are able to perform their associated support function within 12 hours.

At the end of the specified period the required snubbers must be able to perform their associated support function(s), or the affected supported system LCO(s) shall be declared not met.

 INSERT 1

INSERT 1:

LCO 3.0.9 When one or more required barriers are unable to perform their related support function(s), any supported system LCO(s) are not required to be declared not met solely for this reason for up to 30 days provided that at least one train or subsystem of the supported system is OPERABLE and supported by barriers capable of providing their related support function(s), and risk is assessed and managed. This specification may be concurrently applied to more than one train or subsystem of a multiple train or subsystem supported system provided at least one train or subsystem of the supported system is OPERABLE and the barriers supporting each of these trains or subsystems provide their related support function(s) for different categories of initiating events.

For the purposes of this specification, the High Pressure Coolant Injection system, the Reactor Core Isolation Cooling system, and the Automatic Depressurization System are considered independent subsystems of a single system.

If the required OPERABLE train or subsystem becomes inoperable while this specification is in use, it must be restored to OPERABLE status within 24 hours or the provisions of this specification cannot be applied to the trains or subsystems supported by the barriers that cannot perform their related support function(s).

At the end of the specified period, the required barriers must be able to perform their related support function(s) or the supported system LCO(s) shall be declared not met.

Enclosure 2

Proposed Technical Specification Bases Changes (Mark-Up for information only)

3/4.0 APPLICABILITY

3.0.9

BASES

Specifications 3.0.1 through ~~3.0.8~~ establish the general requirements applicable to Limiting Conditions for Operation. These requirements are based on the requirements for Limiting Conditions for Operation stated in the Code of Federal Regulations, 10 CFR 50.36(c)(2):

"Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specification until the condition can be met."

Specification 3.0.1 establishes the Applicability statement within each individual specification as the requirement for when (i.e., in which OPERATIONAL CONDITIONS or other specified conditions) conformance to the Limiting Conditions for Operation is required for safe operation of the facility. The ACTION requirements establish those remedial measures that must be taken within specified time limits when the requirements of a Limiting Condition for Operation are not met. The ACTIONS for not meeting a single LCO adequately manage any increase in plant risk, provided any unusual external conditions (e.g., severe weather, offsite power instability) are considered. In addition, the increased risk associated with simultaneous removal of multiple structures, systems, trains or components from service is assessed and managed in accordance with 10 CFR 50.65(a)(4).

There are two basic types of ACTION requirements. The first specifies the remedial measures that permit continued operation of the facility which is not further restricted by the time limits of the ACTION requirements. In this case, conformance to the ACTION requirements provides an acceptable level of safety for unlimited continued operation as long as the ACTION requirements continue to be met. The second type of ACTION requirement specifies a time limit in which conformance to the conditions of the Limiting Condition for Operation must be met. This time limit is the allowable outage time to restore an inoperable system or component to OPERABLE status or for restoring parameters within specified limits. If these actions are not completed within the allowable outage time limits, a shutdown is required to place the facility in an OPERATIONAL CONDITION or other specified condition in which the specification no longer applies.

The specified time limits of the ACTION requirements are applicable from the point in time it is identified that a Limiting Condition for Operation is not met. The time limits of the ACTION requirements are also applicable when a system or component is removed from service for surveillance testing or investigation of operational problems. Individual specifications may include a specified time limit for the completion of a Surveillance Requirement when equipment is removed from service. In this case, the allowable outage time limits of the ACTION requirements are applicable when this limit expires if the surveillance has not been completed. When a shutdown is required to comply with ACTION requirements, the plant may have entered an OPERATIONAL CONDITION in which a new specification becomes applicable. In this case, the

3/4.0 APPLICABILITY

BASES (Con't)

multiple train or subsystem supported system. LCO 3.0.8.b allows 12 hours to restore the snubber(s) before declaring the supported system inoperable. The 12 hour Completion Time is reasonable based on the low probability of a seismic event concurrent with an event that would require operation of the supported system occurring while the snubber(s) are not capable of performing their associated support function.

When LCO 3.0.8.b is used, it must be verified that at least one success path exists, using equipment not associated with the inoperable snubber(s), to provide makeup and core cooling needed to mitigate LOOP accident sequences.

LCO 3.0.8 requires that risk be assessed and managed. Industry and NRC guidance on the implementation of 10 CFR 50.65(a)(4) (the Maintenance Rule) does not address seismic risk. However, use of LCO 3.0.8 should be considered with respect to other plant maintenance activities, and integrated into the existing Maintenance Rule process to the extent possible so that maintenance on any unaffected train or subsystem is properly controlled, and emergent issues are properly addressed. The risk assessment need not be quantified, but may be a qualitative awareness of the vulnerability of systems and components when one or more snubbers are not able to perform their associated support function.

INSERT 2 →

Specifications 4.0.1 through 4.0.5 establish the general requirements applicable to Surveillance Requirements. These requirements are based on the Surveillance Requirements stated in the Code of Federal Regulations, 10 CFR 50.36(c) (3):

"Surveillance requirements are requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met."

Specification 4.0.1 establishes the requirement that Surveillance Requirements must be met during the OPERATIONAL CONDITIONS or other specified conditions in the Applicability for which the requirements of the Limiting Conditions for Operation apply unless otherwise specified in an individual Surveillance Requirement. This specification is to ensure that surveillances are performed to verify the OPERABILITY of systems and components and that variables are within specified limits. Failure to meet a Surveillance within the specified Frequency, in accordance with Specification 4.0.2, constitutes a failure to meet an LCO.

Systems and components are assumed to be OPERABLE when the associated Surveillance Requirements have been met. Nothing in this Specification, however, is to be construed as implying that systems or components are OPERABLE when either:

- a. The systems or components are known to be inoperable, although still meeting the Surveillance Requirements, or

INSERT 2

Specification 3.0.9 establishes conditions under which systems described in the Technical Specifications are considered to remain OPERABLE when required barriers are not capable of providing their related support function(s).

Barriers are doors, walls, floor plugs, curbs, hatches, installed structures or components, or other devices, not explicitly described in Technical Specifications, that support the performance of the safety function of systems described in the Technical Specifications. This LCO states that the supported system is not considered to be inoperable solely due to required barriers not capable of performing their related support function(s) under the described conditions. LCO 3.0.9 allows 30 days before declaring the supported system(s) inoperable and the LCO(s) associated with the supported system(s) not met. A maximum time is placed on each use of this allowance to ensure that as required barriers are found or are otherwise made unavailable, they are restored. However, the allowable duration may be less than the specified maximum time based on the risk assessment.

If the allowed time expires and the barriers are unable to perform their related support function(s), the supported system's LCO(s) must be declared not met and the ACTIONS entered in accordance with LCO 3.0.2. This provision does not apply to barriers which support ventilation systems or to fire barriers. The Technical Specifications for ventilation systems provide specific Conditions for inoperable barriers. Fire barriers are addressed by other regulatory requirements and associated plant programs.

This provision does not apply to barriers which are not required to support system OPERABILITY (see NRC Regulatory Issue Summary 2001-09, "Control of Hazard Barriers," dated April 2, 2001).

The provisions of LCO 3.0.9 are justified because of the low risk associated with required barriers not being capable of performing their related support function. This provision is based on consideration of the following initiating event categories:

- Loss of coolant accidents;
- High energy line breaks;
- Feedwater line breaks;
- Internal flooding;
- External flooding;
- Turbine missile ejection; and
- Tornado or high wind.

The risk impact of the barriers which cannot perform their related support function(s) must be addressed pursuant to the risk assessment and management provision of the Maintenance Rule, 10 CFR 50.65 (a)(4), and the associated implementation guidance, Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." Regulatory Guide 1.160 endorses the guidance in Section 11 of NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at

Nuclear Power Plants." This guidance provides for the consideration of dynamic plant configuration issues, emergent conditions, and other aspects pertinent to plant operation with the barriers unable to perform their related support function(s). These considerations may result in risk management and other compensatory actions being required during the period that barriers are unable to perform their related support function(s).

LCO 3.0.9 may be applied to one or more trains or subsystems of a system supported by barriers that cannot provide their related support function(s), provided that risk is assessed and managed (including consideration of the effects on Large Early Release and from external events). If applied concurrently to more than one train or subsystem of a multiple train or subsystem supported system, the barriers supporting each of these trains or subsystems must provide their related support function(s) for different categories of initiating events. For example, LCO 3.0.9 may be applied for up to 30 days for more than one train of a multiple train supported system if the affected barrier for one train protects against internal flooding and the affected barrier for the other train protects against tornado missiles. In this example, the affected barrier may be the same physical barrier but serve different protection functions for each train.

The HPCI and RCIC systems are single train systems for injecting makeup water into the reactor during an accident or transient event. The RCIC system is not a safety system, nor required to operate during a transient; therefore, it is not required to meet the single failure proof criterion. The HPCI system provides backup in case of a RCIC system failure. The ADS and low pressure ECCS coolant injection provide the core cooling function in the event of failure of the HPCI system during an accident. For the purposes of LCO 3.0.9, the HPCI system, the RCIC system, and the ADS are considered independent subsystems of a single system and LCO 3.0.9 can be used on these single train systems in a manner similar to multiple train or subsystem systems.

If during the time that LCO 3.0.9 is being used, the required OPERABLE train or subsystem becomes inoperable, it must be restored to OPERABLE status within 24 hours. Otherwise, the train(s) or subsystem(s) supported by barriers that cannot perform their related support function(s) must be declared inoperable and the associated LCOs declared not met. This 24 hour period provides time to respond to emergent conditions that would otherwise likely lead to entry into LCO 3.0.3 and a rapid plant shutdown, which is not justified given the low probability of an initiating event which would require the barrier(s) not capable of performing their related support function(s). During this 24 hour period, the plant risk associated with the existing conditions is assessed and managed in accordance with 10 CFR 50.65(a)(4).