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September 2, 2009

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

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

Subject: **RESPONSE TO RAI2 - REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS REGARDING MODE CHANGE LIMITATIONS USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS (CLIIP), TSTF-359 (ME0341)**

Reference (1) Letter from PSEG to NRC: "Request for Change to Technical Specifications Regarding Mode Change Limitations Using the Consolidated Line Items Improvement Process (CLIIP)," dated January 5, 2009

(2) Letter from PSEG to NRC: "Response to RAI - Request for Change to Technical Specifications Regarding Mode Change Limitations Using the Consolidated Line Items Improvement Process (CLIIP)," dated June 6, 2009

In Reference 1, PSEG Nuclear LLC (PSEG) submitted a license amendment request for the facility operating license listed above. The request would modify Technical Specification (TS) requirements for mode change limitations in TS 3.0.4 and 4.0.4, using the Consolidated Line Item Improvement Process (CLIIP) described in NRC approved industry Technical Specification Task Force (TSTF) change TSTF-359, Revision 9.

In Reference 2 PSEG submitted the response to a Request for Additional Information (RAI) on the Reference 1 license amendment request.

The NRC provided PSEG a second RAI on the license amendment request. The response to the second RAI is provided in Attachment 1 to this submittal.

No regulatory commitments are contained in this submittal.

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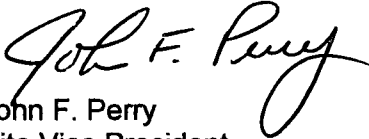
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If you have any questions or require additional information, please do not hesitate to contact Mr. Jeff Keenan at (856) 339-5429.

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

Executed on 9/2/09
(Date)

Sincerely,


John F. Perry
Site Vice President
Hope Creek Generating Station

Attachments (1)

S. Collins, Regional Administrator - NRC Region I
R. Ennis, Project Manager - USNRC
NRC Senior Resident Inspector - Hope Creek
P. Mulligan, Manager IV, NJBNE
Commitment Coordinator – Hope Creek
PSEG Commitment Coordinator - Corporate

REQUEST FOR ADDITIONAL INFORMATION
REGARDING PROPOSED LICENSE AMENDMENT
MODE CHANGE LIMITATIONS
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

By application dated January 5, 2009, as supplemented by letter dated June 9, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML090130384 and ML091670251, respectively), PSEG Nuclear LLC (the licensee) submitted a license amendment request for the Hope Creek Generating Station (HCGS). The proposed amendment would modify Technical Specification (TS) requirements for mode change limitations in accordance with Revision 9 of Nuclear Regulatory Commission (NRC)-approved TS Task Force (TSTF) change TSTF-359, "Increase Flexibility in Mode Restraints."

The NRC staff has reviewed the information the licensee provided that supports the proposed amendment and would like to discuss the following issues to clarify the submittal.

Background

During the license amendment review of TSTF-359 for HCGS a generic issue was identified by the NRC staff. TSTF-359 proposed changes that would modify limiting condition for operation (LCO) 3.0.4 and surveillance requirement 3.0.4 by risk-informing limitations on entering the mode of applicability of an LCO. The issue is that TSTF-359 will remove the current LCO 3.0.4 exceptions and insert new LCO 3.0.4(b) exceptions in accordance with the list of higher risk systems in Section 3.1.1 of the Consolidated Line Item Improvement Process (CLIIP) model safety evaluation. The list of high risk systems had been determined using the owners groups generic qualitative risk assessments. LCO 3.0.4(a) states, "When the associated ACTIONS to be entered permit continued operation in the OPERATIONAL MODE or other specified condition in the Applicability for an unlimited period of time." Licensees can now apply LCO 3.0.4(a) to systems that were previously prohibited, without a risk assessment. Neither the licensee nor the NRC have evaluated and documented why this is acceptable. This is a generic issue that applies to all licensees that have adopted TSTF-359, or may apply to adopt TSTF-359. Further details are provided below.

The proposed LCO 3.0.4(a) retains the current LCO 3.0.4 allowance for when the required actions allow indefinite operation. TSTF-359 removes the current, "LCO 3.0.4 is not applicable" exceptions in the individual specifications. Some plant-specific LCOs contain ACTIONS that allow an unlimited period of time, and currently do not allow LCO 3.0.4 to be applied.

The model safety evaluation addresses the current notes in individual specifications stating that they are now encompassed by LCO 3.0.4(b) and can be removed. The

model safety evaluation does not address allowing the use of LCO 3.0.4(a) (risk assessment not required) on LCOs that were previously prohibited. Future TSTF-359 adoptions will require licensees to provide a safety assessment for removal of each plant-specific LCO 3.0.4 exception.

As an alternative, licensees can opt to adopt TSTF-359 without LCO paragraph (a) or retain the current LCO exceptions and change them to read LCO 3.0.4(a) instead of LCO 3.0.4.

Request for Additional Information

- 1) Licensees interested in increasing flexibility in mode restraints by implementing TSTF-359, Revision 9 must, as applicable, remove pre-existing limiting condition for operation (LCO) 3.0.4 exceptions in the current TSs. The CLIIP model TSs for BWR/4 plants (i.e., NUREG-1433) identified the following LCOs as having LCO 3.0.4 exceptions to be removed:

<u>TS</u>	<u>DESCRIPTION</u>
3.3.3.1	Post Accident Monitoring (PAM) Instrumentation
3.3.3.2	Remote Shutdown System
3.3.6.3	Low-Low Set (LLS) Instrumentation
3.4.6	RCS Leakage Detection Instrumentation
3.4.7	RCS Specific Activity
3.4.8	Residual Heat Removal (RHR) Shutdown Cooling System – Hot Shutdown
3.6.3.1	Primary Containment Hydrogen Recombiners (if permanently installed)
3.6.3.2	Drywell Cooling System Fans
3.6.3.4	Containment Atmosphere Dilution (CAD) System
3.7.3	Diesel Generator (DG) [1B] Standby Service Water (SSW) System

The proposed amendment would remove HCGS-specific pre-existing LCO 3.0.4 exceptions from the TSs. Removal of any plant-specific pre-existing LCO 3.0.4 exceptions not included in the generic CLIIP for TSTF-359 would be considered a plant-specific deviation from the CLIIP and must be justified. As such, please provide justification for the proposed removal of the pre-existing LCO 3.0.4 exceptions from the following HCGS TSs:

<u>TS</u>	<u>DESCRIPTION</u>
3.1.3.1	Control Rod Operability
3.1.3.2	Control Rod Maximum Scram Insertion Times
3.1.3.4	Four Control Rod Group Scram Insertion Times
3.1.3.5	Control Rod Scram Accumulators
3.1.3.6	Control Rod Drive Coupling
3.1.3.7	Control Rod Position Indication
3.2.3	Minimum Critical Power Ratio
3.3.1	Reactor Protection System Instrumentation
3.3.2	Isolation Actuation Instrumentation
3.3.7.1	Radiation Monitoring Instrumentation
3.3.7.4	Remote Shutdown System Instrumentation And Controls

3.3.10	Mechanical Vacuum Pump Trip Instrumentation
3.4.1.1	Recirculation System
3.4.7	Main Steam Line Isolation Valves
3.6.1.3	Primary Containment Air Locks
3.8.4.1	Primary Containment Penetration Conductor Overcurrent Protective Devices
3.8.4.5	Class 1E Isolation Breaker Overcurrent Protective Devices

RESPONSE

There are two categories of 'Action Requirements' in the existing TS that have '3.0.4 not applicable' statements: (i) The first specifies the remedial actions that permit continued operation of the facility not restricted by the time limits of Action Requirements. In this case, conformance to the Action Requirements provides an acceptable level of safety for continued operation of the facility, and operation may proceed indefinitely as long as the remedial Action Requirements are met. (ii) The second type of Action Requirement specifies a time limit in which the LCO must be met. This time limit is the time allowed to restore an inoperable system or component to operable status or to restore parameters within specified limits. If these actions are not completed within the allowable outage time limits, action must be taken to shut down the facility by placing it in a mode or condition of operation in which the LCO does not apply. Justification for the proposed removal of the pre-existing LCO 3.0.4 exceptions for HCGS TSs listed in the question is addressed below per the two category types.

(i) TS that permit continued operation for an unlimited period of time

The RAI states that: "Licensees can now apply LCO 3.0.4(a) to systems that were previously prohibited, without a risk assessment". This is inconsistent with the application of the existing 3.0.4, as revised by GL 87-09 (discussed further below). The '3.0.4 not applicable' statement in these specific TS cases is not interpreted to mean that a mode change is prohibited (though a possible literal interpretation of the TS, not accounting for (a) the regulatory requirements of an LCO and (b) the history of revision of 3.0.4, could reach a differing interpretation). This potential confusion is discussed below.

The actual statement in the TS is: "The provisions of Specification 3.0.4 are not applicable." These statements are consistent with the NRC regulatory requirements for an LCO and the underlying basis of 3.0.4. For an LCO that has Action Requirements permitting continued operation for an unlimited period of time, entry into an operational mode or other specified condition of operation should be permitted in accordance with those Action Requirements. The restriction on a change in operational modes or other specified conditions should apply only where the Action Requirements establish a specified time interval in which the LCO must be met or a shutdown of the facility would be required. This regulatory requirement is discussed in the "Staff Position" section of GL 87-09.

GL 87-09, "Section 3.0 and 4.0 of the Standard Technical Specifications (STS) on the Applicability of Limiting Conditions for Operation and Surveillance Requirements", was issued to discuss three problems regarding the general requirements of Sections 3.0 and 4.0. The first problem concerned unnecessary restrictions on MODE changes.

At the time GL 87-09 was issued TS 3.0.4 stated that entry into an operational mode or other specified condition shall not be made unless the LCO is met without reliance on the provisions of the Action Requirements. Its intent was to ensure that a higher mode of operation is not entered when equipment is inoperable or when parameters exceed their specified limits. This precluded a plant startup when actions are being taken to satisfy an LCO, which -- if not completed within the time limits of the Action Requirements - would result in a plant shutdown to comply with the Action Requirements. Specification 3.0.4 also precluded entering a mode or specified condition if an LCO is not met even if the Action Requirements would permit continued operation of the facility for an unlimited period of time.

As discussed above (in the Staff Position of GL 87-09), this was inconsistent with NRC's regulatory requirements for an LCO. The restriction on a change in operational modes or other specified conditions should apply only where the Action Requirements establish a specified time interval in which the LCO must be met or a shutdown of the facility would be required. To correct this problem the GL recommended modifying Specification 3.0.4 to state:

"Entry into an OPERATIONAL MODE or other specified condition shall not be made when the conditions for the Limiting Conditions for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL MODE or specified condition may be made in accordance with ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time."

This change to 3.0.4 was made by Amendment 19 to the Hope Creek operating license.

The GL went on to say that, as a consequence of the modification to Specification 3.0.4, individual specifications with Action Requirements permitting continued operation no longer need to indicate that Specification 3.0.4 does not apply. They should be revised to delete the noted exception to avoid confusion about the applicability of Specification 3.0.4. This potential confusion could arise because the "3.0.4 not applicable" statement for unlimited time periods was now effectively included within 3.0.4 and did not need to be in each individual TS – it might appear to be contradictory – i.e., the 'not applicable' statements in 'unlimited' TS did not refer to the new added sentence exempting unlimited time periods. It is important to note that the underlying basis was not changed for the existing TS 3.0.4 exceptions in Action Requirements permitting continued operation for an unlimited period of time. The change to TS 3.0.4 simply made the individual exceptions superfluous. The GL stated that it was not the staff's intent that the revision of Specification 3.0.4 should result in more restrictive requirements for individual specifications. This meant that, for the existing TS with unlimited time periods (where continued operation of the facility for an unlimited period of time was permitted), there was no regulatory restriction on Mode change pre or post GL 87-09.

The TS 3.0.4 exceptions in this group apply to Action Requirements which permit operation to proceed indefinitely as long as the remedial Action Requirements are met. The proposed deletion of the TS 3.0.4 exceptions from these Action Requirements by the TSTF-359 license amendment request will eliminate the confusion/redundancy discussed above. Also note that removal of these redundant statements is consistent

with improved standard TS (NUREG-1433). Removal of similar exceptions in creating NUREG-1433 was based on the same reasoning discussed above.

(ii) TS that have a time limit which if not met would require shutdown

The second category is for those TS that have a time limit which if not met would require shutdown. For these cases the new TS 3.0.4.b would be applicable. As noted in the license amendment request (Reference 1), Hope Creek has not adopted improved standard technical specifications (NUREG 1433) and consequently "the location of pre-existing LCO 3.0.4 exceptions in the current Hope Creek TS differs from those in STS". However these differences are bounded by the CLIIP SE and TSTF as discussed below.

As discussed in the CLIIP SE, the TSTF, and RAI1 (Reference 2), there is a small subset of systems and components for BWR4s that have been determined to be more important to risk and use of the LCO 3.0.4.b allowance is prohibited. For BWR4 (Hope Creek) the TS systems are: HPCI, RCIC, DG¹. The LCOs governing these systems and components contain Notes prohibiting the use of LCO 3.0.4.b by stating that LCO 3.0.4.b is not applicable. For these systems the license amendment request (Reference 1) includes appropriate markup to the TS. It is only these systems that are excluded from using 3.0.4.b per the CLIIP SE and the TSTF evaluation; for all other BWR4 systems, it is acceptable to apply 3.0.4.b and perform a risk assessment (regardless of whether they currently have a 3.0.4 not applicable statement). Therefore, for the systems listed above, it is acceptable to remove the existing 'not applicable' statements and use 3.0.4.b in the future.

Currently HCGS TS permit entry into an OPERATIONAL CONDITION or other specified condition when the LCOs in this category are not met. Upon removal of the individual TS 3.0.4 exceptions, entry into an OPERATIONAL CONDITION or other specified condition under the same circumstances will also require performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate. Removal of the individual TS 3.0.4 exceptions and application of the revised LCO 3.0.4 requirements to the above listed LCOs represents a more restrictive change to the HCGS TS.

¹ This group excludes Mode 4 systems. Per the CLIIP SE, Mode transitions for Modes 4 and 5 for BWRs, will be addressed by administrative controls. For Hope Creek this involves only the RHR system. This was discussed in the RAI1, Question 4 response.