

NRR-DMPSPEm Resource

From: Kim, James
Sent: Wednesday, May 30, 2018 1:40 PM
To: Duke, Paul R.; Thomas, Brian J.
Subject: Hope Creek - Final RAI RE: Revise TS to Adopt TSTF-542
Attachments: Final RAI_Hope Creek_542.docx

By letter dated September 21, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17265A847, PSEG Nuclear LLC, (PSEG or the licensee), requested to adopt Technical Specifications Task Force (TSTF) Traveler TSTF-542, "Reactor Pressure Vessel Water Inventory Control," Revision 2, which changes the Technical Specifications (TSs) for Hope Creek Generating Station.

Hope Creek TS Section 2.0, "Safety Limits and Limiting Safety System Settings," 2.1.4 states; the reactor vessel water level shall be above the top of the active irradiated fuel for Operational Conditions 3, 4 and 5. With the reactor vessel water level at or below the top of the active irradiated fuel, manually initiate the Emergency Core Cooling System to restore the water level, after depressurizing the reactor vessel, if required. Safety Limit 2.1.4 is maintained through the TS Limited Condition of Operation (LCO), applicability, actions, and notes. The Hope Creek TSs require certain safety systems to be OPERABLE during "operations with a potential for draining the reactor vessel" (OPDRVs). The proposed changes would replace existing TS requirements associated to OPDRVs with revised TSs providing an alternative requirement for Reactor Pressure Vessel (RPV) Water Inventory Control. These alternative requirements would protect Safety Limit 2.1.4.

The NRC staff has determined that the additional information is required for the staff to complete its review. On March 30, 2018, the NRC staff sent PSEG the draft Request for Additional Information (RAI). This RAI relates to the licensee's request to adopt TSTF-542, "Reactor Pressure Vessel Water Inventory Control," Revision 2.

On May 30, 2018, the NRC staff and the licensee held a conference call to clarify the request. A publicly available version of this final RAI (attached) will be placed in the NRC's ADAMS. Subsequently, the licensee agreed to respond to this request within 30 days of the date of this email (i.e., by June 29, 2018).

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Hearing Identifier: NRR_DMPS
Email Number: 393

Mail Envelope Properties (James.Kim@nrc.gov20180530134000)

Subject: Hope Creek - Final RAI RE: Revise TS to Adopt TSTF-542
Sent Date: 5/30/2018 1:40:00 PM
Received Date: 5/30/2018 1:40:00 PM
From: Kim, James

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Tracking Status: None

Post Office:

Files	Size	Date & Time
MESSAGE	2107	5/30/2018 1:40:00 PM
Final RAI_Hope Creek_542.docx		25499

Options

Priority: Standard
Return Notification: Yes
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

REQUEST FOR ADDITIONAL INFORMATION
APPLICATION TO REVISE TECHNICAL SPECIFICATION TO ADOPT TSTF-542, REVISION
2, “REACTOR PRESSURE VESSEL WATER INVENTORY CONTROL”
PGES NUCLEAR LLC HOPE CREEK GENERATING STATION
EPID: L-2017-LLA-0352

By application dated September 21, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17265A847, PSEG Nuclear LLC, (PSEG), (the licensee), requested to adopt Technical Specifications Task Force (TSTF) Traveler TSTF-542, “Reactor Pressure Vessel Water Inventory Control,” Revision 2, which changes the Technical Specifications (TSs) for Hope Creek Generating Station. Traveler TSTF-542, Revision 2, was approved by the U.S. Nuclear Regulatory Commission (NRC) on December 20, 2016 (ADAMS Accession No. ML16343B008).

Hope Creek TS Section 2.0, “Safety Limits and Limiting Safety System Settings,” 2.1.4 states; the reactor vessel water level shall be above the top of the active irradiated fuel for Operational Conditions 3, 4 and 5. With the reactor vessel water level at or below the top of the active irradiated fuel, manually initiate the Emergency Core Cooling System to restore the water level, after depressurizing the reactor vessel, if required. Safety Limit 2.1.4 is maintained through the TS Limited Condition of Operation (LCO), applicability, actions, and notes. The Hope Creek TSs require certain safety systems to be OPERABLE during “operations with a potential for draining the reactor vessel” (OPDRVs).

The proposed changes would replace existing TS requirements associated to OPDRVs with revised TSs providing an alternative requirement for Reactor Pressure Vessel (RPV) Water Inventory Control. These alternative requirements would protect Safety Limit 2.1.4.

The Nuclear Regulatory Commission (NRC) staff has reviewed the information the licensee provided that supports the proposed amendment and is requesting for the licensee to address the following issues to be resolved and supplement the submittal:

Question 1 (HC-RAI-1)

Background:

LAR Attachment 1, page 7, item D.1 describes a variation related to Core Alterations. The variation states:

In alignment with TSTF-542, Rev. 2, Proposed Safety Basis (Section 3.1.2), the existing Hope Creek TS 3.5.2 requirement to suspend core alterations as an action for ECCS inoperability is no longer warranted since there are no postulated events associated with core alterations that are prevented or mitigated by the proposed RPV water inventory control requirements. In addition, loss of RPV inventory events are not initiated by core alteration operations. Refueling Limiting Conditions for Operation (LCOs) 3.9.1, Reactor Mode Switch, 3.9.2, Instrumentation, 3.9.3, Control Rod Position, and 3.9.8, Water Level - Reactor Vessel, provide requirements to ensure safe operation during core alterations, including required water level above the RPV flange. Therefore, PSEG proposes to delete TS 3.5.2, Action 'b' in its entirety, including the action relating to core alterations.

Traveler 542 does not specifically address that existing TS that have in place requirement for CORE ALTERATION, can be deleted.

Question:

Re-instate the TS requirement for CORE ALTERATION as describe in the following sections; LCO 3.5.2, Action b, LCO 3.5.3, Action b, or provide stronger justification that these actions can be deleted.

Question 2 (HC-RAI-2)

Background:

In LAR Attachment 2, proposed TS Table 3.3.12-2, "RPV Water Inventory Control Instrumentation Setpoints" (TS Page 3/4 3-114), Function 1.a, "Core Spray System, Reactor Vessel Pressure – Low (Permissive)" has a trip setpoint of " ≤ 461 psig" and Function 2.a, "Low Pressure Coolant Injection Mode of RHR System, Reactor Vessel Pressure – Low (Permissive)," has a trip setpoint of " ≤ 450 psig". The proposed change varies from the origin of these TS requirements, existing Table 3.3.3-2, "Emergency Core Cooling System Actuation Instrumentation Setpoints," Functions 1.c with trip setpoint "461 psig" and Function 2.a, with trip setpoint "450 psig".

Question:

Please provide technical justification for the proposed trip setpoints for TS Table 3.3.12-2 Functions 1.a and 2.a.

Question 3 (HC-RAI-3)

Background:

In LAR Attachment 2, Table 3.3.12-1, "RPV Water Inventory Control Instrumentation" (TS Page 3/4 3-112), Function 3.a, "RHR System Shutdown Cooling Mode of RHR System, Reactor Vessel Water Level – Low, Level 3," and Function 4.a, "Reactor Water Cleanup System Isolation, Reactor Vessel Water Level – Low Low, Level 2" each has a value of "2" for their minimum operable channels per trip function. The proposed change varies from the origin of these TS requirements, existing Table 3.3.2-1, "Isolation Actuation Instrumentation," Functions 7.a and 4.f, respectively. Each function currently has a value of "2/Valve" minimum operable channels per trip system. Additionally, in the existing Table 3.3.2-1, both functions contain footnote (e), which states, "Sensors arranged per valve group, not per trip system."

Question:

Please provide technical justification for the proposed "minimum operable channels per trip function" for TS Table 3.3.12-1 Functions 3.a and 4.a.