

NRR-PMDAPem Resource

From: Watford, Margaret
Sent: Friday, February 26, 2016 11:19 AM
To: Carl Stephenson; Del Elkinton; Matthew Cox; Mike Dilorenzo; Tom Weber
Cc: Carte, Norbert; ONeal, Daniel; Miller, Ed
Subject: Palo Verde, Units 1, 2, and 3: DRAFT Request for Additional Information Re: Amendment to Adopt TSTF-505 (CAC Nos. MF6576, MF6577, AND MF6578)
Attachments: Palo Verde, Units 1, 2, and 3 DRAFT RAI Amendment to Adopt TSTF-505 (CAC Nos. MF6576, MF6577, AND MF6578).pdf

Tom,

By letter dated July 31, 2015 (Agencywide Documents Access and Management System Accession No. ML15218A300), Arizona Public Service Company submitted a license amendment request (LAR) regarding Palo Verde Nuclear Generating Station (Palo Verde), Units 1, 2 and 3. The proposed amendment would revise Technical Specifications (TS) to Implement TS Task Force (TSTF)-505, Revision 1, "Provide Risk-Informed Extended Completion Times – RITSTF [Risk-informed TSTF] Initiative 4b."

Based on the NRC's staff review of the LAR, the NRC staff has determined that additional information is necessary to support completion of its technical review. Please see the **draft** request for additional information (RAI) in the attached document.

Thank you,

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Subject: Palo Verde, Units 1, 2, and 3: DRAFT Request for Additional Information Re: Amendment to Adopt TSTF-505 (CAC Nos. MF6576, MF6577, AND MF6578)
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MESSAGE	965	2/26/2016 11:18:00 AM
Palo Verde, Units 1, 2, and 3 DRAFT RAI Amendment to Adopt TSTF-505 (CAC Nos. MF6576, MF6577, AND MF6578).pdf	84999	

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
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REQUEST FOR ADDITIONAL INFORMATION
RELATED TO LICENSE AMENDMENT REQUEST TO ADOPT TSTF-505
ARIZONA PUBLIC SERVICE COMPANY
PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3
DOCKET NOS. STN 50-538, STN 50-529, AND STN 50-530

By letter dated July 31, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15218A300), Arizona Public Service Company (the licensee) submitted a license amendment request (LAR) regarding Palo Verde Nuclear Generating Station (Palo Verde), Units 1, 2 and 3. The proposed amendment would revise Technical Specifications (TS) to Implement TS Task Force (TSTF)-505, Revision 1, "Provide Risk-Informed Extended Completion Times – RITSTF [Risk-informed TSTF] Initiative 4b."

Based on the NRC's staff review of the LAR, the NRC staff has determined the following additional information is necessary to support completion of its technical review:

EICB-RAI-1

The staff seeks clarification on how probabilistic risk assessment (PRA) Functionality will be determined in the RICT program as implemented. The LAR does not describe conditions where Actuation Logic channels are INOPERABLE but PRA Functional.

- (a) Please provide several example conditions that would allow one or more Actuation Logic channels (see TS 3.3.6, "Engineered Safety Features Actuation System (ESFAS) Logic and Manual Trip," Action E insert for TS page 3.3.6-2) to be considered both INOPERABLE and PRA Functional.
- (b) For each example in part (a), please include an evaluation against the criteria in NEI 06-09, Section 2.3.1, "Configuration Risk Management Process & Application of Technical Specifications," Item Nos. 10 and 11.
- (c) The staff understands that by meeting the criteria in Items Nos. 10 and 11 in NEI 06-09, Section 2.3.1, all design basis events would be protected against. Please describe any associated design basis events that are NOT protected against in each example condition in part (a).

EICB-RAI-2

Enclosure 1, "List of Revised Required Actions to Corresponding PRA Functions," to the model application for licensee adoption of TSTF-505 dated January 31, 2012 (ADAMS Accession No. ML12032A065) states:

This enclosure [Enclosure 1] should provide a description of PRA functionality for each associated specified safety function that corresponds to each proposed Required Action that is applicable when all trains of equipment are inoperable as discussed in Section 2.3.1.10 of NEI 06-09. For example, the number and

identity of instrumentation and control channels (or functions) required to be PRA functional is highly dependent on the specific plant and associated equipment design.

Enclosure 1 guidance is included as part of the model application because the NRC staff seeks clarity on how PRA Functional will be used during full power operation following “loss of a specified safety function or inoperability of all required trains or divisions of a system.”

In the LAR, Attachment 5, “List of Revised Required Actions to Corresponding Probabilistic Risk Assessment Functions,” the “PRA Success Criteria” is indicated as being the same as the “Design Success Criteria,” i.e. the same minimum number of channels actuate for some instrument and controls (I&C) functions. (Regarding: TS 3.3.4, “Reactor Protective System (RPS) Logic and Trip Initiation,” & TS 3.3.6)

- (a) Please confirm that the PRA Success Criteria ensures all associated design basis events are protected against in the condition where two Actuation Logic channels are INOPERABLE and PRA Functional or justify how adequate protection is maintained, if not.
- (b) Attachment 5 of the LAR identifies some I&C structure, system, and components that are partially modeled (or not modeled) in the PRA. Item No. 11 in NEI 06-09, Section 2.3.1 includes criteria for determining PRA Functionality of components, and these criteria were developed based on the assumption that the function would be modeled in the PRA.
 - (i) Please describe how PRA Functionality of these partial models (or un-modeled items) will be determined (i.e., how the criteria of Item No. 11 will be applied).
 - (ii) Please describe how PRA Functionality of bounding evaluations will be determined (i.e., how the criteria of Item No. 11 will be applied).

EICB-RAI-3

NEI 06-09, Revision 0-A states that a RICT cannot be used in a condition where there is a total loss of TS specified safety function; however, it does not describe how to determine when a total loss of safety function has occurred.

- (a) For two Actuation Logic channels inoperable, please describe the process of how it will be determined if there is a total loss of TS specified safety function.

Note: Title 10 of the *Code of Federal Regulations* (10 CFR) 50.72 and 50.73 require the reporting of the plant being in a degraded or unanalyzed condition (see NUREG-1022, Revision 3, Section 3.2.4, “Degraded or Unanalyzed Condition”), and conditions that could prevent the fulfillment of the safety function of systems (see NUREG-1022 Revision 3, Section 3.2.7, “Event or Condition that Could Have Prevented Fulfillment of Safety Function”). In the LAR, TS 5.5.20, “Risk Informed Completion Time Program,” states:

“Use of a RICT is permitted for emergent conditions which represent a loss of a specified safety function or inoperability of all required trains of a system required to be OPERABLE if one or more of the trains are considered “PRA functional” as defined in Section 2.3.1 of the NEI 06-09 Revision 0 - A.”