

Diablo Canyon Power Plant Remove the LCO 3.0.4.b Restrictions in Technical Specifications 3.5.3, 3.7.5, and 3.8.1 Using the Risk-Informed Process for Evaluations Pre-Submittal Meeting

April 1, 2026





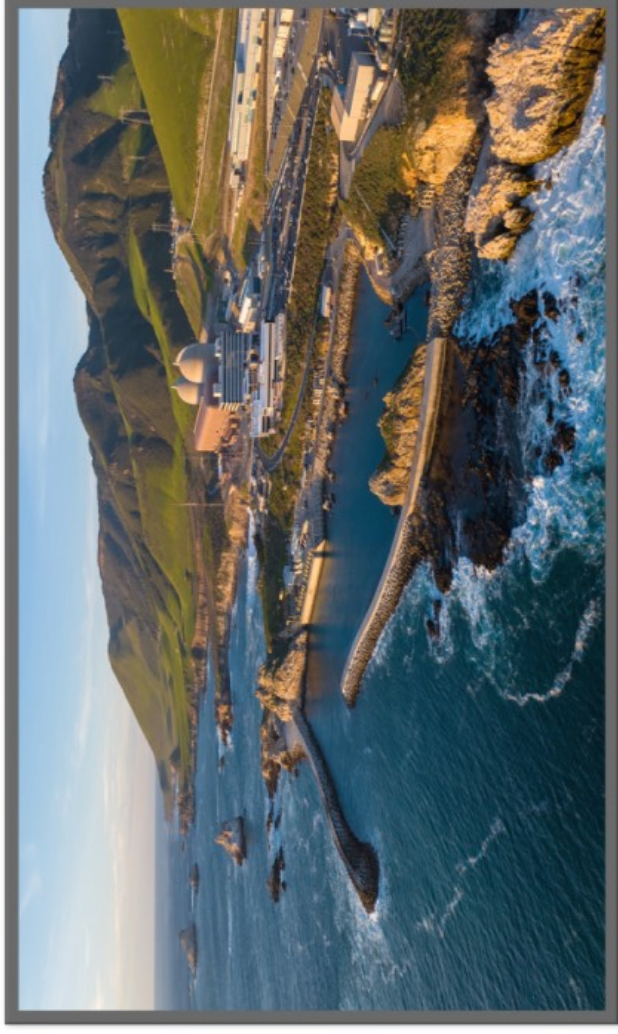
PG&E Project Team

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Meeting Purpose and Desired Outcome

- Meeting Purpose
 - Discuss the planned removal of the Limiting Condition for Operation (LCO) 3.0.4.b restriction Notes in Technical Specifications (TS) 3.5.3, 3.7.5, and 3.8.1 using the Risk-Informed Process for Evaluations (RIPE) License Amendment Request (LAR)
- Objective of the Meeting
 - Obtain NRC feedback on the content of the LAR



Meeting Agenda

- Objectives
- Description of the Change
- Background - Original Basis for the Notes
- TSTF-359 implementation
- Initial Results of the Screening Questions
- PRA Approach and Initial Results
- Proposed Schedule
- Questions

Objectives

- Provide an overview of PG&E's proposed submittal to remove the Notes to the Actions that prohibit applying LCO 3.0.4.b to TS 3.5.3, 3.7.5, and 3.8.1 by using the RIPE TS change process.
 - LAR Scope and Content
 - LAR Schedule
- Obtain NRC Feedback
 - LAR Content
 - Proposed schedule / NRC resource planning

Description of Change

- The following TS will be revised to remove the Note to the Actions that prohibits applying LCO 3.0.4.b to those TS:
 - TS 3.5.3, “Emergency Core Cooling System (ECCS) - Shutdown”: “NOTE - LCO 3.0.4.b is not applicable to ECCS Centrifugal Charging Pump subsystem.”
 - TS 3.7.5, “Auxiliary Feedwater (AFW) System”: “NOTE - LCO 3.0.4.b is not applicable.”
 - TS 3.8.1, “AC Sources - Operating”: “NOTE - LCO 3.0.4.b is not applicable to Diesel Generators (DGs).”
- The proposed change would remove the Notes to the Actions in TS 3.5.3, 3.7.5, and 3.8.1 that prohibit the use of LCO 3.0.4.b for changing modes.
- This change would allow entry into a higher mode of operation provided a risk assessment is performed for the existing plant configuration, the risk results are acceptable, and risk management actions are implemented when necessary.

Description of Change

- The Low Temperature Overpressure (LTOP) TS is not being revised to remove the LCO 3.0.4.b Note.
- The changes will allow continued plant startup for low-risk situations as confirmed by a risk assessment for the plant configuration.

Background of Original Basis for Notes

- Amendment No. 169 and No. 170 to the Diablo Canyon Power Plant (DCPP) Unit Nos. 1 and 2 Facility Operating License, modified the TS to adopt Technical Specifications Task Force (TSTF) Traveler TSTF-359-A, Rev. 9, “Increased Flexibility in Mode Restraints.”
- TSTF-359-A revised LCO 3.0.4 to add LCO 3.0.4.b.
- LCO 3.0.4.b allows entry into a mode or other specified condition in the Applicability with the LCO not met and relying on the associated TS Actions after the performance of a risk assessment, consideration of the results, and establishment of risk management actions, if appropriate.
- To justify the changes in TSTF-359-A, each of the Pressurized Water Reactor (PWR) Owners Groups developed a Qualitative Risk Assessment to justify the change to LCO 3.0.4 to allow mode changes when the SSC is inoperable.

Background of Original Basis for Notes (continued)

- The Qualitative Risk Assessments identified those structures, systems and components (SSCs) that have higher qualitative risk during the transition up through the shutdown and startup modes (PWR Mode 5 to 4, Mode 4 to 3, Mode 3 to 2, and Mode 2 to 1), than the risk of remaining in Mode 1.
- The following list of TS SSCs were determined to have “higher risk” (qualitative) to which LCO 3.0.4.b was not be applied for Westinghouse PWRs:

NUREG-1431 (Westinghouse NSSS)

System	Mode or Other Specified Condition in the Applicability to be Entered
Diesel Generators	1, 2, 3, 4
Auxiliary Feedwater	1, 2, 3, 4 if dependent upon AFW for startup
High Head Safety Injection	4
LTOP System	4

- These DCCP TS were revised to include a Note that prohibits the use of LCO 3.0.4.b to allow entry upward into the applicable Modes.

TSTF-359 Implementation

- As part of the requirements for implementation of TSTF-359, the guidance of NUMARC 93-01, Section 11 has been implemented.
- NUMARC 93-01 provides separate guidance for risk assessment during power operations (section 11.3.4), and during shutdown conditions (section 11.3.6).
- For the refueling and shutdown conditions, the use of a key safety function defense in depth approach based on NUMARC 91-06 is an acceptable approach to satisfy LCO 3.0.4.b requirements regarding risk assessment and management.
- PG&E has implemented a shutdown safety risk “checklist” procedure based on NUMARC 91-06 guidance to maintain a key safety function defense in depth approach for plant equipment, which includes equipment in the TS and not in the TS that can perform key safety functions.
- As part of implementation of TSTF-359, the risk assessment to support Mode entry with inoperable equipment must account for all inoperable TS equipment (inoperable TS 3.5.3, 3.7.5, and 3.8.1 equipment plus other inoperable TS equipment) such that overall plant risk is considered.

Initial Results of Screening Questions

- Screening questions initial response is complete.
- For Step 1 “adverse” questions, only one (question 2) is yes due to potential adverse impact on availability of ECCS charging, AFW, or DG to respond to a design basis accident while LCO 3.0.4.b is invoked.
- For Step 2 “more than minimal impact” questions, plan to refer to Step 1 “no” response for questions 1, 3, 4, and 5, and only provide detailed response for question 2 (prior TS 3.8.1 Condition B RIPE LAR re-answered Step 2 questions even if the corresponding Step 1 question response was “no”).
- Step 2 question 2 response is “no” based on limited use of LCO 3.0.4.b (approximately three opportunities to use LCO 3.0.4.b for ECCS charging, AFW, and DG since 2004), and other available equipment to perform safety functions.

Initial Results of Screening Questions

- Step 2 question 2 response is “no” for “more than minimal impact” on availability, based on limited use of LCO 3.0.4.b, availability of redundant and diverse components to support reactor shutdown and mitigation of the consequences of a design basis accident (DBA).
 - For entry into Mode 4 with inoperable ECCS Centrifugal Charging Pump (CCP) subsystem (TS 3.5.3), borated flow can be provided to the RCS with one of the three available ECCS CCPs, the operable Safety Injection subsystem, and the operable RHR subsystem.
 - For entry into Mode 4 with an inoperable AFW train (TS 3.7.5), RCS cooling can be provided with an available AFW train, an operable RHR subsystem train placed in the cooling mode of operation, or an available AFW motor driven pump and two Steam Generators with narrow range level at least 17 percent with a steam vent path.
 - For entry into Mode 4 with an inoperable DG (TS 3.8.1), AC power to support reactor shutdown and mitigation of the consequences of a DBA can be provided by the two other operable DGs or an operable immediate access offsite power source.
 - Redundant operable equipment can perform design function for Modes 3, 2, and 1.

PRA Approach and Initial Results

- DCP PRA Technical Adequacy
 - The DCP P Probabilistic Risk Assessment (PRA) includes fire, seismic, internal flooding and internal events.
 - Peer reviews complete and all facts and observations closed for the current model of record.
 - DCP P has implemented Risk Informed Completion Times and 50.69.
- DG Risk Assessment Options
 - At-power delta core damage frequency (CDF)/large early release frequency (LERF) for each configuration. Inputs include: annual probability of 3.0.4.b usage for DGs (based on plant specific data) + configuration duration post mode transition (LCO specific CT).
 - Use of a sensitivity evaluation for offsite power reliability (addresses uncertainty in offsite power reliability during outages).
 - Assessment of offsite power refueling outage reliability trends.

PRA Approach and Initial Results

- AFW Risk Assessment Options
 - At-power delta CDF/LERF for each configuration. Inputs include: annual probability of 3.0.4.b usage for AFW (based on plant specific data) + configuration duration post mode transition (LCO specific CT).
 - Use of a sensitivity evaluation for decay heat removal (DHR) reliability in modes where AFW is available (modes 1-4) vs. modes 5 and 6. Sensitivity will compare the reliability of RHR DHR methods when above RHR entry conditions vs. modes 4-6.
 - Use of qualitative insights. AFW is one of multiple methods for DHR in modes 1-4 including feed and bleed.

PRA Approach and Initial Results

- ECCS Risk Assessment Options
 - At-power delta CDF/LERF for each configuration. Inputs include: annual probability of 3.0.4.b usage for ECCS (based on plant specific data) + configuration duration post mode transition (LCO specific CT).
 - Mode specific risk assessment using an at-power sensitivity analysis that increases the likelihood of loss of coolant accident events commensurate with increase in frequency for loss of inventory control events during outage.
 - Use of qualitative insights. Depending on outage configuration, inventory control can be accomplished by any of 5 pumps (2 intermediate head pumps and 3 high head pumps).
- Preliminary Results
 - Initial results indicate that use of at-power surrogate results combined with plant specific probability of 3.0.4.b entry meets RIPE thresholds for DGs, ECCS and AFW configurations.
 - Proposed sensitivities have not yet been completed.



Proposed Schedule

PG&E & NRC Pre-submittal Meeting

April 1, 2026

PG&E IDP meeting

April 30, 2026

LAR submittal

May 2026

Requested Approval for LAR

September 2026

TS Change Implementation (Both Units)

October 2026*

*Supports exit from Unit 1 refueling outage

Questions?



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Thank You



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