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PG&E Letter DCL-22-059 10 CFR 50.90

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

Diablo Canyon Units 1 and 2
Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
License Amendment Request 22-03
Application to Revise Technical Specifications to Adopt TSTF-569, "Revision of Response Time Testing Definitions"

Dear Commissioners and Staff:

Pursuant to 10 CFR 50.90, Pacific Gas and Electric Company (PG&E) is submitting a request for an amendment to the Technical Specifications (TS) for the Diablo Canyon Power Plant (DCPP), Units 1 and 2.

PG&E requests adoption of TSTF-569, "Revise Response Time Testing Definition," which is an approved change to the Improved Standard Technical Specifications, into the DCPP, Units 1 and 2, TS. The proposed amendment revises the TS Definitions for Engineered Safety Feature Response Time and Reactor Trip System Response Time.

The enclosure provides a description and assessment of the proposed changes. Attachment 1 provides the existing TS pages marked to show the proposed changes. Attachment 2 provides revised (clean) TS pages. Attachment 3 is for information only and provides the existing TS Bases pages marked to show revised text associated with the proposed TS changes.

PG&E requests that the amendment be reviewed under the Consolidated Line Item Improvement Process. Approval of the proposed amendment is requested within 6 months of completion of the NRC's acceptance review. Once approved, the amendment shall be implemented within 90 days.

PG&E makes no new or revised regulatory commitments (as defined by NEI 99-04) in this submittal.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the California Department of Public Health.

If you have any questions or require additional information, please contact Mr. James Morris at 805-545-4609.

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

Sincerely,

Dennis B. Petersen
Station Director

7/26/2022
Date

kjse/51063551
Enclosure

cc/enc: Mahdi O. Hayes, NRC Senior Resident Inspector
Samson S. Lee, NRR Project Manager
Scott A. Morris, NRC Region IV Administrator
Gonzalo L. Perez, Branch Chief, California Department of Public Health
cc: Diablo Distribution

Description and Assessment

License Amendment Request 22-03
Application to Revise Technical Specifications to Adopt
TSTF-569, "**Revision of Response Time Testing Definitions**"

ATTACHMENTS:

1. Proposed Technical Specification Changes (Mark-Up)
2. Revised Technical Specification Pages
3. Proposed Technical Specification Bases Changes (Mark-Up) – For Information Only

DESCRIPTION AND ASSESSMENT

1. DESCRIPTION

Pacific Gas and Electric Company (PG&E) requests adoption of TSTF-569, "Revise Response Time Testing Definition," which is an approved change to the Improved Standard Technical Specifications (ISTS), into the Diablo Canyon Power Plant (DCPP), Units 1 and 2, Technical Specifications (TS). The proposed amendment revises the TS Definitions for Engineered Safety Feature (ESF) Response Time and Reactor Trip System (RTS) Response Time.

2. ASSESSMENT

2.1 Applicability of Safety Evaluation

PG&E has reviewed the safety evaluation for TSTF-569 provided to the Technical Specifications Task Force in a letter dated August 14, 2019. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-569. As described herein, PG&E has concluded that the justifications presented in TSTF-569 and the safety evaluation prepared by the NRC staff are applicable to DCPP, Units 1 and 2, and justify this amendment for the incorporation of the changes to the DCPP TS.

2.2 Variations

PG&E is not proposing any variations from the TS changes described in the TSTF-569 or the applicable parts of the NRC staff's safety evaluation dated August 14, 2019.

3. REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Analysis

PG&E requests adoption of TSTF-569, "Revise Response Time Testing Definition," which is an approved change to the ISTS into the DCPP, Units 1 and 2, TS. The proposed amendment revises the TS Definitions for ESF Response Time and RTS Response Time.

PG&E has evaluated if a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change revises the TS Definition of RTS and ESF instrumentation response time to permit the licensee to evaluate using an NRC-approved methodology and apply a bounding response time for some components in lieu of measurement. The requirement for the instrumentation to actuate within the response time assumed in the accident analysis is unaffected.

The response time associated with the RTS and ESF instrumentation is not an initiator of any accident. Therefore, the proposed change has no significant effect on the probability of any accident previously evaluated.

The affected RTS and ESF instrumentation are assumed to actuate their respective components within the required response time to mitigate accidents previously evaluated. Revising the TS definition for RTS and ESF instrumentation response times to allow an NRC-approved methodology for verifying response time for some components does not alter the surveillance requirements that verify the RTS and ESF instrumentation response times are within the required limits. As such, the TS will continue to assure that the RTS and ESF instrumentation actuate their associated components within the specified response time to accomplish the required safety functions assumed in the accident analyses. Therefore, the assumptions used in any accidents previously evaluated are unchanged and there is no significant increase in the consequences of any accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change revises the TS Definition of RTS and ESF instrumentation response time to permit the licensee to evaluate using an NRC-approved methodology and apply a bounding response time for some components in lieu of measurement. The proposed change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed). The proposed change does not alter any assumptions made in the safety analyses. The proposed change does not alter the limiting conditions for operation for the RTS or ESF instrumentation, nor does it change the Surveillance Requirement to verify the RTS and ESF instrumentation response times are within the required limits. As such, the proposed change does not alter the operability

requirements for the RTS and ESF instrumentation, and therefore, does not introduce any new failure modes.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed change revises the TS Definitions of RTS and ESF instrumentation response time to permit the licensee to evaluate using an NRC-approved methodology and apply a bounding response time for some components in lieu of measurement. The proposed change has no effect on the required RTS and ESF instrumentation response times or setpoints assumed in the safety analyses and the TS requirements to verify those response times and setpoints. The proposed change does not alter any Safety Limits or analytical limits in the safety analysis. The proposed change does not alter the TS operability requirements for the RTS and ESF instrumentation. The RTS and ESF instrumentation actuation of the required systems, and components at the required setpoints and within the specified response times, will continue to accomplish the design basis safety functions of the associated systems and components in the same manner as before. As such, the RTS and ESF instrumentation will continue to perform the required safety functions as assumed in the safety analyses for all previously evaluated accidents.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above evaluation, PG&E concludes that the proposed change does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of “no significant hazards consideration” is justified.

3.2 Conclusion

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission’s regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

4. ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), neither an environmental impact statement, nor an environmental assessment need to be prepared in connection with the proposed amendment.

Proposed Technical Specification Changes (Mark-Up)

1.1 Definitions (continued)

ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME	The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.
LEAKAGE	LEAKAGE shall be: a. Identified LEAKAGE 1. LEAKAGE, such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank; 2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary LEAKAGE; or

(continued)

1.1 Definitions (continued)

PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, and the power operated relief valve (PORV) lift settings and arming temperature associated with the Low Temperature Overpressurization Protection (LTOP) System, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.6.
QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3411 MWt for each unit.
REACTOR TRIP SYSTEM (RTS) RESPONSE TIME	The RTS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming: a. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the hot zero power temperatures.

(continued)

Revised Technical Specification Pages

Remove Page	Insert Page
1.1-3a	**1.1-3a**
1.1-5	**1.1-5**

1.1 Definitions (continued)

ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME	The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.
LEAKAGE	LEAKAGE shall be: a. <u>Identified LEAKAGE</u> 1. LEAKAGE, such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank; 2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary LEAKAGE; or

(continued)

1.1 Definitions (continued)

PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, and the power operated relief valve (PORV) lift settings and arming temperature associated with the Low Temperature Overpressurization Protection (LTOP) System, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.6.
QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3411 MWt for each unit.
REACTOR TRIP SYSTEM (RTS) RESPONSE TIME	The RTS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming: a. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the hot zero power temperatures.

(continued)

Enclosure
Attachment 3
PG&E Letter DCL-22-059

Proposed Technical Specification Bases Changes (Mark-Up) – For Information Only]

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.1.16 (continued)

Response time may be verified by actual response time tests in any series of sequential, overlapping or total channel measurements, or by the summation of allocated sensor response times with actual response time tests on the remainder of the channel. Allocations for sensor response times may be obtained from: (1) historical records based on acceptable response time tests (hydraulic, noise, or power interrupt tests), (2) inplace, onsite, or offsite (e.g. vendor) test measurements, or (3) utilizing vendor engineering specifications. WCAP-13632-P-A Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements" (Ref. 8) provides the basis and methodology for using allocated sensor response times in the overall verification of the channel response time for specific sensors identified in the WCAP. Response time verification for other sensor types must be demonstrated by test.

WCAP-14036-P-A, Revision 1, “Elimination of Periodic Protection Channel Response Time Tests,” provides the basis and methodology for using allocated signal processing and actuation logic response times in the overall verification of the protection system channel response time.” The allocations for sensor, signal conditioning, and actuation logic response times must be verified prior to placing the component in operational service and reverified following maintenance work that may adversely affect response time. In general, electrical repair work does not impact response time provided the parts used for repair are of the same type and value. Specific components identified in the WCAP may be replaced without verification testing. One example where response time could be affected is replacing the sensing assembly of a transmitter.

The response time may be verified for components that replace the components that were previously evaluated in Ref. 8 and Ref. 27, provided that the components have been evaluated in accordance with the NRC approved methodology as discussed in Attachment 1 to TSTF-569, “Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing,” (Ref. 34).

For Westinghouse supplied replacement SSPS printed circuit boards (PCBs), Westinghouse has determined that the bounding times and conclusions made in WCAP-14036-P-A apply to the worst-case combination of the new-design PCBs and the original (replaced) PCBs. This applies to reactor trip and safeguards (ESF) functions. Refer to Reference 32, Section 10, for more information.

The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.

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BASES

REFERENCES (continued)

17. WCAP-11082, "Westinghouse Setpoint Methodology for Protection Systems, Diablo Canyon Units 1 and 2, 24 Month Fuel Cycle Evaluation and Replacement Steam Generator," September 2007.
18. NSP-1-20-13F Unit 1 "Turbine Auto Stop Low Oil Pressure."
19. NSP-2-20-13F Unit 2 "Turbine Auto Stop Low Oil Pressure."
20. J-110 "24 Month Fuel Cycle Allowable Value Determination / Documentation and ITDP Uncertainty Sensitivity."
21. IEEE Std. 338-1977.
22. License Amendment 61/60, May 23, 1991.
23. Westinghouse Technical Bulletin ESBU-TB-92-14-R1, “Decalibration Effects of Calorimetric Power Measurements on the NIS High Power Reactor Trip at Power Levels less than 70% RTP,” dated February 6, 1996.
24. DCPP NSSS Calculation N-212, Revision 1.
25. License Amendments 157/157, June 2, 2003.
26. WCAP-12472-P-A, "BEACON Core Monitoring and Operations Support System," August 1994.
27. WCAP-14036-P-A, Revision 1, “Elimination of Periodic Protection Channel Response Time Tests,” October 1998.
28. WCAP-14333-P-A, Revision 1, “Probabilistic Risk Analysis of the RPS and ESFAS Test Times and Completion Times,” October 1998.
29. WCAP-15376-P-A, Revision 1, “Risk-Informed Assessment of the RTS and ESFAS Surveillance Test Intervals and Reactor Trip Breaker Test and Completion Times,” March 2003.
30. WCAP-11394-P-A, "Methodology For The Analysis of the Dropped Rod Event," January, 1990
31. License Amendments 205/206, April 29, 2009
32. WCAP-16769-P Revision 1, "Westinghouse SSPS Universal Logic Board Replacement Summary Report 6D30225G01/G02/G03/G04," July 2008.
33. WCAP-12472-P-A, Addendum 4, Revision 0, "BEACON Core Monitoring and Operations Support System," September 2012.
34. **Attachment 1 to TSTF-569, “Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing,” August 2019.**

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.2.10 (continued)

Response time Testing requirements," dated January 1996, provides the basis and the methodology of using allocated sensor response times in the overall verification of the channel response time for specific sensors identified in the WCAP. Response time verification for other sensor types must be demonstrated by test.

WCAP-14036-P-A, Revision 1, “Elimination of Periodic Protection Channel Response Time Tests,” provides the basis and methodology for using allocated signal processing and actuation logic response times in the overall verification of the protection system channel response time.” The allocations for sensor, signal conditioning, and actuation logic response times must be verified prior to placing the component in operational service and reverified following maintenance work that may adversely affect response time. In general, electrical repair work does not impact response time provided the parts used for repair are of the same type and value. Specific components identified in the WCAP may be replaced without verification testing. One example where response time could be affected is replacing the sensing assembly of a transmitter.

The response time may be verified for components that replace the components that were previously evaluated in Ref. 11 and Ref. 16, provided that the components have been evaluated in accordance with the NRC approved methodology as discussed in Attachment 1 to TSTF-569, “Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing,” (Ref. 21).

The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.

This SR is modified by a Note that clarifies that the turbine driven AFW pump is tested within 24 hours after reaching 650 psig in the SGs.

SR 3.3.2.11

SR 3.3.2.11 is the performance of a TADOT as described in SR 3.3.2.8, except that it is performed for the P-4 Reactor Trip Interlock. The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.

The SR is modified by a Note that excludes verification of setpoints during the TADOT. The Function tested has no associated setpoint.

(continued)

BASES

REFERENCES (continued)

9. WCAP-13878, "Reliability of Potter & Brumfield MDR Relays", June 1994.
10. WCAP-14117, "Reliability Assessment of Potter and Brumfield MDR Series Relays."
11. WCAP-13632-P-A, Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements," January 1996.
12. WCAP-11082, "Westinghouse Setpoint Methodology for Protection Systems, Diablo Canyon Units 1 and 2, 24 Month Fuel Cycle and Replacement Steam Generator Evaluation," September 2007.
13. Calculation J-54, "Nominal Setpoint Calculation for Selected PLS Setpoints."
14. J-110, "24 Month Fuel Cycle Allowable Value Determination / Documentation and ITDP Uncertainty Sensitivity."
15. License Amendment 61/60, May 23, 1991.
16. WCAP-14036-P-A, Revision 1, “Elimination of Periodic Protection Channel Response Time Tests,” October 1998.
17. WCAP-14333-P-A, Revision 1, “Probabilistic Risk Analysis of the RPS and ESFAS Test Times and Completion Times,” October 1998.
18. WCAP-15376-P-A, Revision 1, “Risk-Informed Assessment of the RTS and ESFAS Surveillance Test Intervals and Reactor Trip Breaker Test and Completion Times,” March 2003.
19. 10 CFR 50.55a(h), "Protection and Safety Systems."
20. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.
21. **Attachment 1 to TSTF-569, “Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse Plants only) Response Time Testing,” August 2019.**