

ENCLOSURE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
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 PACIFIC GAS AND ELECTRIC COMPANY)
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 Diablo Canyon Power Plant)
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 Units 1 and 2)
)

Docket No. 50-275
Facility Operating License
No. DPR-80

Docket No. 50-323
Facility Operating License
No. DPR-82

License Amendment Request
No. 90-09

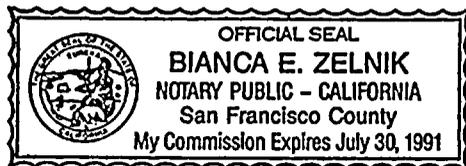
Pursuant to 10 CFR 50.90, Pacific Gas and Electric Company (PG&E) hereby applies to amend its Diablo Canyon Power Plant (DCPP) Facility Operating License No. DPR-80 (License).

The proposed changes amend the Units 1 and 2 Technical Specifications (Appendix A of the Licenses) regarding Technical Specification 3/4.7.1.2 and associated Bases.

Information on the proposed changes is provided in Attachments A and B.

These changes have been reviewed and are considered not to involve a significant hazards consideration as defined in 10 CFR 50.92 or an unreviewed environmental question. Further, there is reasonable assurance that the health and safety of the public will not be endangered by the proposed changes.

Subscribed to in San Francisco, California this 11th day of September 1990.



Respectfully submitted,
Pacific Gas and Electric Company

By J. D. Shiffer
J. D. Shiffer
Senior Vice President and
General Manager
Nuclear Power Generation

Howard V. Golub
Richard F. Locke
Attorneys for Pacific
Gas and Electric Company

Subscribed and sworn to before me
this 11th day of September 1990

By Richard F. Locke
Richard F. Locke

B. E. Zelnik
Bianca E. Zelnik, Notary Public
for the City and County of San Francisco
State of California

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My commission expires July 30, 1991.



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Attachment A

REVISION OF TECHNICAL SPECIFICATION 3/4.7.1.2 AND ASSOCIATED BASES - CLARIFY STEAM SUPPLY OPERABILITY REQUIREMENT FOR TURBINE-DRIVEN AFW PUMP AND REMOVE DIFFERENTIAL PRESSURE VALUES FOR AFW PUMPS

A. DESCRIPTION OF AMENDMENT REQUEST

This license amendment request (LAR) proposes to revise Technical Specification (TS) 3/4.7.1.2, "Auxiliary Feedwater System," and associated Bases, as follows:

1. TS 3.7.1.2 would be revised to specifically require two operable and redundant steam supply sources and to identify surveillance requirements for the non-automatic valve in the steam supply path for the steam turbine-driven auxiliary feedwater (AFW) pump.
2. TS 4.7.1.2.1.a.1) would be revised to require testing of the steam turbine-driven pump and both motor-driven pumps pursuant to TS 4.0.5 and to include an exemption to the provisions of TS 4.0.4 for entry into Mode 3 for the steam turbine-driven pump. The exemption to the provisions of TS 4.0.4 for the steam turbine-driven pump is currently included in TS 4.7.1.2.1.a.2).
3. TS 4.7.1.2.1.a.2) would be deleted and TS 4.7.1.2.1.a.3) would be renumbered to TS 4.7.1.2.1.a.2).

The associated Bases would also be appropriately revised.

Changes to the TS are noted in the marked-up copy of the applicable TS (Attachment B).

B. BACKGROUND

The operability of the AFW system ensures that feedwater delivery can be provided to the steam generators (SGs) in the event of a loss of main feedwater while in Modes 1 through 3 for reactor coolant system (RCS) heat removal through steam generation. The AFW system supplies feedwater to the SGs during normal plant startup, shutdown, and hot standby conditions when the main feedwater system is not in operation.

The AFW system includes three pumps, one steam turbine-driven and two motor-driven. The turbine-driven pump is capable of delivering a total feedwater flow of 880 gpm to the four SGs and each of the two motor-driven AFW pumps is capable of delivering a total feedwater flow of 440 gpm split between two SGs. The operation of any one of these three pumps, delivering flow to at least two intact SGs, provides sufficient feedwater flow to remove decay heat and to reduce RCS temperature to less than 350°F, when the residual heat removal system can be placed in service.



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As described in Unit 2 Licensee Event Report (LER) 2-89-001-01, plant personnel misunderstood the design basis operability requirements of the steam turbine-driven AFW pump and exceeded Action b. of TS 3.7.1.2 when both the steam turbine-driven AFW pump and one motor-driven AFW pump were inoperable for greater than 6 hours with Unit 2 in Mode 1. Personnel did not consider the turbine-driven AFW pump inoperable if one of the main steam supplies was isolated as each steam supply can provide full steam flow requirements for the turbine-driven AFW pump. However, the AFW system design basis requires two redundant steam supply sources for the turbine-driven AFW pump to accommodate the possibility of a faulted SG. The following scenario demonstrates the basis for this requirement.

An accident and single failure could be postulated with the following conditions:

1. SGs 2-2 and 2-3 are the steam sources for the turbine-driven AFW pump. Assume that the main steam supply to the turbine-driven AFW pump from SG 2-2 is isolated.
2. A main feedline rupture on SG 2-3 feedline downstream of the AFW and main feedwater isolation valves occurs simultaneously with a single active failure of the motor-driven AFW pump which supplies SGs 2-1 and 2-2.

In this scenario, the turbine-driven AFW pump would not function as the faulted SG 2-3 would depressurize and ultimately be isolated while the steam supply from SG 2-2 was already assumed isolated. Given the single failure assumed in 2. above, only the motor-driven AFW pump supplying SGs 2-3 and 2-4 is operable. Since SG 2-3 is faulted and isolated, the only SG receiving water is SG 2-4. Based on the main feedwater line break accident, a minimum flow of 440 gpm is required to be delivered to two SGs 10 minutes after the line break. Calculations show that one motor-driven AFW pump can only supply 325 gpm based on one SG available. Because the AFW system cannot meet its design basis in this situation, it is concluded that both steam supply sources are required to ensure that the turbine-driven AFW pump is operable.

Presently, TS 3.7.1.2 does not explicitly require two operable and redundant steam supply sources. The first part of this LAR proposes to clarify the TS operability description for the steam sources which provide steam to the turbine-driven AFW pump, as this was a source of operator misunderstanding resulting in a reportable event.

The second part of this LAR proposes removal of the differential pressure values from the TS surveillance requirements for the AFW pumps. DCPD TS 4.7.1.2.1.a.1) and a.2) require verification every 31 days that the AFW motor-driven pumps and the turbine-driven pump develop a differential pressure at recirculation flow greater than or equal to specified values. The test is performed in accordance with Diablo Canyon Power Plant (DCPP)



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Surveillance Test Procedure (STP) P-5B, "Routine Surveillance Test of Motor-Driven Auxiliary Feedwater Pumps," and STP P-6B, "Routine Surveillance Test of Steam-Driven Auxiliary Feedwater Pump." The surveillance acceptance criteria is a specified value of pump differential pressure which must be obtained or exceeded with the AFW pump operating on recirculation flow. TS 3/4.7.1.2 currently includes specific values for the differential pressures for the motor-driven pumps and for the steam turbine-driven pump.

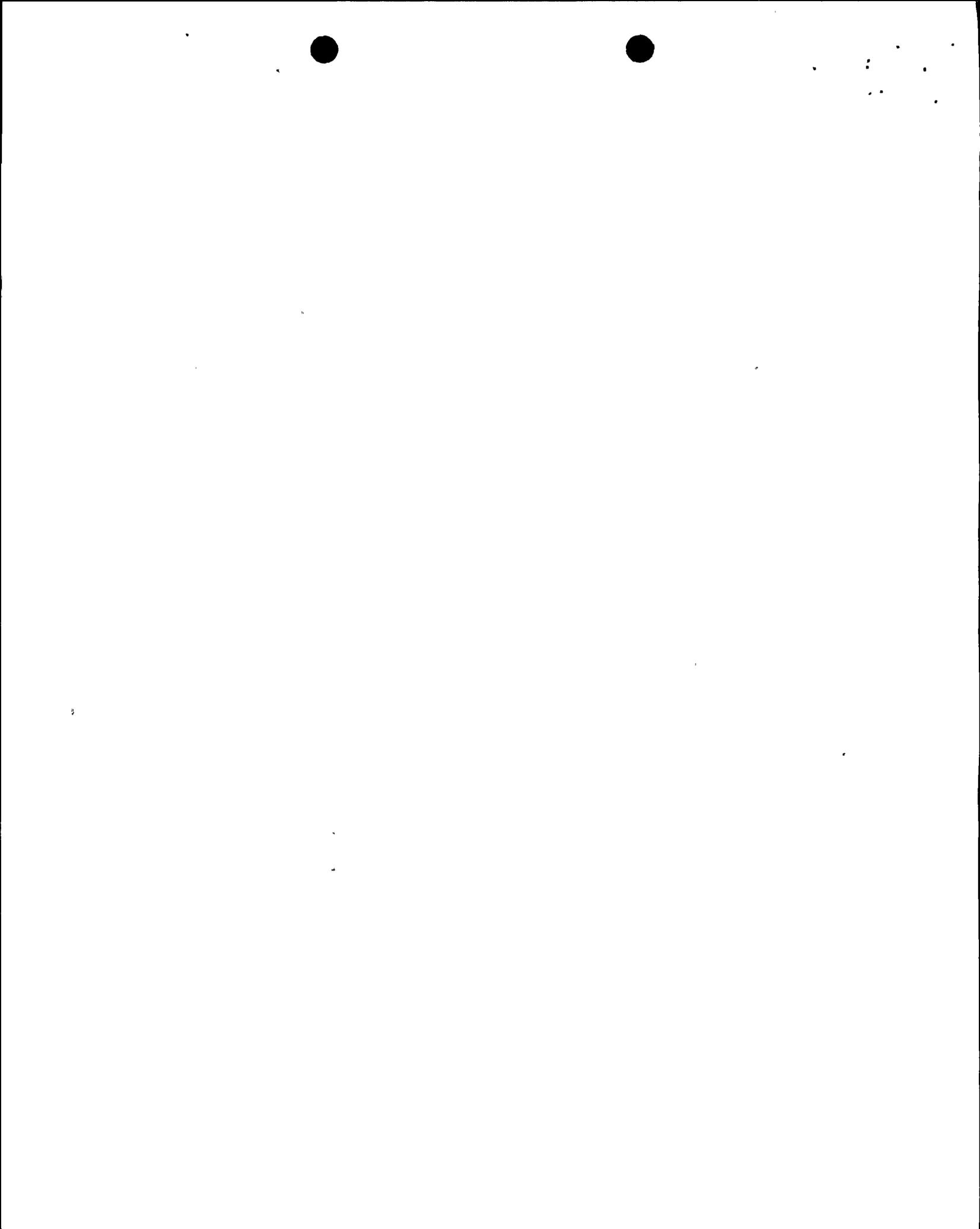
In August 1989, PG&E initiated a review of the AFW system design. The process included review of the system design calculations. This review determined that there had been calculational method changes and that the calculations did not reflect all of the changes to the system configuration. Based on this review, the calculations associated with the AFW system were recalculated. The recalculated system requirements required an increase to the design flow point pressure. The increased design flow point pressure results in an increase of the calculated minimum pump differential pressure requirements contained in the TS. The recalculated pump differential pressure values were included in the appropriate STPs and maintained by PG&E administrative control.

C. JUSTIFICATION

The proposed clarification of TS 3.7.1.2 will promote improved understanding and consistent interpretation of the requirement to have two operable and redundant steam supply sources. This will enhance plant operation and reduce the possibility of violating the TS due to unclear requirements.

The proposed changes to TS 3/4.7.1.2 require compliance with ASME Section XI for pump testing and will allow PG&E to revise the surveillance test acceptance criteria using appropriate administrative controls. Presently, changes to the surveillance test acceptance criteria (AFW pump differential pressure values) require submittal of an LAR and NRC issuance of a license amendment in accordance with 10 CFR 50.90. With the AFW surveillance test pump differential pressure values relocated from the TS to DCPD plant procedures, adequate administrative control is ensured by the procedure change process described in TS 6.8.2, "Procedures and Programs." Implementation of TS 6.8.2 requires that a change to the AFW STP shall be reviewed and approved by the Plant Manager or by a technically qualified manager who reports directly to the Plant Manager as previously designated by the Plant Manager.

In addition, procedure changes are also screened for potential unreviewed safety questions. If a potential unreviewed safety question is identified, the change is evaluated in accordance with 10 CFR 50.59. The procedure change and 10 CFR 50.59 screening/evaluation are independently reviewed and approved by the Plant Manager or an Assistant Plant Manager. If this review process indicates a 10 CFR 50.59 evaluation is required, the Plant Staff Review Committee (PSRC) will also review and approve the evaluation prior to approval of the procedure revision. Should the 10 CFR 50.59 evaluation results determine that Commission approval is required, the NRC will be notified and prior approval requested.



The requirement to perform the surveillance is maintained in the TS. The removal of the surveillance test acceptance criteria allows the AFW pump differential pressure values to be revised with appropriate administrative controls without affecting the function and purpose of the surveillance requirement. The proposed TS surveillance requirement is consistent with the Palo Verde TS surveillance requirement for their AFW pumps.

At this time the present AFW pump differential pressure values require revision based on the recalculated AFW system requirements. In addition, there are other design changes planned for the AFW system that may affect the AFW pump differential pressure values. These potential design changes include modifying the flow control valves on the motor-driven pumps and revising the lift setpoint allowance on the SG safety valves. Removal of the AFW pump differential pressure values from the TS would facilitate the change process without unnecessarily burdening the NRC. The proposed removal of detailed numbers from the TS is consistent with the Industry approach in the Technical Specification Improvement Program. The NRC has approved the relocation of TS requirements provided there are suitable administrative controls over changes. PG&E's administrative controls for procedure revisions ensure adequate review by plant management and evaluation in accordance with 10 CFR 50.59, if required, prior to any revision to the AFW pump differential pressure values.

D. SAFETY EVALUATION

The AFW system provides sufficient feedwater to the SGs to ensure heat removal from the RCS in the event of a loss of normal feedwater to the SGs. The proposed technical specification changes would not alter the function or make any changes to the response and operation of the AFW system or components. All AFW functional safety performance requirements would remain unchanged. The first part of this LAR proposes additional clarification of TS 3.7.1.2 to ensure the operability requirement to have two redundant steam sources for the turbine-driven AFW pump is met. This clarification will promote a better understanding of the system design basis, which enhances the fulfillment of the AFW system safety function.

The second part of this LAR proposes to revise TS 3/4.7.1.2 to reference ASME Section XI, and to provide for potential changes in the acceptance criteria to be administratively controlled by PG&E. PG&E's administrative controls for procedure revisions ensure adequate plant management review and evaluation in accordance with TS 6.8.2. Also a 10 CFR 50.59 evaluation and PSRC review will be conducted prior to any safety significant revision to the AFW pump differential pressure values in the STP. Should the 10 CFR 50.59 evaluation determine that Commission approval is required, the NRC will be notified and prior approval requested. These proposed changes are administrative in nature and do not affect the capability of the AFW to fulfill its system safety function.



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Based on this evaluation, PG&E believes there is reasonable assurance that the proposed changes to TS 3/4.7.1.2 will not adversely affect the health and safety of the public.

E. NO SIGNIFICANT HAZARDS EVALUATION

PG&E has evaluated the no significant hazard considerations involved with the proposed amendment focusing on the three standards set forth in 10 CFR 50.92(c) as quoted below.

The Commission may make final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility licensed under 50.21(b) or 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:

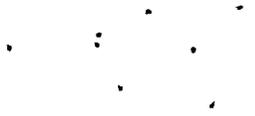
- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in a margin of safety.

The following evaluation is provided for the three categories of the significant hazards consideration standards.

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

The first part of the proposed license amendment would clarify the operability requirements for the turbine-driven AFW pump and does not affect the probability or consequences of analyzed accidents.

The second part of the proposed license amendment would constitute an administrative improvement by relocating the surveillance acceptance criteria to other PG&E controlled documents. This change will provide enhanced flexibility in accommodating changes to the surveillance criteria while providing for careful review and analysis by competent individuals of any changes to the surveillance acceptance criteria. The careful review and analysis of a change and the requirement for prior Commission approval through the 10 CFR 50.59 review process provides assurance that nuclear safety is not adversely affected. The proposed changes to the TS clarify the compliance with ASME Section XI and state the functional requirement for the surveillance test. In addition, the proposed license amendment would not alter the function or the operation of the system.



Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

There is no physical alteration to the AFW system, nor is there a change in the method by which the AFW system performs its functions.

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

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

As indicated above, the first proposed change would clarify the operability requirements for the turbine-driven AFW pump; however, this does not affect the function or operation of the AFW System.

Also, as indicated above, the proposed changes involving the surveillance acceptance criteria are administrative in nature to better facilitate revision to the numerical values in the surveillance acceptance criteria and would not change the purpose and application of the criteria and the test. Controls for changes are in place, including TS 6.8.2, to assure proper review and application of the 10 CFR 50.59 process as appropriate. The TS states the required adherence to the ASME code and the functional requirement of the test, which has not changed.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

F. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the above evaluation, PG&E concludes that the activities associated with this LAR satisfy the no significant hazards consideration standards of 10 CFR 50.92(c) and, accordingly, a no significant hazards consideration finding is justified.

G. ENVIRONMENTAL EVALUATION

PG&E has evaluated the proposed changes and determined that the changes do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meet the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed changes is not required.

