Docket Files

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

June 27, 1991

Docket Nos. 50-275
and 50-323

Mr. J. D. Shiffer
Senior Vice President
Nuclear Power Generation
Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Dear Mr. Shiffer:

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. 77906 AND 77907)

The Commission has issued the enclosed Amendment No. 62 to Facility Operating License No. DPR-80 and Amendment No. 61 to Facility Operating License No. DPR-82 for the Diablo Canyon Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated September 11, 1990 (LAR 90-09).

These amendments revise the combined Technical Specifications (TS) for the Diablo Canyon Power Plant Unit Nos. 1 and 2 to (a) clarify the requirement that two redundant steam supply sources are needed for the turbine-driven auxiliary feedwater (AFW) pump to be operable and (b) remove the differential pressure values from the surveillance requirements for the AFW pumps and perform the testing pursuant to TS 4.0.5.

A copy of the related Safety Evaluation is enclosed. A notice of issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Harry Rood

Harry Rood, Senior Project Manager
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 62 to License No. DPR-80
2. Amendment No. 61 to License No. DPR-82
3. Safety Evaluation

cc w/enclosures:
See next page

CP-1 Ltr

June 27, 1991

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Mr. J. D. Shiffer
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Senior Vice President
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ORIGINAL SIGNED BY:

Harry Rood, Senior Project Manager
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
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See next page

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OFFICIAL RECORD COPY Document Name: DC 1/2 AMD 77906/7

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-275

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 62
License No. DPR-80

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Pacific Gas & Electric Company (the licensee) dated September 11, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-80 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 62 , are hereby incorporated in the license. Pacific Gas & Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

for C M Trammell

James E. Dyer, Director
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 27, 1991

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 2

DOCKET NO. 50-323

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 61
License No. DPR-82

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Pacific Gas & Electric Company (the licensee) dated September 11, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-82 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 61 , are hereby incorporated in the license. Pacific Gas & Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

for CM Trammell

James E. Dyer, Director
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nulcear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 27, 1991

ATTACHMENT TO LICENSE AMENDMENT NOS. 62 AND 61

FACILITY OPERATING LICENSE NOS. DPR-80 AND DPR-82

DOCKET NOS. 50-275 AND 50-323

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. Overleaf pages are also included, as appropriate.

REMOVE	INSERT
3/4 7-4	3/4 7-4
3/4 7-5	3/4 7-5
B 3/4 7-2	B 3/4 7-2
	B 3/4 7-2a

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least three steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

a. Two motor-driven auxiliary feedwater pumps, each capable of being powered from separate vital busses, and

b. One steam turbine-driven auxiliary feedwater pump capable of being powered from two OPERABLE and redundant steam supply sources.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one auxiliary feedwater pump inoperable, restore the required auxiliary feedwater pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With two auxiliary feedwater pumps inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.7.1.2.1 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1) Testing the steam turbine-driven pump and both motor-driven pumps pursuant to Specification 4.0.5*. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 for the steam turbine-driven pump.

*For the steam turbine-driven pump, when the secondary steam supply pressure is greater than 650 psig.

SURVEILLANCE REQUIREMENTS (Continued)

(2) Verifying that each non-automatic valve in the pump flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

(3) Verifying that each non-automatic valve in both steam supplies to the steam turbine-driven pump that is not locked, sealed, or otherwise secured in position, is in its correct position.

b. At least once per 18 months by verifying that each auxiliary feedwater pump starts and valve opens* as designed automatically upon receipt of an Auxiliary Feedwater Actuation test signal.

*For the steam turbine-driven pump, when the secondary steam supply pressure is greater than 650 psig.

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the Auxiliary Feedwater System ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss of off-site power.

Each electric motor-driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 440 gpm at a pressure of 1135 psig to the entrance of the steam generators. The steam-driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 880 gpm at a pressure of 1135 psig to the entrance of the steam generators. The capacity of one motor-driven AFW pump (440 gpm) delivered to at least two steam generators is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the Residual Heat Removal System may be placed into operation.

The two redundant steam sources are required to be operable to assure that at least one source is available for the steam-driven AFW pump operation following a feedwater or steam line break.

Since it is undesirable to introduce cold AFW into the steam generator piping during power operation, this surveillance requirement is performed on recirculation flow. Evaluating the differential pressure developed from the pump test at the recirculation flow point to the reference differential pressure detects trends that may be indicative of pump performance deterioration. Performance of the ASME Section XI inservice testing, per the Inservice Inspection and Testing program, is used to satisfy this surveillance requirement. The reference minimum differential pressure value will be established based on the margin of the pump performance reference curve to the design flow point, or by the ASME Section XI limit, depending on which method results in the more conservative value.

Surveillance Requirement 4.7.1.2.1.a.1 provides an exemption to the requirements of Specification 4.0.4 for entry into MODE 3 for purposes of testing the turbine-driven AFW pump. In MODE 4, 5, and 6 there is an insufficient amount of steam to perform a valid test.

3/4.7.1.3 CONDENSATE STORAGE TANK

The OPERABILITY of the condensate storage tank with the minimum water volume ensures that sufficient water is available for cooldown of the Reactor Coolant System to less than 350°F in the event of a total loss of off-site power. The minimum water volume is sufficient to maintain the RCS at HOT STANDBY conditions for 8 hours with steam discharge to atmosphere.

The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

3/4.7.1.4 SPECIFIC ACTIVITY

The limitations on Secondary Coolant System specific activity ensure that the resultant off-site radiation dose will be limited to a small fraction of 10 CFR Part 100 dose guideline values in the event of a steam line rupture. This dose also includes the effects of a coincident 1 gpm reactor-to-secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the safety analyses.

3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blowdown in the event of a steam line rupture. This restriction is required to: (1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and (2) limit the pressure rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam isolation valves within the closure times of the Surveillance Requirements is consistent with the assumptions used in the safety analyses.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 62 TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NO. DPR-82

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-275 AND 50-323

1.0 INTRODUCTION

By letter dated September 11, 1990, Pacific Gas and Electric Company (PG&E or the licensee) requested amendments to the Technical Specifications appended to Facility Operating License Nos. DPR-80 and DPR-82 for operation of Diablo Canyon Nuclear Power Plant, Unit Nos. 1 and 2.

The proposed TS changes are summarized as follow:

1. TS 3.7.1.2 would be revised to require two operable and redundant steam supply sources for the steam turbine-driven auxiliary feedwater (AFW) pump.

2. TS Section 4.7.1.2.1 would be revised to remove the differential pressure values from the surveillance requirements for the AFW pumps and include them in administratively controlled plant procedures. The section would also be revised to add a requirement to verify that each manual valve in both steam supply flow paths to the steam-driven pump, that is not locked, sealed, or otherwise secured in position, is in its correct position.

2.0 EVALUATION

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 feedwater flow of 880 gpm to the four SGs and each of the two motor-driven AFW pumps is capable of delivering a 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. 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.

2.1 Proposed Changes to TS Section 3.7.1.2

Existing TS Section 3.7.1.2 does not explicitly require two operable and redundant steam supply sources. The proposed TS changes will clearly establish the requirement to have two operable and redundant steam supply sources. This will enhance the fulfillment of the auxiliary feedwater system function.

Based on this review, the NRC staff finds that the licensee's proposed changes to clarify the requirement of having two operable and redundant steam supply sources to the steam-driven AFW pump is acceptable.

2.2 Proposed Changes to TS Section 4.7.1.2.1 and TS Bases Section 3/4.7.1.2 With Respect to Surveillance Testing of the Steam Turbine-Driven Pump and Both Motor-Driven Pump:

Existing TS Sections 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) 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 specified values for the differential pressures for the motor-driven pumps and for the steam turbine-driven pump.

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 a license amendment request 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 DCPP plant procedures, adequate administrative control is ensured by the procedure change process described in TS 6.8.2, "Procedures and Programs." The licensee stated that 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 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.

Based on this review of the rationale submitted by the licensee, the NRC staff finds that the requirement to perform the surveillance is maintained in the TS. The removal of the surveillance test acceptance criteria from the TS will allow 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 TS surveillance requirement accepted by the staff at other nuclear plants for their AFW pumps. Therefore, the staff finds that the licensee's proposed change to the TS surveillance requirements with respect to relocation of surveillance test acceptance criteria (AFW pump differential pressure values) is acceptable.

2.3 Proposed Changes to TS Section 4.7.1.2.1 with Respect to Steam Supply Flow Paths to the Steam Turbine-Driven Pump.

The proposed changes to TS Section 4.7.1.2.1 will provide the requirement of verifying (at least once per 31 days) that each manual valve in both steam supply flow paths to the steam-driven pump, that is not locked, sealed, or otherwise secured in position, is in its correct position.

Based on this review, the staff finds that the licensee's proposed change to provide additional TS surveillance requirements is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or change a surveillance requirement. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (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.

Principal Contributors: D. Shum
A. Fitzgerald

Date: June 27, 1991