

April 25, 1989

Docket Nos. 50-275  
and 50-323

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

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Dear Mr. Shiffer:

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. 64487 AND 64488)

The Commission has issued the enclosed Amendment No. 36 to Facility Operating License No. DPR-80 and Amendment No. 35 to Facility Operating License No. DPR-82 for the Diablo Canyon Power Plant, Units 1 and 2, respectively. The amendments change the combined Technical Specifications (TS) in response to your application dated December 24, 1986 (Reference LAR 86-13).

The amendments revise certain analog channel operational test surveillance intervals defined in TS 3/4.1, "Reactor Trip System Instrumentation," and TS 3/4.2, "Engineered Safety Features Actuation System Instrumentation." Specifically, the surveillance test interval in TS Table 4.3-1 for Functional Unit 20, Reactor Trip System Interlocks, Analog Channel Operational Test, is changed from "S/U(1)" (prior to each reactor startup) to "k" (at least once per 18 months) for each of the six interlocks. Also, the surveillance test interval in TS Table 4.3-2 for each of three Tavg-Low-Low signals, Analog Channel Operational Test, is changed from "M" (at least once per 31 days) to "Q" (at least once per 92 days). Finally, the wording of note (6) of Table 4.3-1 is changed to state that detector plateau curves are to be obtained and evaluated only for the source range neutron flux channels.

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

Sincerely,

original signed by

Harry Rood, Senior Project Manager  
Project Directorate V  
Division of Reactor Projects - III,  
IV, V and Special Projects

Enclosures:

1. Amendment No. 36 to DPR-80
2. Amendment No. 35 to DPR-82
3. Safety Evaluation

cc w/enclosures: See next page

DRSP/PD5	DRSP/PD	OTSB	SICB	PRRB	OGC	DRSP/PD5
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

April 25, 1989

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Mr. J. D. Shiffer, Vice President  
Nuclear Power Generation  
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Sincerely,

Harry Rood, Senior Project Manager  
Project Directorate V  
Division of Reactor Projects - III,  
IV, V and Special Projects

Enclosures:

1. Amendment No. 36 to DPR-80
2. Amendment No. 35 to DPR-82
3. Safety Evaluation

cc w/enclosures: See next page

Mr. J. D. Shiffer  
Pacific Gas and Electric Company

Diablo Canyon

cc:

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Diablo Canyon

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

PACIFIC GAS AND ELECTRIC COMPANY  
DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1  
DOCKET NO. 50-275  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 36  
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 December 24, 1986 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. 36, 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 becomes effective at the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
George W. Knighton, Director  
Project Directorate V  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 25, 1989



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

PACIFIC GAS AND ELECTRIC COMPANY  
DIABLO CANYON NUCLEAR POWER PLANT, UNIT 2  
DOCKET NO. 50-323  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 35  
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 December 24, 1986 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. 35, 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 becomes effective at the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
George W. Knighton, Director  
Project Directorate V  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 25, 1989



ATTACHMENT TO LICENSE AMENDMENT NOS. 36 AND 35  
FACILITY OPERATING LICENSE NOS. DPR-80 and DPR-82  
DOCKET NOS. 50-275 AND 50-323

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

Remove Page

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Insert Page

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TABLE 3.3-2 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIME</u>
17. Turbine Trip	
a. Low Fluid Oil Pressure	N.A.
b. Turbine Stop Valve	N.A.
18. Safety Injection Input from ESF	N.A.
19. Reactor Coolant Pump Breaker Position Trip	N.A.
20. Reactor Trip Breakers	N.A.
21. Automatic Trip and Interlock Logic	N.A.
22. Reactor Trip System Interlocks	N.A.
23. Seismic Trip	N.A.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. Manual Reactor Trip	N.A.	N.A.	N.A.	R	N.A.	1, 2, 3*, 4*, 5*
2. Power Range, Neutron Flux						
a. High Setpoint	S	D(2, 4), M(3, 4), Q(4, 6), R(4, 5)	Q(12)	N.A.	N.A.	1, 2
b. Low Setpoint	S	R(4)	S/U(1)	N.A.	N.A.	1###, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(4)	Q(12)	N.A.	N.A.	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(4)	Q(12)	N.A.	N.A.	1, 2
5. Intermediate Range, Neutron Flux	S	R(4, 5)	S/U(1)	N.A.	N.A.	1###, 2
6. Source Range, Neutron Flux	S	R(4, 5)	S/U(1), Q(8, 12)	N.A.	N.A.	2##, 3, 4, 5
7. Overtemperature $\Delta T$	S	R(11)	Q(12)	N.A.	N.A.	1, 2
8. Overpower $\Delta T$	S	R	Q(12)	N.A.	N.A.	1, 2
9. Pressurizer Pressure-Low	S	R	Q(12)	N.A.	N.A.	1
10. Pressurizer Pressure-High	S	R	Q(12)	N.A.	N.A.	1, 2
11. Pressurizer Water Level-High	S	R	Q(12)	N.A.	N.A.	1
12. Reactor Coolant Flow-Low	S	R	Q(12)	N.A.	N.A.	1

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
13. Steam Generator Water Level-Low-Low	S	R	Q(12, 13)	N.A.	N.A.	1, 2
14. Steam Generator Water Level-Low Coincident with Steam/Feedwater Flow Mismatch	S	R	Q(12, 13)	N.A.	N.A.	1, 2
15. Undervoltage-Reactor Coolant Pumps	N.A.	R	N.A.	Q(12, 13)	N.A.	1
16. Underfrequency-Reactor Coolant Pumps	N.A.	R	N.A.	Q(12)	N.A.	1
17. Turbine Trip						
a. Low Fluid Oil Pressure	N.A.	N.A.	N.A.	S/U(1, 9)	N.A.	1
b. Turbine Stop Valve Closure	N.A.	N.A.	N.A.	S/U(1, 9)	N.A.	1
18. Safety Injection Input from ESF	N.A.	N.A.	N.A.	R	N.A.	1, 2
19. Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	N.A.	R	N.A.	1
20. Reactor Trip System Interlocks						
a. Intermediate Range Neutron Flux, P-6	N.A.	R(4)	R	N.A.	N.A.	2##
b. Low Power Reactor Trips Block, P-7	N.A.	R(4)	R	N.A.	N.A.	1
c. Power Range Neutron Flux, P-8	N.A.	R(4)	R	N.A.	N.A.	1

DIABLO CANYON - UNITS 1 & 2

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Amendment Nos. 36 and 35

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
20. Reactor Trip System Interlocks (Continued)						
d. Power Range Neutron Flux, P-9	N.A.	R(4)	R	N.A.	N.A.	1
e. Low Setpoint Power Range Neutron Flux, P-10	N.A.	R(4)	R	N.A.	N.A.	1, 2
f. Turbine Impulse Chamber Pressure, P-13	N.A.	R	R	N.A.	N.A.	1
21. Reactor Trip Breaker	N.A.	N.A.	N.A.	M(7, 10)	N.A.	1, 2, 3*, 4*, 5*
22. Automatic Trip and Interlock Logic	N.A.	N.A.	N.A.	N.A.	M(7)	1, 2, 3*, 4*, 5*
23. Seismic Trip	N.A.	R	N.A.	SA <sup>#</sup>	R	1, 2

<sup>#</sup>During Unit 1 Cycle 3, this test shall be performed during the Unit 1 third refueling outage.

TABLE 4.3-1 (Continued)

TABLE NOTATIONS

- \* - When the Reactor Trip System breakers are closed and the Control Rod Drive System is capable of rod withdrawal.
- ## - Below P-6 (Intermediate Range Neutron Flux Interlock) Setpoint.
- ### - Below P-10 (Low Setpoint Power Range Neutron Flux Interlock) Setpoint.
- (1) - If not performed in previous 31 days.
- (2) - Heat balance only, above 15% of RATED THERMAL POWER. During startup in MODE 1 above 15% of RATED THERMAL POWER, the required heat balance shall be performed prior to exceeding 30% of RATED THERMAL POWER, or within 24 hours, whichever occurs first. Adjust channel if absolute difference greater than 2%. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (3) - Compare incore to excore axial flux difference above 15% of RATED THERMAL POWER at least once per 31 Effective Full Power days. Recalibrate if the absolute difference is greater than or equal to 3%. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (4) - Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (5) - Detector plateau curves shall be obtained and evaluated for the source range neutron flux channels. For the Intermediate Range and Power Range Neutron Flux channels a test shall be performed that shows allowed variances of detector voltage do not effect detector operation. For the Intermediate Range and Power Range Neutron Flux Channels the provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (6) - Incore - Excore Calibration, above 75% of RATED THERMAL POWER at least once per 92 Effective Full Power days. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (7) - Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.
- (8) - Quarterly Surveillance in MODES 3\*, 4\* and 5\* shall also include verification that permissives P-6 and P-10 are in their required state for existing plant conditions by observation of the permissive annunciator window.
- (9) - Setpoint verification is not applicable.
- (10) - At least once per 18 months and following maintenance or adjustment of the Reactor trip breakers, the TRIP ACTUATING DEVICE OPERATIONAL TEST shall include verification of the independence of the Undervoltage trip and the Shunt trip.
- (11) - CHANNEL CALIBRATION shall include the RTD bypass loops flow rate.
- (12) - Each channel shall be tested at least every 92 days on a STAGGERED TEST BASIS.
- (13) - These channels also provide inputs to ESFAS. Comply with the applicable MODES and surveillance frequencies of Specification 4.3.2.1 for any portion of the channel required to be OPERABLE by Specification 3.3.2.

## INSTRUMENTATION

### 3/4.3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

---

3.3.2 The Engineered Safety Features Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their Trip Setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4 and with RESPONSE TIMES as shown in Table 3.3-5.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

- a. With an ESFAS Instrumentation Channel or Interlock Trip Setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the Trip Setpoint adjusted consistent with the Trip Setpoint value.
- b. With an ESFAS instrumentation channel or interlock inoperable, take the ACTION shown in Table 3.3-3.

#### SURVEILLANCE REQUIREMENTS

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4.3.2.1 Each ESFAS instrumentation channel and interlock and the automatic actuation logic and relays shall be demonstrated OPERABLE by the performance of the Engineered Safety Feature Actuation System Instrumentation Surveillance Requirements specified in Table 4.3-2.

4.3.2.2 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one train such that both trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" column of Table 3.3-3.

TABLE 4.3-2

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALI- BRATION</u>	<u>ANALOG CHANNEL OPERA- TIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERA- TIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MASTER RELAY TEST</u>	<u>SLAVE RELAY TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. Safety Injection, (Reactor Trip Feedwater Isolation, Start Diesel Generators, Containment Fan Cooler Units, and Component Cooling Water)								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
d. Pressurizer Pressure-Low	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
e. Differential Pressure Between Steam Lines-High	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
f. Steam Flow in Two Steam Lines-High Coincident With Either	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
1) T <sub>avg</sub> -Low-Low, or	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
2) Steam Line Pressure-Low	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
2. Containment Spray								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High-High	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3



TABLE 3.3-5 (Continued)

TABLE NOTATIONS

- (1) Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps, SI and RHR pumps (where applicable).
- (2) Feedwater System overall response time shall include verification of each individual Feedwater System valve closure time as shown below:

<u>Valve</u>	<u>Closure Time (not including instrumentation delays)</u>
FCV-438	< 60 seconds
439	< 60 seconds
440	< 60 seconds
441	< 60 seconds
510	< 5 seconds
520	< 5 seconds
530	< 5 seconds
540	< 5 seconds
1510	< 5 seconds
1520	< 5 seconds
1530	< 5 seconds
1540	< 5 seconds

- (3) Diesel generator starting and loading delays included.
- (4) Diesel generator starting and sequence loading delays not included. Offsite power available. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps (where applicable).
- (5) Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps.
- (6) The maximum response time of 48.5 seconds is the time from when the containment pressure exceeds the High-High Setpoint until the spray pump is started and the discharge valve travels to the fully open position assuming off-site power is not available. The time of 48.5 seconds includes the 28-second maximum delay related to ESF loading sequence. Spray riser piping fill time is not included. The 80-second maximum spray delay time does not include the time from LOCA start to "P" signal.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALI-BRATION</u>	<u>ANALOG CHANNEL OPERA-TIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERA-TIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MASTER RELAY TEST</u>	<u>SLAVE RELAY TEST</u>	<u>MODES FOR WHICH SURVEILLAN-CE IS REQUIRED</u>
3. Containment Isolation								
a. Phase "A" Isolation								
1) Manual	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
3) Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
b. Phase "B" Isolation								
1) Manual	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
3) Containment Pressure-High-High	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
c. Containment Ventilation Isolation								
1) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
2) Plant Vent Noble Gas Activity-High (RM-14A and 14B)	S	R	M(2)	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
3) Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

DIABLO CANYON - UNITS 1 & 2

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Amendment Nos. 36 and 35

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALI-BRATION</u>	<u>ANALOG CHANNEL OPERA-TIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERA-TIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MASTER RELAY TEST</u>	<u>SLAVE RELAY TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
4. Steam Line Isolation								
a. Manual	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Containment Pressure-High-High	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
d. Steam Flow in Two Steam Lines-High Coincident With Either	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
1) T <sub>avg</sub> -Low-Low or	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
2) Steam Line Pressure-Low	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
5. Turbine Trip and Feedwater Isolation								
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2
b. Steam Generator Water Level-High-High	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2
6. Auxiliary Feedwater								
a. Manual	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Steam Generator Water Level-Low-Low	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALI- BRATION</u>	<u>ANALOG CHANNEL OPERA- TIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERA- TIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MASTER RELAY TEST</u>	<u>SLAVE RELAY TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
6. Auxiliary Feedwater (Continued)								
d. Undervoltage - RCP	N.A.	R	N.A.	R	N.A.	N.A.	N.A.	1
e. Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
7. Loss of Power								
a. 4.16 kV Emergency Bus Level 1	N.A.	R	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
b. 4.16 kV Emergency Bus Level 2	N.A.	R	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
8. Engineered Safety Feature Actuation System Interlocks								
a. Pressurizer Pressure, P-11	N.A.	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
b. Low-Low T <sub>avg</sub> , P-12	N.A.	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3

TABLE NOTATIONS

- (1) Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.
- (2) For the Plant Vent Activity-High monitor only, a CHANNEL FUNCTIONAL TEST shall be performed at least once every 31 days.

## INSTRUMENTATION

### 3/4.3.3 MONITORING INSTRUMENTATION

#### RADIATION MONITORING FOR PLANT OPERATIONS

#### LIMITING CONDITION FOR OPERATION

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3.3.3.1 The radiation monitoring instrumentation channels for plant operations shown in Table 3.3-6 shall be OPERABLE with their Alarm/Trip Setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

- a. With a radiation monitoring channel Alarm/Trip Setpoint for plant operations exceeding the value shown in Table 3.3-6, adjust the Setpoint to within the limit within 4 hours or declare the channel inoperable.
- b. With one or more radiation monitoring channels for plant operations inoperable, take the ACTION shown in Table 3.3-6.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.3.3.1 Each radiation monitoring instrumentation channel for plant operations shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST for the MODES and at the frequencies shown in Table 4.3-3.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. DPR-80  
AND AMENDMENT NO. 35 TO FACILITY OPERATING LICENSE NO. DPR-82  
PACIFIC GAS AND ELECTRIC COMPANY  
DIABLO CANYON NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2  
DOCKET NO. 50-275 AND 50-323

1.0 INTRODUCTION

By letter dated December 24, 1986 (Reference LAR 86-13), Pacific Gas and Electric Company (PG&E or the licensee) requested amendments to the combined Technical Specifications (TS) appended to Facility Operating License Nos. DPR-80 and DPR-82 for the Diablo Canyon Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments change the surveillance intervals for certain reactor trip system (RTS) and engineered safety features actuation system (ESFAS) instrumentation.

2.0 DISCUSSION

The amendments revise certain analog channel operational test surveillance intervals defined in TS 3/4.1, "Reactor Trip System Instrumentation," and TS 3/4.2, "Engineered Safety Features Actuation System Instrumentation." Specifically, the surveillance test interval in TS Table 4.3-1 for Functional Unit 20, Reactor Trip System Interlocks, Analog Channel Operational Test, is changed from "S/U(1)" (prior to each reactor startup) to "R" (at least once per 18 months) for each of the six interlocks. Also, the surveillance test interval in Table 4.3-2 for each of three Avg-Low-Low signals, Analog Channel Operational Test, is changed from "M" (at least once per 31 days) to "Q" (at least once per 92 days). Finally, the wording of note (5) of Table 4.3-1 is changed to state that detector plateau curves are to be obtained and evaluated only for the source range neutron flux channels.

The NRC staff has reviewed each part of the licensee's proposed TS change and finds it acceptable, based on the following:

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- a. These amendments increase the surveillance interval for each of six RTS interlocks (TS Table 4.3-1 for Functional Unit 20, Reactor Trip System Interlocks, Analog Channel Operational Test) from "S/U(1)" (prior to each reactor startup) to "R" (at least once per 18 months). This change was proposed in WCAP-10271, "Evaluation of Surveillance Frequencies and Out-Of-Service Times for the Reactor Protection Instrumentation System," Supplement 1, dated July 1983. The NRC staff has reviewed and approved most of the changes proposed in WCAP-10271 in letters dated February 21, 1985 and July 24, 1985. Specifically, changing the RTS interlock surveillance interval from "M" to "R" was approved by the staff in its letter of July 24, 1985, from Harold R. Denton (NRC) to Mr. L. D. Butterfield, Chairman, Westinghouse Owner's Group. Therefore, this change is acceptable to the NRC staff for Diablo Canyon.
- b. These amendments change the surveillance test interval in Table 4.3-2 for each of three Tavglow-low signals, Analog Channel Operational Test, from "M" (at least once per 31 days) to "Q" (at least once per 92 days). Enclosure 3 to the NRC letter of July 24, 1985 states that relaxation of surveillance requirements may be acceptable for channels which share measurement signals between the RTS and the ESFAS. For these channels, the requirement to perform periodic channel checks provides a measure of assurance that the shared components associated with these measurement signals are operable.

The Diablo Canyon licensee has stated that the ESFAS Tavglow-low channels are shared with the RTS channels for overtemperature delta-T and overpower delta-T. The licensee has confirmed that the shared channels are measurement channels, and are not bistable/comparators which could fail in a non-tripped state that would only be detectable by performance of analog channel operational tests. These shared channels are periodically confirmed to be operable by channel checks. Also, the licensee has instituted a program to evaluate and address instrument drift for RTS channels including the shared channels. The licensee has stated that in this program, instrument drift is treated as a random variable in setpoint analyses, thereby providing assurance that the channel checks reduce the impact of instrument drift. Since the above features meet the staff criteria given in Enclosure 3 to the July 24, 1985 letter, the staff concludes that increasing the surveillance interval for the ESFAS Tavglow-low channels is acceptable for Diablo Canyon.

- c. These amendments change the wording of note (5) of Table 4.3-1 to state that detector plateau curves are to be obtained and evaluated only for the source range neutron flux channels, which utilize proportional counter detectors. The staff finds this acceptable because the intermediate range and power range neutron flux detectors are boron-trifluoride ion chambers. For such devices, the detector curve is linear, and does not "plateau," and the generation of a plateau curve is not appropriate. Consequently, revised note (5) requires that for the intermediate and power range channels, a test shall be performed that shows that the allowed variances of detector voltage do not affect detector operation.

Based on the above, the staff finds the proposed amendments authorizing revision of certain analog channel operational test surveillance intervals defined in TS 3/4.1, "Reactor Trip System Instrumentation," and TS 3/4.2, "Engineered Safety Features Actuation System Instrumentation," to be acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes in the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. We have 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, these 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 these amendments.

### 4.0 CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and (3) the issuance of these amendments will not be inimical to the common defense and security or the health and safety of the public.

Principal Contributor: Harry Rood

Dated: April 25, 1989