

April 1, 199

Docket Nos. 50-275
and 50-323

Mr. Gregory M. Rueger
Nuclear Power Generation, B14A
Pacific Gas and Electric Company
77 Beale Street, Room 1451
P.O. Box 770000
San Francisco, California 94177

Dear Mr. Rueger:

SUBJECT: ISSUANCE OF AMENDMENTS FOR DIABLO CANYON NUCLEAR POWER PLANT,
UNIT NO. 1 (TAC NO. M88814) AND UNIT NO. 2 (TAC NO. M88815)

The Commission has issued the enclosed Amendment No. 92 to Facility Operating License No. DPR-80 and Amendment No. 91 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 February 17, 1994, (reference LAR 94-02).

These amendments revise TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation," Table 3.3-3, functional unit 6.c.2), Start Turbine-Driven Pump, and Table 3.3-4, functional unit 4.e, Negative Steam Pressure Rate - High. These amendments revise TS changes originally issued in License Amendments 84 and 83 for the Process Protection System Upgrade (Eagle 21).

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,

Original signed by:

Sheri R. Peterson, Project Manager
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

9404180035 940401
PDR ADOCK 05000275
P PDR

Enclosures:

1. Amendment No. 92 to DPR-80
2. Amendment No. 91 to DPR-82
3. Safety Evaluation

cc w/enclosures:
See next page

DISTRIBUTION

Docket File : Region V (8) OGC
EAdensam KPerkins, RV 15B18
DHagan, 3206 NRC & Local PDRs ACRS (10)
OPA, 2G5 DFoster-Curseen P-315
JRoe GHill (4), P1-37 SPeterson
TQuay OC/LFDCB, 4503
CGrimes, 11E22 PDV R/F

OFFICE:	PDV/LA <i>dfc</i>	PDV/PM <i>SR</i>	HICB <i>W</i>	OGC <i>AB</i>	PDV/Dir <i>SR</i>
NAME:	DFoster-Curseen	SPeterson:mk	JWemeil	<i>ABachmann</i>	TQuay <i>W</i>
DATE:	3/11/94	3/14/94	3/15/94	3/21/94	4/1/94

OFFICIAL RECORD COPY/ FILENAME: A:\DC88814.AMD

130075

RECEIVED COPY

DF01

April 1, 1999

Docket Nos. 50-275
and 50-323

Mr. Gregory M. Rueger
Nuclear Power Generation, B14A
Pacific Gas and Electric Company
77 Beale Street, Room 1451
P.O. Box 770000
San Francisco, California 94177

Dear Mr. Rueger:

SUBJECT: ISSUANCE OF AMENDMENTS FOR DIABLO CANYON NUCLEAR POWER PLANT,
UNIT NO. 1 (TAC NO. M88814) AND UNIT NO. 2 (TAC NO. M88815)

The Commission has issued the enclosed Amendment No. 92 to Facility Operating License No. DPR-80 and Amendment No. 91 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 February 17, 1994, (reference LAR 94-02).

These amendments revise TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation," Table 3.3-3, functional unit 6.c.2), Start Turbine-Driven Pump, and Table 3.3-4, functional unit 4.e, Negative Steam Pressure Rate - High. These amendments revise TS changes originally issued in License Amendments 84 and 83 for the Process Protection System Upgrade (Eagle 21).

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,

Original signed by:

Sheri R. Peterson, Project Manager
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 92 to DPR-80
2. Amendment No. 91 to DPR-82
3. Safety Evaluation

cc w/enclosures:
See next page

DISTRIBUTION

Docket File	Region V (8)	OGC
EAdensam	KPerkins, RV	15B18
DHagan, 3206	NRC & Local PDRs	ACRS (10)
OPA, 2G5	DFoster-Curseen	P-315
JRoe	GHill (4), P1-37	SPeterson
TQuay	OC/LFDCB, 4503	
CGrimes, 11E22	PDV R/F	

OFFICE:	PDV/LA <i>dfc</i>	PDV/PM <i>SR</i>	HI6B	OGC <i>AKS</i>	PDV/Dir <i>AKS</i>
NAME:	DFoster-Curseen	SPeterson:mk	JWernick	<i>R. Bachmann</i>	TQuay <i>AKS</i>
DATE:	3/11/94	3/14/94	3/15/94	3/12/94	4/1/94

OFFICIAL RECORD COPY/ FILENAME: A:\DC88814.AMD



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 1, 1994

Docket Nos. 50-275
and 50-323

Mr. Gregory M. Rueger
Nuclear Power Generation, B14A
Pacific Gas and Electric Company
77 Beale Street, Room 1451
P.O. Box 770000
San Francisco, California 94177

Dear Mr. Rueger:

SUBJECT: ISSUANCE OF AMENDMENTS FOR DIABLO CANYON NUCLEAR POWER PLANT,
UNIT NO. 1 (TAC NO. M88814) AND UNIT NO. 2 (TAC NO. M88815)

The Commission has issued the enclosed Amendment No. 92 to Facility Operating License No. DPR-80 and Amendment No. 91 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 February 17, 1994, (reference LAR 94-02).

These amendments revise TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation," Table 3.3-3, functional unit 6.c.2), Start Turbine-Driven Pump, and Table 3.3-4, functional unit 4.e, Negative Steam Pressure Rate - High. These amendments revise TS changes originally issued in License Amendments 84 and 83 for the Process Protection System Upgrade (Eagle 21).

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,

A handwritten signature in black ink, reading "Sheri R. Peterson".

Sheri R. Peterson, Project Manager
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 92 to DPR-80
2. Amendment No. 91 to DPR-82
3. Safety Evaluation

cc w/enclosures:
See next page

Mr. Gregory M. Rueger
Pacific Gas and Electric Company

Diablo Canyon

cc:
NRC Resident Inspector
Diablo Canyon Nuclear Power Plant
c/o U.S. Nuclear Regulatory Commission
P. O. Box 369
Avila Beach, California 93424

Mr. Steve Hsu
Radiologic Health Branch
State Department of Health Services
Post Office Box 942732
Sacramento, California 94234

Dr. Richard Ferguson, Energy Chair
Sierra Club California
6715 Rocky Canyon
Creston, California 93432

Regional Administrator, Region V
U.S. Nuclear Regulatory Commission
1450 Maria Lane, Suite 210
Walnut Creek, California 94596

Ms. Nancy Culver
San Luis Obispo
Mothers for Peace
P. O. Box 164
Pismo Beach, California 93448

Mr. Peter H. Kaufman
Deputy Attorney General
State of California
110 West A Street, Suite 700
San Diego, California 92101

Ms. Jacquelyn C. Wheeler
P. O. Box 164
Pismo Beach, California 93448

Christopher J. Warner, Esq.
Pacific Gas & Electric Company
Post Office Box 7442
San Francisco, California 94120

Managing Editor
The County Telegram Tribune
1321 Johnson Avenue
P. O. Box 112
San Luis Obispo, California 93406

Mr. John Townsend
Vice President and Plant Manager
Diablo Canyon Power Plant
P. O. Box 56
Avila Beach, California 93424

Chairman
San Luis Obispo County Board of
Supervisors
Room 370
County Government Center
San Luis Obispo, California 93408

Mr. Truman Burns
Mr. Robert Kinosian
California Public Utilities Commission
505 Van Ness, Rm. 4102
San Francisco, California 94102

Diablo Canyon Independent Safety Committee
ATTN: Robert R. Wellington, Esq.
Legal Counsel
857 Cass Street, Suite D
Monterey, California 93940



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-275

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 92
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 February 17, 1994, 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 rules and 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:

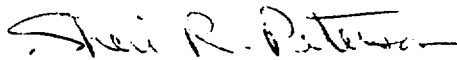
9404180040 940401
PDR ADOCK 05000275
P PDR

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 92, 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 Theodore R. Quay, 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: April 1, 1994



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-323

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 91
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 February 17, 1994, 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 rules and 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. 91, 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, to be implemented for cycle 7.

FOR THE NUCLEAR REGULATORY COMMISSION


for Theodore R. Quay, 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: April 1, 1994

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 92 TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 91 TO FACILITY OPERATING LICENSE NO. 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

3/4 3-19
3/4 3-26
3/4 3-27

INSERT

3/4 3-19
3/4 3-26
3/4 3-27

TABLE 3.3-5

ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
1. Manual Initiation	
a. Safety Injection (ECCS)	N.A.
1) Feedwater Isolation	N.A.
2) Reactor Trip	N.A.
3) Phase "A" Isolation	N.A.
4) Containment Ventilation Isolation	N.A.
5) Auxiliary Feedwater	N.A.
6) Component Cooling Water	N.A.
7) Containment Fan Cooler Units	N.A.
8) Auxiliary Saltwater Pumps	N.A.
b. Phase "B" Isolation	
1) Containment Spray (Coincident with SI Signal)	N.A.
2) Containment Ventilation Isolation	N.A.
c. Phase "A" Isolation	
1) Containment Ventilation Isolation	N.A.
d. Steam Line Isolation	N.A.
2. Containment Pressure-High	
a. Safety Injection (ECCS)	$\leq 27^{(7)}/25^{(4)}$
1) Reactor Trip	≤ 2
2) Feedwater Isolation	≤ 63
3) Phase "A" Isolation	$\leq 18^{(1)}/28^{(3)}$
4) Containment Ventilation Isolation	N.A.
5) Auxiliary Feedwater	$\leq 60^{(3)}$
6) Component Cooling Water	$\leq 38^{(1)}/48^{(3)}$
7) Containment Fan Cooler Units	$\leq 40^{(3)}$
8) Auxiliary Saltwater Pumps	$\leq 48^{(1)}/58^{(3)}$
3. Pressurizer Pressure-Low	
a. Safety Injection (ECCS)	$\leq 27^{(7)}/25^{(4)}/35^{(6)}$
1) Reactor Trip	≤ 2
2) Feedwater Isolation	≤ 63
3) Phase "A" Isolation	$\leq 18^{(1)}$
4) Containment Ventilation Isolation	N.A.
5) Auxiliary Feedwater	$\leq 60^{(3)}$
6) Component Cooling Water	$\leq 48^{(3)}/38^{(1)}$
7) Containment Fan Cooler Units	$\leq 40^{(3)}$
8) Auxiliary Saltwater Pumps	$\leq 58^{(3)}/48^{(1)}$

TABLE 3.3-4 (Continued)
ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
7. Loss of Power (4.16 kV Emergency Bus Undervoltage)		
a. First Level		
1) Diesel Start	≥ 0 volts with a ≤ 0.8 second time delay and ≥ 2583 volts with a ≤ 10 second time delay One relay	≥ 0 volts with a ≤ 0.8 second time delay and ≥ 2583 volts with a ≤ 10 second time delay One relay
2) Initiation of Load Shed	≥ 0 volts with a ≤ 4 second time delay and ≥ 2583 volts with a ≤ 25 second time delay with one relay ≥ 2870 volts, instantaneous	≥ 0 volts with a ≤ 4 second time delay and ≥ 2583 volts with a ≤ 25 second time delay with one relay ≥ 2870 volts, instantaneous
b. Second Level		
1) Diesel Start	≥ 3785 volts with a ≤ 10 second time delay	≥ 3785 volts with a ≤ 10 second time delay
2) Initiation of Load Shed	≥ 3785 volts with a ≤ 20 second time delay	≥ 3785 volts with a ≤ 20 second time delay
8. Engineered Safety Features Actuation System Interlocks		
a. Pressurizer Pressure, P-11	≤ 1915 psig	≤ 1920.6 psig
b. DELETED		
c. Reactor Trip, P-4	N.A.	N.A.
NOTE 1: Time constants utilized in the lead-lag controller for Steam Pressure - Low are τ_1 = 50 seconds and τ_2 = 5 seconds.		
NOTE 2: Steam Generator Water Level Low-Low Trip Time Delay $TD = [B1(P)^3 + B2(P)^2 + B3(P) + B4][0.99]$ Where: P = RCS loop ΔT Equivalent to Power (%RTP), $P \leq 50\%$ RTP TD = Time Delay for Steam Generator Water Level Low-Low Reactor Trip (in seconds) Generators affected		
	B1 = -0.0072 B2 = +0.8181 B3 = -31.72 B4 = +468.8	
NOTE 3: Time constants utilized in the rate-lag controller for Negative Steam Pressure Rate - High are τ_3 = 50 seconds and τ_4 = 50 seconds.		

DIABLO CANYON - UNITS 1 & 2

3/4 3-27

Amendment Nos. ~~37 & 36, 72 & 71,~~
~~64 & 63, 66 & 65,~~ 92 & 91

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
6. Auxiliary Feedwater					
a. Manual Initiation	1 manual switch/pump	1 manual switch/pump	1 manual switch/pump	1, 2, 3	24
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3	22
c. Stm. Gen. Water Level- Low-Low					
1) Start Motor- Driven Pumps					
a. Steam Generator Water Level- Low-Low	3/S.G.	2/S.G. in one S.G.	2/S.G. in each S.G.	1, 2, 3	20
b. RCS loop ΔT	4 (1/loop)	2	3	1, 2, 3	29
2) Start Turbine- Driven Pump					
a. Steam Generator Water Level- Low-Low	3/S.G.	2/S.G. in any 2 S.G.	2/S.G. in each S.G.	1, 2, 3	20
b. RCS loop ΔT	4 (1/loop)	2	3	1, 2, 3	29
d. Undervoltage-RCP Bus Start Turbine- Driven Pump	2/bus	1/bus on both busses	1/bus	1	35
e. Safety Injection Start Motor-Driven Pumps	See Item 1. above for all Safety Injection initiating functions and requirements.				

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
7. Loss of Power (4.16 kV Emergency Bus Undervoltage)					
a. First Level				1, 2, 3, 4	
1) Diesel Start	1/Bus	1/Bus	1/Bus		16
2) Initiation of Load Shed	2/Bus	2/Bus	2/Bus		16
b. Second Level				1, 2, 3, 4	
1) Undervoltage Relays	2/Bus	2/Bus	2/Bus		16
2) Timers to Start Diesel	1/Bus	1/Bus	1/Bus		16
3) Timers to Shed Load	1/Bus	1/Bus	1/Bus		16
8. Engineered Safety Features Actuation System Interlocks					
a. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	21
b. DELETED					
c. Reactor Trip, P-4	2	2	2	1, 2, 3	23

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
3. Containment Isolation (Continued)		
c. Containment Ventilation Isolation		
1) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
2) Plant Vent Noble Gas Activity-High (RM-14A and 14B) ^(a)	Per the ODCP	
3) Safety Injection	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.	
4) Containment Ventilation Exhaust Radiation-High (RM-44A and 44B) ^(b)	Per Specification 3.3.3.10	
4. Steam Line Isolation		
a. Manual	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
c. Containment Pressure-High-High	≤ 22 psig	≤ 22.3 psig
d. Steam Line Pressure-Low	≥ 600 psig (Note 1)	≥ 594.6 psig (Note 1)

(a) The requirements for Plant Vent Noble Gas Activity-High (RM-14A and 14B) are not applicable following installation of RM-44A and 44B.

(b) The requirements for Containment Ventilation Exhaust Radiation-High (RM-44A and 44B) are applicable following installation of RM-44A and 44B.

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
e. Negative Steam Pressure Rate-High	≤ 100 psi (Note 3)	≤ 105.4 psi (Note 3)
5. Turbine Trip and Feedwater Isolation		
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
b. Steam Generator Water level-High-High	≤ 75% of narrow range** instrument span each steam generator.	≤ 75.5% of narrow range** instrument span each steam generator.
6. Auxiliary Feedwater		
a. Manual	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
c. Steam Generator Water Level-Low-Low	≥ 7.2% of narrow range instrument span each steam generator.	≥ 6.8% of narrow range instrument span each steam generator.
Coincident with:		
1) RCS loop ΔT Equivalent to Power ≤ 50% RTP	RCS loop ΔT variable input ≤ 50% RTP	RCS loop ΔT variable input ≤ 51.5% RTP
With a time delay (TD)	TD (Note 2)	≤ (1.01)TD (Note 2)
Or		
2) RCS loop ΔT Equivalent to Power > 50% RTP		
With no time delay		
d. Undervoltage - RCP	≥ 8050 volts	≥ 7730 volts
e. Safety Injection	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.	

DIABLO CANYON - UNITS 1 & 2

3/4 3-26

Amendment Nos.

34 & 33, 70 & 69
72 & 71, 84 & 83, 92 & 91



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 92 TO FACILITY OPERATING LICENSE NO. DPR-80
AND AMENDMENT NO. 91 TO FACILITY OPERATING LICENSE NO. DPR-82
PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2
DOCKET NOS. 50-275 AND 50-323

1.0 INTRODUCTION

By letter of February 17, 1994, Pacific Gas and Electric Company (or the licensee) submitted a request for changes to the Technical Specifications (TS) for Diablo Canyon Power Plant (DCPP) Units 1 and 2. The proposed amendments would revise TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation," Table 3.3-3, functional unit 6.c.2), Start Turbine-Driven Pump, and Table 3.3-4, functional unit 4.e, Negative Steam Pressure Rate - High. The proposed amendments would revise TS changes originally issued on October 7, 1993, in License Amendments 84 and 83 for the Process Protection System Upgrade (Eagle 21). Specifically, TS 3/4.3.2, "Engineered Safety Feature Actuation System Instrumentation," would be revised as follows:

1. Table 3.3-3, functional unit 6.c.2), channels to trip, would be changed from 2/steam generator in one steam generator to 2/steam generator in any 2 steam generators due to an administrative error.
2. Table 3.3-4 would be changed as follows:
 - a. Functional Unit 4.e., Negative Steam Pressure Rate - High, trip setpoint and allowable value, would be changed from -100 psi/sec and -105.4 psi/sec to 100 psi and 105.4 psi, respectively.
 - b. A note would be added stating that the time constants utilized in the rate-lag controller for Negative Steam Pressure Rate - High, are equal to 50 seconds.

9404180050 940401
PDR ADDCK 05000275
P PDR

2.0 EVALUATION

As part of the changes approved in License Amendments 84 and 83, Table 3.3-3, functional unit 6., Auxiliary Feedwater, item c., Steam Generator Water Level - Low-Low, requirements were revised to add a start of the motor-driven and turbine-driven auxiliary feedwater (AFW) pumps on reactor coolant system (RCS) loop delta-T. The addition of RCS loop delta-T AFW pump starts was the only intended change to functional unit 6.c. However, due to an administrative error, the channels to the trip column for the turbine-driven AFW pump start on steam generator water level - low-low was inadvertently changed from 2/Steam Generator in any 2 operating steam generators to 2/Steam Generator in one steam generator. The actuation logic for the turbine-driven AFW pump start on steam generator water level - low-low is not affected by the installation of Eagle 21 and the resistance temperature detector (RTD) bypass elimination changes. This administrative change to the turbine-driven AFW pump start function corrects the error and reflects the current actuation logic. The staff finds the proposed change acceptable.

On January 20, 1994, Westinghouse notified the licensee that the Eagle 21 TS issued in LA 84 and 83 required changes, and provided PG&E with corrected TS pages. Installation of Eagle 21 is scheduled for the Unit 1 sixth refueling outage (scheduled for March 1994) and the Unit 2 sixth refueling outage (scheduled for September 1994). As part of Eagle 21 installation, a new steam line break protection functional upgrade will be implemented to accommodate the removal of the steam flow signals and the comparison of steam line pressures. These ESF actuation signals have historically been the source of inadvertent safety injection (SI) actuations. The new protection logic uses low pressure and high negative steam pressure rate setpoints in each steam line, without comparison between steam lines, to initiate mitigating actions for steam line break (SLB) scenarios. Included in the new steam line break protection logic is a steam line isolation (SLI) signal generated on high negative steam pressure rate below the P-11 Pressurizer Pressure Low (P-11) setpoint.

With the new SLB protection logic, SI and SLI on high steam line flow coincident with either low steam line pressure or Lo-Lo T_{avg} are deleted; SI on high steam line differential pressure would also be deleted. These would be replaced with SI and SLI on low steam line pressure and SLI on high negative steam pressure rate when below P-11. Manual block switches allow operators to switch from the low steam line pressure protection to steam line pressure rate during normal heatup and cooldown operations while in Mode 3 below P-11.

There is no DCPD specific accident analysis that credits mitigation via the Negative Steam Line Pressure Rate - High, trip function. With the exception of the Boron Dilution event, no licensing basis event is limiting at an RCS pressure below the P-11 setpoint.

The 100 psi setpoint with rate-lag time constants equal to 50 seconds is employed at most Westinghouse plants with new steam line break protection.

The setpoint was chosen such that the protection setpoint would not be reached during a normal cooldown (with allowance for short term perturbations) and yet would provide automatic protection for rapid steam line depressurizations consistent with steam line breaks.

While typical cooldown rates are on the order of 50 degrees F/hour, larger perturbations were considered such that a "bounding" setpoint of 2.0 psi/sec was selected. Analytical work performed for Westinghouse plants demonstrated this setpoint would be reached for a spectrum of steam line breaks. At a constant depressurization of 2.0 psi/sec in a steamline, the output from the rate-lag filter asymptotically approaches the trip setpoint of 100 psi. At constant rates of greater than 2.0 psi/sec, the output from the rate-lag filter will exceed the trip setpoint of 100 psi. A greater depressurization rate (e.g., 10 psi/sec) will result in a shorter period of time before the trip setpoint is exceeded.

The rate-lag time constants are input into the Eagle 21 algorithm code as τ_3 and τ_4 , both set equal to 50 seconds. To more adequately define the Negative Steam Pressure Rate - High function, the licensee is proposing to change the units of the setpoint and allowable value from psi/sec to psi and to add Note 3 to Table 3.3-4. The proposed Note 3 states: "Time constants utilized in the rate-lag controller for Negative Steam Pressure Rate - High are $\tau_3 = 50$ seconds and $\tau_4 = 50$ seconds." Additionally, the negative signs would be deleted from the numerical values for the trip setpoint and allowable value. Since the heading for functional unit 4.e. already indicates a "negative" rate of pressure change, the additional minus signs could cause confusion.

The changes proposed in this license amendment request more adequately define the trip setpoint and allowable values to be consistent with the original intent of License Amendments 84 and 83 and actual plant practice. These clarifying changes do not involve changes to the actual values themselves or the manner in which they are used. In addition, these proposed changes are consistent with other similar values' signs/units located within Table 3.3-4, i.e., functional unit 4.d., Steam Line Pressure - Low.

Based on the above, the staff finds the proposed changes 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

These 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 and change surveillance requirements. 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 (59 FR 9789). 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 Contributor: S. Peterson

Date: April 1, 1994