

April 20, 1992

Docket Nos. 50-275
and 50-323

Mr. Gregory M. Rueger
Senior Vice President and General Manager
Nuclear Power Generation Business Unit
Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Dear Mr. Rueger:

SUBJECT: ISSUANCE OF AMENDMENTS FOR DIABLO CANYON NUCLEAR POWER PLANT, UNIT
NOS. 1 AND 2 (TAC NOS. M80629 AND M80630)

The Commission has issued the enclosed Amendment No. 70 to Facility Operating License No. DPR-80 and Amendment No. 69 to Facility Operating License No. DPR-82 for the Diablo Canyon Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments respond to your amendment application dated June 5, 1991 (reference License Amendment Request LAR 91-06).

These amendments revise the combined technical specifications (TS) for the Diablo Canyon Nuclear Power Plant Unit Nos. 1 and 2 to support a comprehensive program to upgrade the plant Radiation Monitoring System (RMS).

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

Enclosures:

1. Amendment No. 70 to License No. DPR-80
2. Amendment No. 69 to License No. DPR-82
3. Safety Evaluation

cc w/enclosures:

See next page

*See previous concurrence

DISTRIBUTION

Docket File	DHagan
NRC & LPDR	GHill (8)
PDV Reading	WandaJones
BBoger	CGrimes
MVirgilio	KEccleston
TQuay	ACRS (10)
DFoster	OPA
HRood	OC/LFMB
RZimmerman, RV	OGC
Region V(8)	

OFC:	LA:PDV:DRPW	PM:PDV:DRPW	*OGC	D:PDV:DRPW
NAME:	DFoster	HRood:pm	SHom	TOB
DATE:	4/17/92	4/17/92	04/03/92	4/20/92

OFFICIAL RECORD COPY

Document Name: DCM80629.AMD

9204290222 920420
PDR ADOCK 05000275
P PDR

NRC FILE CENTER COPY



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

April 20, 1992

Docket Nos. 50-275
and 50-323

Mr. Gregory M. Rueger
Senior Vice President and General Manager
Nuclear Power Generation Business Unit
Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Dear Mr. Rueger:

SUBJECT: ISSUANCE OF AMENDMENTS FOR DIABLO CANYON NUCLEAR POWER PLANT, UNIT
NOS. 1 AND 2 (TAC NOS. M80629 AND M80630)

The Commission has issued the enclosed Amendment No. 70 to Facility Operating License No. DPR-80 and Amendment No. 69 to Facility Operating License No. DPR-82 for the Diablo Canyon Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments respond to your amendment application dated June 5, 1991 (reference License Amendment Request LAR 91-06).

These amendments revise the combined technical specifications (TS) for the Diablo Canyon Nuclear Power Plant Unit Nos. 1 and 2 to support a comprehensive program to upgrade the plant Radiation Monitoring System (RMS).

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 dark ink, reading "Harry Rood", is positioned above the typed name and title.

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

Enclosures:

1. Amendment No. 70 to
License No. DPR-80
2. Amendment No. 69 to
License No. 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

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

Ms. Sandra A. Silver
Mothers for Peace
660 Granite Creek Road
Santa Cruz, California 95065

Ms. Jacquelyn C. Wheeler
3303 Barranca Court
San Luis Obispo, California 93401

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

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

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

Mr. John Hickman
Senior Health Physicist
Environmental Radioactive Mgmt. Unit
Environmental Management Branch
State Department of Health Services
714 P Street, Room 616
Sacramento, California 95814

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

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

Ms. Nancy Culver
192 Luneta Street
San Luis Obispo, California 93401

Michael M. Strumwasser, Esq.
Special Assistant Attorney General
State of California
Department of Justice
3580 Wilshire Boulevard, Room 800
Los Angeles, California 90010



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. 70
License No. DPR-80

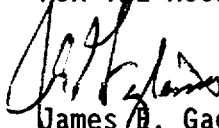
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Pacific Gas & Electric Company (the licensee) dated June 5, 1991, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations 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. 70 , 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 as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



James B. Gagliardo, Acting 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 20, 1992



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. 69
License No. DPR-82

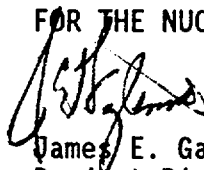
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Pacific Gas & Electric Company (the licensee) dated June 5, 1991, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations 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. 69 , 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 as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



James E. Gagliardo, Acting 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 20, 1992

ATTACHMENT TO LICENSE AMENDMENT NOS. 70 AND 69

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 PAGE

3/4 3-17
3/4 3-25
3/4 3-26
3/4 3-30
3/4 3-33
3/4 3-37
3/4 3-39
3/4 9-10
B 3/4 9-3

INSERT PAGE

3/4 3-17
3/4 3-25
3/4 3-26
3/4 3-30
3/4 3-33
3/4 3-37
3/4 3-39
3/4 9-10
B 3/4 9-3

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>
3. Containment Isolation (Continued)					
2) Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14
3) Containment Pressure-High-High	4	2	3	1, 2, 3	17
c. Containment Ventilation Isolation					
1) Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	18
2) Plant Vent Noble Gas Activity-High (RM-14A and 14B) ^(a)	2	1	2	1, 2, 3, 4	18
3) Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				
4) Containment Ventilation Exhaust Radiation-High (RM-44A and 44B) ^(b)	2	1	2	1, 2, 3, 4	18
4. Steam Line Isolation					
a. Manual	1 manual switch/steam line	1 manual switch/steam line	1 manual switch/operating steam line	1, 2, 3, 4	24

(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 3.3-3 (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>
4. Steam Line Isolation (Continued)					
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3	22
c. Containment Pressure- High-High	4	2	3	1, 2, 3	17
d. Steam Flow in Two Steam Lines-High	2/steam line	1/steam line any 2 steam lines	1/steam line	1, 2, 3	20
Coincident With Either T _{avg} -Low-Low	1 T _{avg} /loop	1 T _{avg} any 2 loops	1 T _{avg} any 3 loops	1, 2, 3	20
Or					
Steam Line Pressure-Low	1 pressure/ loop	1 pressure any 2 loops	1 pressure any 3 loops	1, 2, 3	20
5. Turbine Trip & Feedwater Isolation					
a. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2	25
b. Steam Generator Water Level- High-High	3/stm. gen.	2/stm. gen. in any operat- ing stm. gen.	2/stm. gen. in each oper- ing stm. gen.	1, 2	20

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	≤ 24 psig
d. Steam Flow in Two Steam Lines-High	< A function defined as follows: A Δp corresponding to 40% of full steam flow between 0% and 20% load and then a Δp increasing linearly to a Δp corresponding to 110% of full steam flow at full load.	< A function defined as follows: A Δp corresponding to 44% of full steam flow between 0% and 20% load and then a Δp increasing linearly to a Δp corresponding to 111.5% of full steam flow at full load.

(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>
Coincident With Either		
1) T_{avg} -Low-Low, or	$\geq 543^{\circ}\text{F}$	$\geq 540.2^{\circ}$
2) Steam Line Pressure-Low	≥ 600 psig	≥ 580 psig
5. Turbine Trip and Feedwater Isolation		
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
b. Steam Generator Water level-High-High	$< 67\%$ of narrow range Instrument span each steam generator.	$< 68\%$ 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.	$> 6.2\%$ of narrow range Instrument span each steam generator.
d. Undervoltage - RCP	≥ 8050 volts	≥ 7935 volts
e. Safety Injection	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.	

TABLE 3.3-5 (Continued)
ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
4. Differential Pressure Between Steam Lines-High	
a. Safety Injection (ECCS)	$\leq 25^{(4)}/35^{(5)}$
1) Reactor Trip	< 2
2) Feedwater Isolation	$< 63^{(2)}$
3) Phase "A" Isolation	$< 18^{(1)}/28^{(3)}$
4) Containment Ventilation Isolation	N.A.
5) Auxiliary Feedwater	$< 60^{(3)}$
6) Component Cooling Water	$< 38^{(1)}/48^{(3)}$
7) Containment Fan Cooler Units	$< 40^{(3)}$
8) Auxiliary Saltwater Pumps	$\leq 48^{(1)}/58^{(3)}$
5. Steam Flow in Two Steam Lines - High Coincident with T _{avg} -Low-Low	
a. Safety Injection (ECCS)	$\leq 25^{(4)}/35^{(5)}$
1) Reactor Trip	< 4
2) Feedwater Isolation	$< 65^{(2)}$
3) Phase "A" Isolation	$< 20^{(1)}/30^{(3)}$
4) Containment Ventilation Isolation	N.A.
5) Auxiliary Feedwater	$< 60^{(3)}$
6) Component Cooling Water	$< 40^{(1)}/50^{(3)}$
7) Containment Fan Cooler Units	$< 40^{(3)}$
8) Auxiliary Saltwater Pumps	$\leq 50^{(1)}/60^{(3)}$
b. Steam Line Isolation	≤ 10
6. Steam Flow in Two Steam Lines-High Coincident with Steam Line Pressure-Low	
a. Safety Injection (ECCS)	$\leq 25^{(4)}/35^{(5)}$
1) Reactor Trip	< 2
2) Feedwater Isolation	$< 63^{(2)}$
3) Phase "A" Isolation	$< 18^{(1)}/28^{(3)}$
4) Containment Ventilation Isolation	N.A.
5) Auxiliary Feedwater	$< 60^{(3)}$
6) Component Cooling Water	$< 38^{(1)}/48^{(3)}$
7) Containment Fan Cooler Units	$< 40^{(3)}$
8) Auxiliary Saltwater Pumps	$\leq 48^{(1)}/58^{(3)}$
b. Steam Line Isolation	≤ 8

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
7. Containment Pressure-High-High	
a. Containment Spray	< 48.5 ⁽⁶⁾
b. Phase "B" Isolation	N.A.
c. Steam Line Isolation	≤ 7
8. Steam Generator Water Level-High-High	
a. Turbine Trip	≤ 2.5
b. Feedwater Isolation	≤ 66 ⁽²⁾
9. Steam Generator Water Level Low-Low	
a. Motor-Driven Auxiliary Feedwater Pumps	≤ 60
b. Turbine-Driven Auxiliary Feedwater Pump	≤ 60
10. RCP Bus Undervoltage	
Turbine-Driven Auxiliary Feedwater Pump	≤ 60
11. Plant Vent Noble Gas Activity-High ^(a)	
Containment Ventilation Isolation	≤ 11
12. Containment Ventilation Exhaust Radiation- High ^(b)	
Containment Ventilation Isolation	≤ 11

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

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

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>
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								
b. Phase "B" Isolation								
					See Item 1. above for all Safety Injection Surveillance Requirements.			
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	Q	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) ^(a)	S	R	M(2)	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
3) Safety Injection								
4) Containment Ventilation Exhaust Radiation-High (RM-44A and 44B) ^(b)	S	R	M(2)	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4

(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 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALI- BRATION	ANALOG CHANNEL OPERA- TIONAL TEST	TRIP ACTUATING DEVICE OPERA- TIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
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	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
d. Steam Flow in Two Steam Lines-High Coincident With Either	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
1) T_{avg} -Low-Low or	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
2) Steam Line Pressure-Low	S	R	Q	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	Q	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	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
1. Fuel Handling Building				
a. Storage Area				
1) Spent Fuel Pool	1	*	≤ 75 mR/hr	30 & 32**(a)
2) New Fuel Storage	1	*	≤ 15 mR/hr	30 & 32**(a)
b. Gaseous Activity				
Fuel Handling Building	1	*	Per the ODCP	32**
Ventilation Mode Change ^(d)				
2. Control Room				
Ventilation Mode Change	2***	All	≤ 2 mR/hr	34
3. Containment				
a. Gaseous Activity				
1) Containment Ventilation Isolation (RM-14A or 14B) ^(b)	1	6	Per the ODCP	33
2) RCS Leakage	1	1, 2, 3, 4	N.A.	31
3) Containment Ventilation Isolation (RM-44A or 44B) ^(c)	1	6	Per the ODCP	33
b. Particulate Activity				
1) Containment Ventilation Isolation (RM-44A or 44B) ^(c)	1	6	Per the ODCP	33
2) RCS Leakage	1	1, 2, 3, 4	N.A.	31

*With fuel in the spent fuel pool or new fuel storage vault.

**With irradiated fuel in the spent fuel pool.

***One channel for each normal intake to the Control Room Ventilation System (common to both units).

(a) Action 32 is not applicable to the Fuel Storage Area Monitors following installation of RM-45A and 45B.

(b) The requirements for Containment Ventilation Isolation (RM-14A or 14B) are not applicable following installation of RM-44A and 44B.

(c) The requirements for Containment Ventilation Isolation (RM-44A or 44B) are applicable following installation of RM-44A and 44B.

(d) The requirements for Fuel Handling Building Ventilation Mode Change are applicable following installation of RM-45A and 45B.

TABLE 3.3-6 (Continued)

ACTION STATEMENTS

- ACTION 30 -** With less than the Minimum Channels OPERABLE requirement, operation may continue for up to 30 days provided an appropriate portable continuous monitor with the same Alarm Setpoint or an individual qualified in radiation protection procedures with a radiation dose rate monitoring device is provided in the fuel storage pool area. Restore the inoperable monitors to OPERABLE status within 30 days or suspend all operations involving fuel movement in the fuel storage pool areas.
- ACTION 31 -** With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.6.1. The provisions of Specification 3.0.4 are not applicable.
- ACTION 32 -** With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.
- ACTION 33 -** With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.9.
- ACTION 34 -** With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the Control Room Ventilation System in a recirculation mode with the HEPA filter and charcoal adsorber bank in operation.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS SURVEILLANCE REQUIREMENTS

	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. Fuel Handling Building				
a. Storage Area				
1) Spent Fuel Pool	S	R	M	*
2) New Fuel Storage	S	R	M	*
b. Gaseous Activity				
Fuel Handling Building (c)	S	R	M	*
Ventilation Mode Change				
2. Control Room				
Ventilation Mode Change	S	R	M	A11
3. Containment				
a. Gaseous Activity				
1) Containment	S	R	M	6
Ventilation				
Isolation				
(RM-14A or 14B)(a)				
2) RCS Leakage	S	R	M	1, 2, 3, 4
3) Containment Venti-	S	R	M	6
lation Isolation				
(RM-44A or 44B)(b)	S	R	M	6
b. Particulate Activity				
1) Containment Venti-	S	R	M	6
lation Isolation				
(RM-44A or 44B)(b)				
2) RCS Leakage	S	R	M	1, 2, 3, 4

*With fuel in the spent fuel pool or new fuel storage vault.

(a)The requirements for Containment Ventilation Isolation (RM-14A or 14B) are not applicable following installation of RM-44A and 44B.

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

(c)The requirements for Fuel Handling Building Ventilation Mode Change are applicable following installation of RM-45A and 45B.

INSTRUMENTATION

MOVABLE INCORE DETECTORS

LIMITING CONDITION FOR OPERATION

3.3.3.2 The Movable Incore Detection System shall be OPERABLE with:

- a. At least 75% of the detector thimbles,
- b. A minimum of two detector thimbles per core quadrant, and
- c. Sufficient movable detectors, drive, and readout equipment to map these thimbles.

APPLICABILITY: When the Movable Incore Detection System is used for:

- a. Recalibration of the Excore Neutron Flux Detection System, or
- b. Monitoring the QUADRANT POWER TILT RATIO, or
- c. Measurement of $F_{\Delta H}^N$, $F_Q(Z)$ and F_{xy} .

ACTION:

With the Movable Incore Detection System inoperable, do not use the system for the above applicable monitoring or calibration functions. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.2 The Movable Incore Detection System shall be demonstrated OPERABLE at least once per 24 hours by normalizing each detector output when required for:

- a. Recalibration of the Excore Neutron Flux Detection System, or
- b. Monitoring the QUADRANT POWER TILT RATIO, or
- c. Measurement of $F_{\Delta H}^N$, $F_Q(Z)$ and F_{xy} .

REFUELING OPERATIONS

LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent residual heat removal (RHR) trains shall be OPERABLE and at least one RHR train shall be in operation.*

APPLICABILITY: MODE 6, when the water level above the top of the reactor vessel flange is less than 23 feet.

ACTION:

- a. With less than the required RHR trains OPERABLE, immediately initiate corrective action to return the required RHR trains to OPERABLE status, or to establish at least 23 feet of water above the reactor vessel flange, as soon as possible.
- b. With no RHR train in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR train to operation. Close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere within 4 hours.

SURVEILLANCE REQUIREMENTS

4.9.8.2.1 With the reactor subcritical less than 57 hours, at least one RHR train shall be verified in operation and circulating reactor coolant at a flow rate of greater than or equal to 3000 gpm at least once per 12 hours.

4.9.8.2.2 With the reactor subcritical for 57 hours or more, at least one RHR train shall be verified in operation and circulating reactor coolant at a flow rate of greater than or equal to 1300 gpm at least once per 12 hours.

*Prior to initial criticality, the RHR train may be removed from operation for up to 1 hour per 8-hour period during the performance of CORE ALTERATIONS in the vicinity of the reactor vessel hot legs.

REFUELING OPERATIONS

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Ventilation Isolation System shall be OPERABLE.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within containment.

ACTION:

- a. With the Containment Ventilation Isolation System inoperable, close each of the ventilation penetrations providing direct access from the containment atmosphere to the outside atmosphere.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Ventilation Isolation System shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS by verifying that containment ventilation isolation occurs on a High Radiation test signal^(a) from the plant vent noble gas activity monitoring instrumentation channels.

-
- (a) Following installation of RM-44A and 44B, the high radiation test signal shall come from the containment ventilation exhaust radiation monitoring instrumentation channels.

REFUELING OPERATIONS

BASES

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM

The OPERABILITY of this system ensures that the containment ventilation penetrations will be automatically isolated upon detection of high radiation levels within the containment. The OPERABILITY of this system is required to restrict the release of radioactive material from the containment atmosphere to the environment.

3/4.9.10 and 3/4.9.11 WATER LEVEL - REACTOR VESSEL and SPENT FUEL POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gas activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis.

The minimum water level for movement of fuel assemblies (23 feet above the vessel flange) assures that sufficient water depth is maintained above fuel elements being moved to or from the vessel. With the upper internals in place, fuel assemblies and control rods cannot be removed from the vessel. Operations involving the unlatching of control rods with the vessel upper internals in place may proceed with less than 23 feet of water above the vessel flange provided that 23 feet of water (12 feet above the flange) is maintained above all irradiated fuel assemblies within the reactor vessel.

3/4.9.12 FUEL HANDLING BUILDING VENTILATION SYSTEM

The limitations on the Fuel Handling Building Ventilation System ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the safety analyses. Transfer of system operation into the iodine removal mode (exhaust through HEPA filters and charcoal adsorbers) is initiated automatically by either the new fuel storage or spent fuel pool area radiation monitors required by Specification 3.3.3. Following installation of the Fuel Handling Building Ventilation exhaust radiation monitors, the automatic function of the fuel storage area monitors will be removed. Transfer of system operation into the iodine removal mode will be by either of the two Fuel Handling Building Ventilation exhaust radiation monitors required by Specification 3.3.3. ANSI N510-1980 will be used as a procedural guide for surveillance testing.

3/4.9.13 SPENT FUEL SHIPPING CASK MOVEMENT

The restriction on spent fuel shipping cask movement ensures that no fuel assemblies will be ruptured in the event of a spent fuel shipping cask accident. The dose consequences of this accident are within the dose guideline values of 10 CFR Part 100.

3/4.9.14 SPENT FUEL ASSEMBLY STORAGE

The restrictions placed on spent fuel assemblies stored in Region 2 of the spent fuel pool and the requirement for 2000 ppm boron concentration ensure that keff will not be greater than 0.95. The spent fuel storage has been designed and analyzed for a maximum enrichment of 4.5 weight percent U-235.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 70 TO FACILITY OPERATING LICENSE NO. DPR-80
AND AMENDMENT NO. 69 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 June 5, 1991, Pacific Gas and Electric Company (PG&E or the licensee) requested amendments to Facility Operating Licenses DPR-80 and DPR-82 for Diablo Canyon Units 1 and 2, respectively. The amendment application is designated License Amendment Request LAR 91-06. The amendments change the combined Diablo Canyon technical specifications (TS) to support completion of planned upgrades to the Radiation Monitoring System (RMS) at these units. The specific technical specifications to be changed are:

1. TS 3/4.3.2, "Engineered Safety Features Activation System Instrumentation" and the referenced Tables 3.3-3, 3.3-4, 3.3-5, and 4.3-2.
2. TS 3/4.3.3.1, "Radiation Monitoring for Plant Operations" and the referenced Tables 3.3-6 and 4.3-3.
3. TS 3/4.3.3.10, "Radioactive Gaseous Effluent Monitoring Instrumentation" and the referenced Tables 3.3-13 and 4.3-9.
4. TS 3/4.9.9, "Containment Ventilation Isolation System."
5. Bases 3/4.9.12, "Fuel Handling Building Ventilation System."

In the June 5, 1991, submittal, the licensee noted that the RMS upgrade and the associated TS changes were not intended to address an immediate safety concern. Rather, the changes are being made to reduce spurious containment ventilation isolation events, fuel handling building ventilation shifts, and the associated Licensee Event Reports (LERs).

2.0 EVALUATION

Pacific Gas and Electric Company has proposed changes to the technical specifications for Diablo Canyon Units 1 and 2. The changes proposed by the licensee are discussed below according to the sections of the technical specification affected by the requested modifications.

(1) Plant Vent and Containment Ventilation System Monitors

The licensee has proposed changes to TS 3/4.3.2 "Engineered Safety Features Actuation System Instrumentation." Changes to TS Tables 3.3-3, 3.3-4, 3.3-5, and 4.3-2 will add operability, response time, and surveillance requirements for the radiation monitors RM-44A and RM-44B. Outputs from RM-14A and RM-14B will be removed as inputs to the Solid State Protection Systems (SSPS) Containment Ventilation Isolation (CVI) actuation logic and will be replaced with outputs from RM-44A and RM-44B. TS Table 3.3-6, "Radiation Monitoring Instrumentation for Plant Operations," and Table 4.3-3, "Radiation Monitoring Instrumentation for Plant Operations Surveillance Requirements," will provide appropriate operability and surveillance requirements for RM-44A and RM-44B. The addition of RM-44A and RM-44B will enhance radiation monitoring system response to radioactivity located in the containment ventilation exhaust since the RM-44A and RM-44B detectors will be located closer to the containment ventilation exhaust penetration and, therefore, closer to any release originating within the containment. In addition, RM-44A and RM-44B will be placed directly in the effluent stream and will monitor undiluted containment exhaust.

In addition, plant vent monitors RM-14A and RM-14B will be replaced with new noble gas activity monitors RM-14 and RM-14R. These monitors will incorporate improvements in sensitivity, range, and dependability compared to RM-14A and RM-14B. In its June 5, 1991, amendment request, the licensee proposed to add operability and surveillance requirements for the new noble gas monitors in TS Table 3.3-13, "Radioactive Gaseous Effluent Monitoring Instrumentation," and Table 4.3-9, "Radioactive Gaseous Effluent Monitoring Instrumentation Surveillance Requirements." However, these tables were removed from the TS by Amendments 67 and 66 to the Diablo Canyon operating licenses, issued on January 22, 1992. At that time the tables were relocated to the Radiological Monitoring Control Procedure (RMCP) or the Process Control Program (PCP), as appropriate. Therefore, this amendment does not revise these tables. Rather, the licensee has indicated that appropriate changes will be made to the RMCP and/or the PCP. A new plant vent flow rate monitor will increase the capability to analyze the radiochemical contents of the vent effluent.

Applicable design features of monitors RM-44A and RM-44B as well as RM-14 and RM-14R are in accordance with applicable criteria of Standard Review Plan (SRP) Section 11.5 "Process and Effluent Monitoring Instrumentation and Sampling System."

The NRC staff has reviewed the TS changes proposed by the licensee related to the plant vent and containment ventilation system monitors and finds that the changes proposed by the licensee for these monitors provide an adequate level on accountability and control of effluents discharged via these pathways. Consequently, we find these proposed changes acceptable.

(2) Fuel Handling Building (FHB) Monitors

Radiation monitoring in the fuel storage areas and instrumentation to provide input to the FHB ventilation mode-shift actuation logic will be provided by the additions of RM-45A and RM-45B to the FHB ventilation exhaust line. These inputs will replace the existing RM-58 and RM-59 inputs to the FHB ventilation mode shift actuation logic. These monitors will directly monitor the Spent Fuel Pool (SFP) exhaust streams, a capability which has not previously existed at Diablo Canyon. Appropriate technical specification operability and surveillance requirements for these monitors will be included in TS Table 3.3-6 and Table 4.3-3.

The NRC staff has reviewed the technical specification changes proposed by the licensee related to the radiation monitors associated with the FHB ventilation mode shift actuation logic and finds that the changes proposed provide for improved monitoring of the Spent Fuel Pool exhaust streams since direct monitoring of this flow stream will be provided by the modified system. Consequently, we find the changes proposed by the licensee acceptable.

In summary, the staff finds that the changes to the Diablo Canyon radiation monitoring systems proposed by Pacific Gas and Electric Company in its June 5, 1991, application will provide an improved level of accountability of effluents discharged to the environment. In addition, the changes to the technical specifications proposed by the licensee are suitable for use with the modified system. On the basis of its review of this matter, the NRC staff finds that the proposed changes to the Diablo Canyon TS are acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes 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 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 (56 FR 37588). 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.

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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: K. Eccleston
H. Rood

Dated: April 20, 1992