

September 2, 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. M86479) AND UNIT NO. 2 (TAC NO. M86480)

The Commission has issued the enclosed Amendment No. 94 to Facility Operating License No. DPR-80 and Amendment No. 93 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 May 7, 1993 (reference LAR 93-01).

These amendments revise TS 3/4.3.3.5, "Remote Shutdown Instrumentation," to add remote shutdown control functions, to increase the Allowed Outage Time (AOT) for an inoperable remote shutdown function (instrumentation and control) from 7 days to 30 days, to add an Action Statement that clarifies that separate entry is permitted for each function listed in Table 3.3-9, and to revise the associated TS bases.

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 IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

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Enclosures:

1. Amendment No.94 to DPR-80
2. Amendment No.93 to DPR-82
3. Safety Evaluation

cc w/enclosures:
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SPeterson	CMcCracken, 08D1

CP-1

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*See Previous Sheet for Concurrence

OFC	LA:DRPW <i>JFC</i>	PDIV-2/PM <i>SP</i>	SPLB*	OGC	PDIV-2/D
NAME	DFoster-Curseen	SPeterson:mk	CMcCracken	<i>S Hom</i>	<i>TQuay</i>
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*See Previous Sheet for Concurrence

OFC	LA:DRPW <i>Jc</i>	PDIV-2/PM <i>Q</i>	SPLB*	OGC	PDIV-2/D
NAME	DFoster-Curseen	SPeterson:mk	CMcCracken	<i>S. Hom</i>	<i>TQuay</i>
DATE	8/19/94	8/22/94	8/16/94	8/29/94	8/29/94



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

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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 cursive script that reads "Sheri R. Peterson".

Sheri R. Peterson, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 94 to DPR-80
2. Amendment No. 93 to DPR-82
3. Safety Evaluation

cc w/enclosures:

Mr. Gregory M. Rueger
Pacific Gas and Electric Company

Diablo Canyon

cc:
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San Francisco, California 94102



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. 94
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 May 7, 1993, 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:

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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. 94, 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 within 30 days from the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Theodore R. Quay, Director
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 2, 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. 93
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 May 7, 1993, 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. 93, 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 within 30 days from the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Theodore R. Quay, Director
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 2, 1994

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 94 TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 93 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.

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3/4 3-48
3/4 3-49
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B 3/4 3-3a
B 3/4 3-3b
B 3/4 3-3c
B 3/4 3-3d

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INSTRUMENTATION

REMOTE SHUTDOWN INSTRUMENTATION AND CONTROLS

LIMITING CONDITION FOR OPERATION

3.3.3.5 The remote shutdown monitoring instrumentation and control functions shown in Table 3.3-9 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With less than the minimum required Function(s) of Table 3.3-9 operable, restore the inoperable Function(s) to OPERABLE status within 30 days or be in HOT SHUTDOWN within the next 12 hours.
- b. The provisions of Specification 3.0.4 are not applicable.
- c. Separate entry into Action a. is allowed for each Function in Table 3.3-9.

SURVEILLANCE REQUIREMENTS

4.3.3.5.1 Each remote shutdown monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION at the frequencies shown in Table 4.3-6.

4.3.3.5.2 Verify each required control circuit and control transfer switch is capable of performing the intended function at least once every 18 months.

TABLE 3.3-9

REMOTE SHUTDOWN MONITORING INSTRUMENTATION
AND CONTROLS

<u>INSTRUMENT/CONTROL FUNCTION</u>	<u>READOUT/CONTROL LOCATION</u>	<u>REQUIRED NUMBER OF CHANNELS</u>
1. Reactor Trip Breaker Indication	Reactor Trip Breaker	1/trip breaker
2. Pressurizer Pressure	Hot Shutdown Panel	1
3. Pressurizer Level	Hot Shutdown Panel	1
4. Steam Generator Pressure	Hot Shutdown Panel	1/stm. gen.
5. Steam Generator Wide Range Water Level	Hot Shutdown Panel	1/stm. gen.
6. Condensate Storage Tank Water Level	Hot Shutdown Panel	1
7. Auxiliary Feedwater Flow	Hot Shutdown Panel	1/stm. gen.
8. Charging Flow	Hot Shutdown Panel	1
9. RCS Loop 1 Temperature Indication	Dedicated Shutdown Panel	Hot and Cold Leg Temperature Indication
10. Auxiliary Feedwater Flow Control - AFW Pump, and Associated Valves - Transfer Switches	Hot Shutdown Panel 4 kV Switchgear	any 2 of 3 AFW pumps
11. Charging Flow Control - Centrifugal Charging Pump - Transfer Switch	Hot Shutdown Panel 4 kV Switchgear	2 of 2 pumps
12. Component Cooling Water Control - Component Cooling Water Pump - Transfer Switch	Hot Shutdown Panel 4 kV Switchgear	any 2 of 3 CCW pumps
13. Auxiliary Saltwater Control - Auxiliary Saltwater Pump - Transfer Switch	Hot Shutdown Panel 4 kV Switchgear	2 of 2 pumps
14. Emergency Diesel Generator Control - EDG Start	EDG Local Control Panel	3 of 3 EDGs

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Reactor Trip Breaker Indication	N.A.	N.A.
2. Pressurizer Pressure	M	R
3. Pressurizer Level	M	R
4. Steam Generator Wide Range Water Level	M	R
5. Steam Generator Pressure	M	R
6. Condensate Storage Tank Water Level	M	R
7. Auxiliary Feedwater Flow	M	R
8. Charging Flow	M	R
9. RCS Loop 1 Temperature Indication	M	R

INSTRUMENTATION

BASES

3/4.3.3.3 SEISMIC INSTRUMENTATION

The OPERABILITY of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility to determine if plant shutdown is required pursuant to Appendix A of 10 CFR Part 100. The instrumentation is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes."

3/4.3.3.4 METEOROLOGICAL INSTRUMENTATION

The OPERABILITY of the meteorological instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public and is consistent with the recommendations of Regulatory Guide 1.23, "Onsite Meteorological Programs," February 1972.

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION

BACKGROUND

The Remote Shutdown Instrumentation and Controls provide the control room operator with sufficient instrumentation and controls to place and maintain the unit in a safe shutdown condition from a location other than the control room. This capability is necessary to protect against the possibility that the control room becomes inaccessible. A safe shutdown condition is defined as MODE 3. With the unit in MODE 3, the Auxiliary feedwater (AFW) System and the steam generator (SG) safety valves can be used to remove core decay heat and meet all safety requirements. The long term supply of water for the AFW System allows extended operation in MODE 3 from outside the control room until such a time that either control is transferred back to the control room or a cooldown is initiated.

In the event that the control room becomes inaccessible, the operators can establish control at the remote shutdown panel (hot shutdown panel), and place and maintain the unit in MODE 3. Not all controls and necessary transfer switches are located at the hot shutdown panel. Some controls and transfer switches will have to be operated locally at the switchgear, motor control panels, or other local stations. The unit automatically reaches MODE 3 following a unit shutdown and can be maintained safely in MODE 3 for an extended period of time.

The OPERABILITY of the remote shutdown control and instrumentation functions ensures there is sufficient information available on selected unit parameters to place and maintain the unit in MODE 3 should the control room become inaccessible.

INSTRUMENTATION

BASES

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION (Continued)

APPLICABLE SAFETY ANALYSES

The Remote Shutdown Instrumentation and Controls provides equipment at appropriate locations outside the control room with a capability to promptly shut down and maintain the unit in a safe condition in MODE 3.

The criteria governing the design and specific system requirements of the Remote Shutdown Instrumentation and Controls are located in 10 CFR 50, Appendix A, GDC 19.

LCO

The Remote Shutdown Instrumentation and Controls LCO provides the OPERABILITY requirements of the instrumentation and controls necessary to place and maintain the unit in MODE 3 from a location other than the control room. The instrumentation and controls required are listed in Table 3.3-9 in the accompanying LCO.

The controls, instrumentation, and transfer switches are required for:

- Reactor trip indication;
- RCS pressure control;
- Decay heat removal via the AFW System and the SG safety valves;
- RCS inventory control via charging flow; and
- Safety support systems for the above Functions, including auxiliary saltwater, component cooling water, and emergency diesel generators.

A remote shutdown Function is OPERABLE if all required instrument and control channels for that function listed in Table 3.3-9 are OPERABLE.

The remote shutdown instrument and control circuits covered by this LCO do not need to be energized to be considered OPERABLE. This LCO is intended to ensure the instruments and control circuits will be OPERABLE if unit conditions require that a remote shutdown be performed.

APPLICABILITY

The Remote Shutdown Instrumentation and Controls LCO is applicable in MODES 1, 2, and 3. This is required so that the unit can be placed and maintained in MODE 3 for an extended period of time from a location other than the control room until either control is transferred back to the control room or a cooldown is initiated. This LCO is not applicable in MODE 4, 5, or 6.

INSTRUMENTATION

BASES

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION (Continued)

In these MODES, the facility is already subcritical and in a condition of reduced RCS energy. Under these conditions, considerable time is available to restore necessary instrument control functions if control room instruments or controls become unavailable.

ACTIONS

Action a.

Action a. addresses the situation where one or more required Functions (instrument or control) of the Remote Shutdown Instrumentation and Controls are inoperable. This includes any Function listed in Table 3.3-9, as well as the control and transfer switches.

The Required Action (Action a.) is to restore the required Function to OPERABLE status within 30 days. The Allowed Outage Time (AOT) is based on operating experience and the low probability of an event that would require evacuation of the control room.

If the Required Action and associated AOT of Action a is not met, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the unit must be brought to MODE 4 within 12 hours. The AOTs are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

Action b.

Action b. excludes the MODE change restriction of TS 3.0.4. This exception allows entry into an applicable MODE while relying on the ACTIONS even though the ACTIONS may eventually require a unit shutdown. This exception is acceptable due to the low probability of an event requiring remote shutdown and because the equipment can generally be repaired during operation without significant risk of spurious trip.

Action c.

Action c. has been added to the ACTIONS to clarify the application of AOT rules. Separate Condition entry is allowed for each Function listed on Table 3.3-9. The AOT(s) of the inoperable channel(s) of a Function will be tracked separately for each Function starting from the time the Condition was entered for that Function.

INSTRUMENTATION

BASES

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION (Continued)

SURVEILLANCE REQUIREMENTS

SR 4.3.3.5.1

Performance of the CHANNEL CHECK once every 31 days ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is a comparison of the parameter indicated on one channel to a similar parameter on other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between the two instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious. CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying that the instrumentation continues to operate properly between each CHANNEL CALIBRATION.

Agreement criteria are determined by the unit staff based on a combination of the channel instrument uncertainties, including indication and readability. If the channels are within the match criteria, it is an indication that the channels are OPERABLE. If the channels are normally off scale during times when Surveillance is required, the CHANNEL CHECK will verify only that they are off scale in the same direction. Offscale low current loop channels are verified to be reading at the bottom of the range and not failed downscale.

The frequency of 31 days is based upon operating experience which demonstrates that channel failure is rare.

CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. The test verifies that the channel responds to measured parameters with the necessary range and accuracy.

The frequency of 18 months is based upon operating experience and consistency with the typical industry refueling cycle.

SR 4.3.3.5.2

SR 4.3.3.5.2 verifies each required Remote Shutdown Instrumentation and Controls control circuit and transfer switch performs the intended function. This verification is performed from the hot shutdown panel and at other locations for certain control transfer switches, as appropriate. This will ensure that if the control room becomes inaccessible, the unit can be placed and maintained in MODE 3 from the hot shutdown panel and the local control stations. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. (However, this Surveillance is not required to be

INSTRUMENTATION

BASES

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION (Continued)

performed only during a unit outage.) Operating experience demonstrates that remote shutdown control channels usually pass the Surveillance test when performed at the 18 month frequency.

NOTE: A surveillance of the reactor trip breaker OPERABILITY is not required as part of the SURVEILLANCE REQUIREMENT for 4.3.3.5.2 since a TRIP ACTUATING DEVICE OPERATIONAL TEST of the reactor trip breakers is performed as part of the SURVEILLANCE REQUIREMENT for TS 3/4.3.1 (See Table 4.3-1 Item 21 and Note 10).

REFERENCES

1. 10 CFR 50, Appendix A, GDC 19.

3/4.3.3.6 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. The normal plant instrument channels specified are suitable for use as post-accident instruments. This capability is consistent with the recommendations of Regulatory Guide 1.97, Revision 3, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," May 1983, and NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980.

3/4.3.3.7 CHLORINE DETECTION SYSTEMS

The OPERABILITY of the Chlorine Detection System ensures that sufficient capability is available to promptly detect and initiate protective action in the event of an accidental chlorine release. This capability is required to protect control room personnel and is consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release," February 1975.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 94 TO FACILITY OPERATING LICENSE NO. DPR-80
AND AMENDMENT NO. 93 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 May 7, 1993, 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 3/4.3.3.5, "Remote Shutdown Instrumentation," to include additional control functions required to establish and maintain Mode 3 (Hot Standby) from outside of the control room in accordance with 10 CFR Part 50, Appendix A, General Design Criteria (GDC) 19 and the Westinghouse Standard Technical Specifications (STS) located in NUREG-1431. The proposed changes are as follows:

1. TS 3.3.3.5 is revised as follows:
 - a. The TS title is changed from "Remote Shutdown Instrumentation" to "Remote Shutdown Instrumentation and Controls."
 - b. The list of remote shutdown instrumentation in TS Table 3.3-9 is revised to include the following remote shutdown control functions: auxiliary feedwater (AFW) flow control, charging pump control, component cooling water (CCW) pump control, auxiliary saltwater (ASW) pump control, and emergency diesel generator (EDG) control.
 - c. The list of remote shutdown instrumentation in TS Table 3.3-9 is revised to include reactor coolant system (RCS) Loop 1 hot and cold leg temperature indicators.
 - d. Emergency borate flow indication is deleted from the list of instrumentation in TS Table 3.3-9.
 - e. Editorial changes are made throughout the TS to reflect the inclusion of the control functions required for remote shutdown.

- f. Surveillance Requirement 4.3.3.5 is renumbered to 4.3.3.5.1 and a new Surveillance Requirement 4.3.3.5.2 is added to verify that each required control circuit and transfer switch is capable of performing the intended function at least once every 18 months.
2. Action Statement (a) is revised to increase the Allowed Outage Time (AOT) from 7 days to 30 days.
3. Action Statement (c) is added to clarify that separate condition entry is allowed for each function listed in Table 3.3-9.
4. The associated TS Basis is expanded to be consistent with NUREG-1431.

2.0 BACKGROUND

The remote shutdown instrumentation and controls provide the control room operator with sufficient instrumentation and controls to place and maintain the unit in a safe shutdown condition from outside the control room. This capability is necessary in the event that the control room must be evacuated.

For TS 3.3.3.5, a safe shutdown condition is defined as Mode 3. With the unit in Mode 3, the auxiliary feedwater (AFW) system and the steam generator (SG) safety valves can be used to remove core decay heat and meet all safety requirements. The long term supply of water for the AFW system allows extended operation in Mode 3 from outside the control room until such a time that either control is transferred back to the control room or a cooldown is initiated.

In addition to being available in the DCPD control room, the primary instrumentation and control functions required to establish and maintain Mode 3 are located at the hot shutdown panel (HSP), with the exception of the:

- (1) Reactor trip indication, which is located at the reactor trip switchgear
- (2) Emergency diesel generator (EDG) local start control, which is located at each EDG control panel
- (3) Reactor coolant system (RCS) Loop 1 hot and cold leg indicators, which are located at the dedicated shutdown panel

The criteria governing the design and specific system requirements for remote shutdown instrumentation and controls are contained in 10 CFR Part 50, Appendix A, General Design Criteria (GDC) 19.

Operability of the remote shutdown instrumentation assures that there is sufficient information available on selected unit parameters to place and maintain the unit in a safe shutdown condition. In accordance with the current Diablo Canyon Power Plant (DCPP) TS 3.3.3.5 Basis, the HSP is designed to maintain the reactor in Mode 3. The specific instrument channels which are

required to be operable per the current DCPD TS 3.3.3.5 (Table 3.3-9) are as follows:

- (1) Reactor Trip Breaker Indication
- (2) Pressurizer Pressure Indication
- (3) Pressurizer Level Indication
- (4) SG Pressure Indication
- (5) SG Wide Range Water Level Indication
- (6) Condensate Storage Tank Water Level Indication
- (7) AFW Flow Indication
- (8) Emergency Borate Flow Indication
- (9) Charging Flow Indication

All of the above instrumentation, except for the reactor trip breaker indication, is located at the HSP at DCPD. Reactor trip breaker indication is displayed at the reactor trip breaker.

In addition to the indicators located at the HSP, the HSP provides for remote control of the following functions and not all of these functions are required to establish and maintain Mode 3. Currently, these functions are not included in TS 3.3.3.5.

- (1) AFW Flow Control (pumps and valves)
- (2) Charging Flow Control (pumps and valves)
- (3) Emergency Borate Flow Control (pumps and valves)
- (4) CCW Pumps
- (5) ASW Pumps
- (6) Containment Fan Coolers
- (7) Pressurizer Power Operated Relief Valves (PORVs) (close only)
- (8) 10% Atmospheric Steam Dump Valves (ADV) (open and close)
- (9) Pressurizer Heaters
- (10) Letdown Orifice Isolation Valves

In summary, the current TS 3.3.3.5 controls the instrumentation located at the HSP that is required to monitor operation in Mode 3 from a location outside the control room.

3.0 EVALUATION

The licensee is proposing the addition of the following remote shutdown instrumentation and control functions to the list of instrumentation presented in TS Table 3.3-9:

- (1) AFW Flow Control
- (2) Charging Pump Control
- (3) CCW Pump Control
- (4) ASW Pump Control
- (5) EDG Local Start Control
- (6) RCS Loop 1 Hot and Cold Leg Temperature Indication

(UFSAR) includes the above control functions as part of the remote safe shutdown systems. As such, the addition of the above remote shutdown control functions and the associated surveillance requirements is consistent with the description of the remote safe shutdown system presented in the DCPD UFSAR.

Although emergency borate flow indication is currently included in the TS, the licensee has determined that emergency borate flow is not required to maintain and establish Mode 3. As such, the licensee proposes to delete emergency borate flow indication from TS Table 3.3-9 and TS Table 4.3-6. The deletion of the emergency borate flow control is consistent with TS 3.3.4 of the STS located in NUREG-1431.

The TS remote shutdown instrumentation and control functions provide the ability to establish and maintain operation in Mode 3 from outside the control room in the event that the control room must be evacuated. The equipment added to the TS is currently included in the DCPD surveillance test program. The surveillance test program for this equipment includes the starting of the equipment from the HSP. Inclusion of this equipment in the TS provides additional restrictions to assure that it is available to establish and maintain the unit in Mode 3.

In order to establish and maintain Mode 3 from outside the control room, the reactor must be tripped, decay heat must be removed, and RCS temperature, pressure, and inventory must be controlled. Additionally, systems required to support equipment performing these functions must be operable. The following provides discussion of the minimum functions required to establish and maintain Mode 3 from outside the control room until a cooldown is initiated or control is transferred back to the control room.

- Reactor Trip

Core subcriticality is achieved by tripping the reactor. The reactor can be tripped from outside the control room by opening the reactor trip breakers at the reactor trip switchgear. Reactor trip indication is provided from outside the control room by the reactor trip breaker position. The insertion of the control rods during a reactor trip provides the negative reactivity needed to establish and maintain Mode 3 until such time that either control is transferred back to the control room or a cooldown is initiated. Reactor trip breaker position indication is currently included in TS 3.3.3.5.

- Decay Heat Removal via the AFW System and the SG Safety Valves

Heat removal from the RCS is accomplished by transferring heat to the secondary plant through the SGs. The decay heat is then removed from the SGs via boiling and steam release through the SG code safety valves.

Indication of the secondary side heat sink is provided by SG pressure indication (one per SG), SG wide range water level indication (one per SG), and AFW flow indication (one per SG)

located at the HSP. The HSP also provides indication of the condensate storage tank level to allow monitoring of water available to supply the suction of the AFW pumps for extended operation in Mode 3. These functions are currently located in TS 3.3.3.5.

In order to assure that SG level remains within its expected range, the AFW pumps and level control valves must be operable from the HSP. Upon initiation of a reactor trip, SG level will decrease due to shrink and the trip of the main feedwater pumps. The AFW pumps will supply feedwater to the SGs to compensate for the loss of main feedwater. After the level in the SGs recovers, the feedwater supply to the SGs must be controlled to prevent the SG from overflowing and overcooling the RCS, which could result in a safety injection. The feedwater flow can be controlled from the HSP using the AFW level control valves or by starting and stopping AFW pumps. The addition of AFW pump and level control valve controls to TS 3.3.3.5 is consistent with TS 3.3.4 of the STS located in NUREG-1431.

In order to monitor the rate of heat removal from the core during all plant conditions, including a loss of offsite power, indications of RCS hot and cold leg temperatures are required. Loop 1 RCS hot and cold leg temperature indication is available at the dedicated shutdown panel. The addition of these indicators to TS 3.3.3.5 is consistent with the STS located in NUREG-1431.

- RCS Pressure Control

Indication of RCS pressure is provided by the pressurizer pressure indication located at the HSP. This indication is currently required by TS 3.3.3.5. RCS overpressure protection is provided by the pressurizer code safety valves. Although pressurizer heaters would assist in controlling RCS pressure, they are not required to maintain pressure control of the RCS.

- RCS Inventory Control via Charging Flow

Indication of RCS inventory is provided by the pressurizer level indication located at the HSP. Level control of the RCS is necessary to prevent the loss of level in the pressurizer and the subsequent loss of pressure control of the RCS, to prevent the RCS from achieving a solid water condition where pressure would no longer be readily controllable, and to prevent the core from being uncovered due to low level. This indication is currently included in TS 3.3.3.5.

The HSP contains controls to start and stop each centrifugal charging pump (CCP). The charging pumps not only supply water to the RCS for pressurizer level control, but also provide water to the reactor coolant pump (RCP) seals. By starting and stopping the CCPs, pressurizer level can be controlled. During any time

when the CCPs are shut off, RCP seal degradation would be prevented by reactor coolant flowing past the thermal barrier heat exchanger, which is cooled by CCW flow, and out of the RCP seals. This would also remove water injected into the RCS that may have caused an increase in pressurizer level. The addition of charging pump controls to TS 3.3.3.5 is consistent with TS 3.3.4 of the STS located in NUREG-1431.

- Safety Support Systems

In order for the above equipment to perform its intended safety function, it must have power and be cooled. Heat removal can be accomplished via the CCW and ASW systems. The CCW system removes heat from the lube oil and seals of the engineered safety feature (ESF) pumps. The ASW system removes heat from the CCW system and rejects it to the ultimate heat sink. Both the CCW pumps and the ASW pumps can be started from the HSP. Inclusion of the CCW and ASW pumps is an additional restriction not in the STS. Although the CCW and ASW pumps are normally in operation and are designed to auto start, inclusion of the pump controls at the HSP assures that the pumps are available in the event that they don't start automatically, and emphasizes the importance of the function of the pumps.

To assure that power is available to ESF equipment, EDGs are available to supply power in the event that offsite power is unavailable. Although the EDG should auto-start during a loss of offsite power, the addition of the starting control function to TS 3.3.3.5 provides additional assurance that power will be available to the ESF equipment required to establish and maintain Mode 3. Inclusion of the EDGs is an additional restriction not included in the STS, but provides additional assurance that the ESF equipment can be powered.

Although the HSP also contains controls to manipulate the emergency borate flow, 10% ADVs, the containment fan coolers, pressurizer heaters, PORVs, and letdown orifice isolation valves, the remote control of these functions is not added to TS 3.3.3.5. DCCP UFSAR Section 7.4 identifies those accidents which would result in the most severe consequences during a remote shutdown. Based on the licensee's review of the accidents identified in UFSAR Section 7.4, the remote control of the emergency borate flow, 10% ADVs, containment fan coolers, pressurizer heaters, PORVs, and letdown orifice isolation valves is an operational convenience and not required to mitigate the consequences of an accident. Consequently, these functions are not required to be included in TS 3.3.3.5.

The above evaluation demonstrates that with the equipment previously discussed, the reactor can be maintained in a safe condition. Additional equipment is provided at the HSP, but is not required to be available to establish and maintain Mode 3.

Increased Allowed Outage Time

Control of several components located at the HSP that are required for safe shutdown can be accomplished at other locations (e.g., at the 4 kV switchgear, a motor control center, a local control panel, or manually at a valve). Alternate instrumentation for monitoring selected parameters required for safe shutdown is included at the dedicated shutdown panel. These parameters include: (1) RCS wide range pressure; (2) cold calibrated pressurizer level; and (3) cold calibrated narrow range SG level. Therefore, other means exist to monitor and control reactor conditions besides the indications and control functions located at the HSP.

Based on the above, an allowed outage time of 30 days for remote shutdown monitoring and control functions is acceptable. In addition, this allowed outage time is consistent with NUREG-1431.

Separate Entry into Action Statement and Enhanced Bases

The licensee's proposed Action Statement (c) provides clarification allowing separate entry in Action Statement (a) for each instrument and control function listed in Table 3.3-9.

A principal objective of the enhanced Bases is to provide a comprehensive explanation of the safety significance of TS with respect to the accident analyses performed for the facility. The enhanced Bases also provide a complete background for the specification, contain a brief description of the system, and establish a baseline for future specification changes. The emphasis of the enhanced Bases is to explain why the requirements of the TS are important to safety, and how the TS assures that the initial conditions assumed during accident conditions exist.

The addition of both the Action Statement (c) and the enhanced Bases are administrative in nature and, therefore, are acceptable.

Based on the above, the staff finds the proposed changes acceptable.

4.0 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.

5.0 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 (58 FR 39057). 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.

6.0 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.

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