



**Pacific Gas and
Electric Company**

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PG&E Letter DCL-04-037

U.S. Nuclear Regulatory Commission
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Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
Diablo Canyon Units 1 and 2
Exigent License Amendment Request 04-02
Revision to Technical Specification 3.3.5, "Loss of Power (LOP) Diesel Generator
(DG) Start Instrumentation"

In accordance with 10 CFR 50.90, enclosed is an application for amendment to Facility Operating License Nos. DPR-80 and DPR-82 for Units 1 and 2 of the Diablo Canyon Power Plant (DCPP), respectively. The enclosed license amendment request (LAR) proposes to revise Technical Specification (TS) 3.3.5, "Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation."

The proposed change increases the frequency of Surveillance Requirement (SR) 3.3.5.2 from 18 months to 24 months.

This LAR is submitted on an exigent basis to allow a delay in the performance of SR 3.3.5.2 that is coming due on DCPP Unit 1, which is currently in its 12th refueling outage (1R12). Performance of SR 3.3.5.2 at this time to avoid exceeding its required frequency, will occur when the desired redundancy of safety-related equipment is not available. To better manage outage defense-in-depth, it will be better to perform SR 3.3.5.2 later in 1R12, as originally scheduled, when the desired redundancy of safety-related equipment (defense-in-depth) is available.

Enclosure 1 contains a description of the proposed change, the supporting technical analyses, and the no significant hazards consideration determination. Enclosures 2 and 3 contain marked-up and retyped (clean) TS pages, respectively. TS Bases changes will be implemented pursuant to TS 5.5.14, "Technical Specifications Bases Control Program," at the time this amendment is implemented.

PG&E has determined that this LAR does not involve a significant hazards consideration as determined per 10 CFR 50.92. Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of this amendment.

AD01



The change in this LAR is not required to address an immediate safety concern. However, approval is requested on an exigent basis to allow performance of SR 3.3.5.2 later in 1R12, as originally planned. Approval is requested as soon as practical, but no later than April 13, 2004, to support planned maintenance on vital inverter 1-2. PG&E requests the license amendment be made effective upon NRC issuance, to be implemented within 10 days from the date of issuance.

If you have any questions or require additional information, please contact Stan Ketelsen at 805-545-4720.

Sincerely,

David H. Oatley

Vice President and General Manager - Diablo Canyon

jer1/3664

Enclosures

cc: Edgar Bailey, DHS
Bruce S. Mallett
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cc/enc: Girija S. Shukla

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

_____)	Docket No. 50-275
In the Matter of)	Facility Operating License
PACIFIC GAS AND ELECTRIC COMPANY)	No. DPR-80
)	
Diablo Canyon Power Plant)	Docket No. 50-323
Unit 1 and 2)	Facility Operating License
_____)	No. DPR-82

AFFIDAVIT

David H. Oatley, of lawful age, first being duly sworn upon oath says that he is Vice President and General Manager - Diablo Canyon of Pacific Gas and Electric Company; that he has executed license amendment request 04-02 on behalf of said company with full power and authority to do so; that he is familiar with the content thereof; and that the facts stated therein are true and correct to the best of his knowledge, information, and belief.



David H. Oatley
Vice President and General Manager - Diablo Canyon

Subscribed and sworn to before me this 2nd day of April 2004.



Notary Public
County of San Luis Obispo
State of California



EVALUATION

1.0 DESCRIPTION

This letter is a request to amend Operating Licenses DPR-80 and DPR-82 for Units 1 and 2 of the Diablo Canyon Power Plant (DCPP), respectively.

The proposed change would revise the frequency of the trip actuation device operational test (TADOT) required by Technical Specification (TS) Surveillance Requirement (SR) 3.3.5.2 from 18 months to 24 months. This change is similar to TADOT frequency extensions approved for other systems by NRC Letter dated April 14, 1997, which issued DCPP License Amendments 118 (Unit 1) and 116 (Unit 2) (LAs 118/116).

2.0 PROPOSED CHANGE

The proposed change would revise TS 3.3.5, "Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation," to increase the frequency of SR 3.3.5.2 from 18 months to 24 months.

Enclosures 2 and 3 contain marked-up and retyped (clean) TS pages, respectively. TS Bases changes will be implemented pursuant to TS 5.5.14, "Technical Specifications Bases Control Program," at the time this amendment is implemented.

The SR 3.3.5.2 Bases will be updated to state:

"SR 3.3.5.2 is the performance of a TADOT. This test is performed every 24 months. The test checks trip devices that provide actuation signals directly, bypassing the analog process control equipment. The relay setpoints and time delays that support the TADOT are verified and adjusted as necessary in accordance with SR 3.3.5.3 - CHANNEL CALIBRATION every 18 months. The 24 month TADOT frequency is based on the known reliability of the relays and controls and the multichannel redundancy available, and has been shown to be acceptable through operating experience."

3.0 BACKGROUND

SR 3.3.5.2 requires performing a TADOT on an 18-month frequency on the LOP DG start instrumentation. This involves testing the sequencing of the first and second-level undervoltage (UV) relays that start the three DGs that supply the three 4-kV vital busses (F, G, and H). The TADOT does not verify the relay setpoints. Other SRs performed in Mode 1 are used to verify relay setpoints and characteristics that are subject to time-dependent changes.

System Description

The DGs provide a source of emergency power when offsite power is either unavailable, or is degraded below a point that would allow safe unit operation. UV protection will generate an LOP start if a loss of voltage, or degraded voltage condition, occurs on the 4.16-kV vital bus. There are three LOP start signals for each 4-kV vital bus.

First level UV relays are provided on each 4-kV Class 1E vital bus for detecting sustained degraded voltage condition, or a loss of bus voltage. The DG start relay will generate an LOP signal if the voltage is below 61.5 percent for a short time. The DG start relays (one per bus) have an inverse time characteristic and will generate an LOP signal with a ≤ 0.8 second time delay at ≥ 0 volts and at ≤ 10 seconds for ≥ 2583 volts. In addition, the circuit breakers for all loads, except the 4160-480 volt load center transformers, are opened automatically by load shedding relays for first-level undervoltage. Each of the vital 4160 volt buses has a separate pair of these relays. The relays have a two-out-of-two logic arrangement for each bus to prevent inadvertent tripping of operating loads during a loss of voltage, either from a single failure in the potential circuits, or from human error. One relay trips instantaneously at ≥ 2870 volts. The second of the two relays has an inverse time characteristic and delay of ≤ 4 seconds at no voltage, and a ≤ 25 -second delay with ≥ 2583 volts to prevent loss of operating loads during transient voltage dips, and to permit the offsite power sources to pick up the load.

Second level UV relays are provided on each 4160 volt vital bus for detecting a degraded voltage condition, where the voltage of the vital 4-kV buses remains at approximately 3785 volts or below, but above the setpoints of the first-level undervoltage relays. Each vital 4160 volt bus has two second-level undervoltage relays operating with two-out-of-two logic. Each vital 4160 volt bus also has two second-level undervoltage timers. One timer provides the DG starts and the other initiates load shedding.

The following second-level undervoltage actions occur automatically:

- (1) After a ≤ 10 -second time delay, the respective diesel generators will start.
- (2) After a ≤ 20 -second time delay, if the undervoltage condition persists, the circuit breakers for all loads to the respective vital 4-kV buses, except the 4160-480 volt load center transformer, are opened and sequentially loaded on the DG.

SR 3.3.5.2

This TADOT surveillance is satisfied for Bus F by performing surveillance test procedure (STP) M-13F, "4-kV Bus F Non-SI (safety injection) Auto-Transfer Test," and M-13G and M-13H for busses G and H, respectively. These STPs are performed only in Modes 5, 6 or defueled. Each STP involves initiating a vital bus first-level and second-level UV condition and then verifying that:

1. The first-level/second-level UV relay is actuated.
2. The associated DG is auto-started.
3. Load shed on the associated bus is initiated.
4. The DG output breaker is closed onto the bus when the DG reaches the required voltage.
5. Auto-transfer load sequence is initiated with the required loads sequentially loaded back onto the vital bus.

The SR verifies in part that the UV relays operate (change state) when a UV condition occurs on a 4-kV vital bus. Other SRs are used to verify relay setpoints and characteristics that are subject to time-dependent changes.

SR 3.3.5.2 has a frequency of 18 months. With the interval of 1.25 times the frequency allowed by SR 3.0.2, the maximum interval for this surveillance is 687 days. The due date for SR 3.3.5.2 for the Unit 1 vital busses, including the allowed 1.25 extension, is as follows:

Bus F - April 6, 2004
Bus G - April 8, 2004
Bus H - April 5, 2004

SR 3.3.5.2 is required to be current only when one or more DGs are required to be operable. With Unit 1 fuel currently offloaded to the spent fuel pool, a DG is required only during movement of irradiated fuel assemblies in accordance with TS 3.8.2, "AC Sources - Shutdown."

If TS 3.8.2 is entered and SR 3.3.5.2 is not current, Unit 1 will be required to enter TS 3.3.5 Condition A. Its Required Action A.1 is to enter applicable condition(s) and required action(s) for the associated DG made inoperable by LOP DG instrumentation immediately. Since Unit 1 is shut down, the applicable TS condition is LCO 3.8.2, which requires at least one DG to be operable. With no DG operable, the required actions are to immediately:

- B.1 Suspend core alterations, and
- B.2 Suspend movement of irradiated fuel assemblies, and

- B.3 Suspend operations involving positive reactivity additions that could result in loss of required shutdown margin or boron concentration, and
- B.4 Initiate action to restore required DG to operable status.

With Unit 1 in its shutdown condition, compliance with LCO 3.8.2 actions B.1, B.2, and B.3 is not an issue as it can be controlled. However, compliance with B.4 to restore the DG to operable status would mean performing the applicable M-13F, M-13G and M-13H STP(s) to meet SR 3.3.5.2. From an outage defense-in-depth standpoint it is better to perform this SR at a time when desired redundancy of safety-related equipment is available. This will not occur until later in 1R12, past the current due dates for SR 3.3.5.2.

4.0. JUSTIFICATION AND BASIS FOR THE EXIGENT CIRCUMSTANCES

This license amendment request is submitted on an exigent basis to allow a delay in the performance of SR 3.3.5.2, which is coming due on Unit 1, which is currently in its 12th refueling outage (1R12). Performance of SR 3.3.5.2 at this time to avoid exceeding its required frequency will occur when the desired redundancy of safety-related equipment is not available. From an outage defense-in-depth standpoint, it is better to perform SR 3.3.5.2 later in 1R12 as originally planned, when the desired redundancy of safety-related equipment is available.

For Unit 1 in its present condition (core offloaded), SR 3.3.5.2 does not have to be current as long there is no movement of irradiated fuel assemblies. However, to allow scheduled fuel reconstitution activities to proceed as planned, a performance of the TADOT for SR 3.3.5.2 for Bus H will be conducted during the weekend of April 3-4, 2004. This will allow making one DG operable so that fuel activities can proceed. To provide a plant configuration with the desired redundancy of safety-related equipment (defense-in-depth) without further disruption of the outage plan, it is advisable to retain the existing schedule for performance of the SR 3.3.5.2 TADOTs for Busses F and G later in the outage. This will require extending the frequency of SR 3.3.5.2 as requested in this LAR.

5.0 TECHNICAL ANALYSIS

The TADOT required SR 3.3.5.2 is similar to other TADOTs that have been previously revised to change the surveillance frequency from 18 months to 24 months. PG&E Letter DCL-96-052, "License Amendment Request 96-04, Revision of Technical Specifications to Support Extended Fuel Cycles to 24 Months," dated February 14, 1996, and approved by NRC Letter dated April 14, 1997, which issued License Amendments 118 (Unit 1) and 116 (Unit 2) (LAs 118/116) revised the surveillance frequency for the following

TADOTs from 18 months to 24 months (the numbering reflects "Current Technical Specifications (CTS)" in use at the time prior to implementation of "Improved TS (ITS)":

TS 3/4.3.1, "Reactor Trip System Instrumentation," TS 4.3.1.1, Table 4.3-1:

Functional Unit 1, Manual Reactor Trip
Functional Unit 18, Safety Injection Input from ESF
Functional Unit 19, Reactor Coolant Pump Breaker Position Trip
Functional Unit 24, Reactor Trip Bypass Breaker

TS 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation," TS 4.3.2.1, Table 4.3-2:

Functional Unit 1.a, Safety Injection, Manual Initiation
Functional Unit 3.a.1), Containment Isolation, Phase "A" Isolation,
Manual
Functional Unit 3.b.1), Containment Isolation, Phase "B" Isolation,
Manual
Functional Unit 4.a, Steam Line Isolation, Manual
Functional Unit 8.c, ESFAS Interlocks, Reactor Trip, P-4

The NRC Safety Evaluation issued in support of LAs 118/116 states for these changes:

Devices of functional units of item 3.5.1.1 through item 3.5.1.9 are either manual switches, auxiliary contacts of breakers, shunt-trip solenoids, relays and relay contacts, or solid state logic states. These devices are tested only during a refueling outage. Testing includes operating of the device and verifying the operability of related alarms, interlocks and/or trips. The licensee stated that these devices do not experience time-dependent drift, and that a review of surveillance, maintenance and operational history of these devices indicated that there were no time-dependent failures or problems in meeting the TS test requirements. In addition, there were no recurring failures observed in historical data. The licensee concluded that the effect on safety of extending the surveillance intervals is small. The staff finds the licensee's conclusion for the proposed change acceptable.

In PG&E Letter DCL-00 056, "Supplement to License Amendment Request 00-01, Administrative Revisions to the Improved Technical Specifications," dated April 11, 2000, PG&E corrected an inadvertent change that had been made to both SR 3.3.5.2 (TADOT) and 3.3.5.3 (channel calibration) to change the frequencies from 18 months to 24 months as part of the ITS conversion. PG&E acknowledged that it had not provided justification for either of these

In retrospect, PG&E could have retained the 24-month surveillance interval for the SR 3.3.5.2 TADOT by providing a justification similar to the other TADOT revisions that had been made for 24-month fuel cycles.

Justification for SR 3.3.5.2 Frequency Revision to 24 Months

The SR 3.3.5.2 TADOT is performed on a refueling frequency. The frequency of surveillance is based on the potential for an unplanned transient if the surveillance were performed with the reactor at power and the need to perform this test under conditions that apply during a plant outage.

Operating History

A review of DCPD operating history was completed. No instances were found where the relays required to be tested in accordance with SR 3.3.5.2 failed to actuate when required to do so.

Surveillance History

A review of the applicable surveillance history was completed. No instances were found where the relays required to be tested in accordance with SR 3.3.5.2 failed to meet their SR 3.3.5.2 surveillance test.

Maintenance History

A review of the maintenance history for the relays required to be tested in accordance with SR 3.3.5.2 was completed. Other than periodic preventive maintenance and inspection, no maintenance-related issues were identified.

Industry Experience

A review of industry experience for the past ten years was completed. No events were identified where relays of the type required to be tested in accordance with SR 3.3.5.2 failed to perform as required.

Summary

The surveillance, maintenance, and operating history of the first and second-level UV relays required to be tested in accordance with SR 3.3.5.2 support the conclusion that the effect on safety of extending the surveillance interval is small. No time-dependent failure history is evident for these relays. PG&E believes there is reasonable assurance that the health and safety of the public will not be adversely affected by the proposed TS change.

6.0 REGULATORY ANALYSIS

6.1 No Significant Hazards Consideration

PG&E has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

Extending the frequency of Surveillance Requirement (SR) 3.3.5.2 from 18 months to 24 months does not involve an accident initiator. The SR only verifies that undervoltage (UV) relays operate (change state) when a UV condition occurs on a 4-kV vital bus. Other SRs performed in Mode 1 are used to verify relay setpoints and characteristics that are subject to time-dependent changes. Therefore, the proposed change will not increase the probability of any accident previously evaluated. Also, the proposed change has no effect on the radiological consequences of any accident previously evaluated because it will not delay or prevent any plant equipment from performing its design function.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different accident from any accident previously evaluated?

Response: No.

The proposed change does not involve or create an accident initiator. It only extends the surveillance interval for verifying operability of UV relay sequencing. Other SRs are used to verify relay setpoints and characteristics that are subject to time-dependent changes.

Therefore, the proposed change does not create the possibility of a new or different accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed change only involves extending an SR frequency that has no time-dependent characteristics. The SR itself is not changed. Other SRs are used to verify relay setpoints and characteristics that are subject to time-dependent changes. Extension of this SR frequency has no effect on any margin of safety.

Based on the above evaluation, PG&E concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

6.2 Applicable Regulatory Requirements/Criteria

10 CFR 50, Appendix A, "General Design Criteria for Nuclear Power Plants," states in part:

Criterion 17--Electric power systems. An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

Provisions shall be included to minimize the probability of losing electric power from any of the remaining supplies as a result of, or coincident with, the loss of power generated by the nuclear power unit, the loss of power from the transmission network, or the loss of power from the onsite electric power supplies.

Criterion 18--Inspection and testing of electric power systems. Electric power systems important to safety shall be designed to permit appropriate periodic inspection and testing of important areas and features, such as wiring, insulation, connections, and switchboards, to assess the continuity of the systems and the condition of their components. The systems shall be designed with a capability to test periodically (1) the operability and

functional performance of the components of the systems, such as onsite power sources, relays, switches, and buses, and (2) the operability of the systems as a whole and, under conditions as close to design as practical, the full operation sequence that brings the systems into operation, including operation of applicable portions of the protection system, and the transfer of power among the nuclear power unit, the offsite power system, and the onsite power system.

In conclusion, based on the considerations discussed above, (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.

7.0 ENVIRONMENTAL CONSIDERATION

PG&E has evaluated the proposed amendment and has determined that the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types, or significant increase in the amounts, of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

8.0 REFERENCES

1. PG&E Letter DCL-96-052, "License Amendment Request 96-04, Revision of Technical Specifications to Support Extended Fuel Cycles to 24 Months," dated February 14, 1996.
2. NRC Letter dated April 14, 1997, License Amendments 118 (Unit 1) and 116 (Unit 2).
3. PG&E Letter DCL-00 056, "Supplement to License Amendment Request 00-01, Administrative Revisions to the Improved Technical Specifications," dated April 11, 2000.

Proposed Technical Specification Page (Mark-up)

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3.3 INSTRUMENTATION

3.3.5 Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation

LCO 3.3.5 One channel per bus of loss of voltage DG start Function; and two channels per bus of degraded voltage Function shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4,
When associated DG is required to be OPERABLE by LCO 3.8.2, "AC Sources-Shutdown."

ACTIONS

-----NOTE-----

Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more channels per bus inoperable.	A.1 -----NOTE----- One channel may be bypassed for up to 2 hours for surveillance testing. Enter applicable Condition(s) and Required Action(s) for the associated DG made inoperable by LOP DG start instrumentation.	Immediately 24

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.5.1 Not used	
SR 3.3.5.2 Perform TADOT.	18 months
SR 3.3.5.3 Perform CHANNEL CALIBRATION with Allowable Value setpoints as follows: a. Loss of voltage Diesel Start Allowable Value ≥ 0 V with a time delay of ≤ 0.8 seconds and ≥ 2583 V with a ≤ 10 second time delay. Loss of voltage initiation of load shed with one relay Allowable Value ≥ 0 V with a time delay of ≤ 4 seconds and ≥ 2583 V with a time delay ≤ 25 seconds and with one relay Allowable Value ≥ 2870 V, instantaneous.	18 months 142 142 (continued)

Proposed Technical Specification Changes (Retyped)

