ENCLOSURE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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

License Amendment Request No. 94-08

Pursuant to 10 CFR 50.90, Pacific Gas and Electric Company hereby applies to amend its Diablo Canyon Power Plant Facility Operating License Nos. DPR-80 and DPR-82 (Licenses).

The proposed changes revise the Technical Specifications (Appendix A of the Licenses) regarding Technical Specifications 3/4.1.3.1, 3/4.3.2, 3/4.3.3.1, 3/4.5.1, 3/4.5.2, 3/4.6.2.1, 3/4.6.4.2, 3/4.7.1.2, 3/4.10.1, and 3/4.11.2.6.

These changes have been reviewed and are considered not to involve a significant hazards consideration as defined in 10 CFR 50.92 or an unreviewed environmental assessment in accordance with 10 CFR 51.22(b). Further, there is reasonable assurance that the health and safety of the public will not be endangered by the proposed changes.

Sincerely,

Greg Rueger

Gregory M. Rueger

ADRIANE D. TOLEFREE
COMM. # 979198
Notary Public — California
SAN FRANCISCO COUNTY
My Comm. Expires DEC 22, 1996

Subscribed and sworn to before me this 20th day of September 1994

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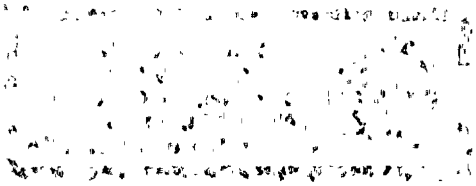

ATTACHMENT A

LINE-ITEM TECHNICAL SPECIFICATIONS IMPROVEMENTS TO REDUCE SURVEILLANCE REQUIREMENTS FOR TESTING DURING POWER OPERATION (GENERIC LETTER 93-05)

A. DESCRIPTION OF AMENDMENT REQUEST

This license amendment request (LAR) proposes to revise the following Technical Specifications (TS):

3/4.1.3.1, "Movable Control Assemblies"
3/4.3.2, "Engineered Safety Features Actuation System"
3/4.3.3.1, "Radiation Monitoring for Plant Operation"
3/4.5.1, "Accumulators"
3/4.5.2, "ECCS Subsystems - T_{avg} Greater Than 350°F"
3/4.6.2.1, "Containment Spray System"
3/4.6.4.2, "Electric Hydrogen Recombiners"
3/4.7.1.2, "Auxiliary Feedwater System"
3/4.10.1, "Shutdown Margin"
3/4.11.2.6, "Gas Storage Tanks"

Specific changes are as follows:

1. TS surveillance requirement 4.1.3.1.2 would be revised to change the frequency for testing the movability of the control rods from at least once per 31 days to at least once per 92 days.

2. TS 3/4.3.2, Table 4.3-2, "Engineered Safety Features Actuation System Instrumentation Surveillance Requirements," Functional Unit 3.c.4), and TS 3/4.3.3.1, Table 4.3-3, "Radiation Monitoring Instrumentation for Plant Operations Surveillance Requirements," would be revised to change the monthly channel functional test to a quarterly channel functional test.

3. The proposed changes to TS 3/4.5.1 are as follows:

   a. TS surveillance requirement 4.5.1.1a.1) would be revised to more clearly state that the accumulator water volume and pressure must be verified to be within their limits.

b. TS surveillance requirement 4.5.1.1b. would be revised to specify that the boron concentration surveillance is not required to be performed if the accumulator makeup source was the refueling water storage tank (RWST).

c. TS surveillance requirement 4.5.1.2 would be relocated to plant procedures.

4. TS surveillance requirement 4.5.2c.2) would be revised to clarify that a separate containment entry to verify the absence of loose debris is not required after each containment entry.

5. TS surveillance requirement 4.6.2.1d. would be revised to change the frequency for a containment spray header flow test from at least once per 5 years to at least once per 10 years.

6. TS surveillance requirement 4.6.4.2a. would be revised to change the verification of the minimum hydrogen recombiner sheath temperature from at least once per 6 months to at least once each refueling interval.

7. TS surveillance requirement 4.7.1.2.1 would be revised to change the surveillance frequency for testing each auxiliary feedwater (AFW) pump from at least once per 31 days to at least once per 92 days on a staggered test basis.

8. TS surveillance requirement 4.10.1.2 would be revised to lengthen the allowed period of time for a rod drop test from 24 hours to 7 days prior to reducing shutdown margin to less than the limits of TS 3.1.1.1.

9. TS surveillance requirement 4.11.2.6 would be revised to change the surveillance frequency from 24 hours to 7 days when radioactive material is being added to the gas decay tanks and to add a requirement to monitor radioactive material concentrations in the gas decay tanks at least once per 24 hours when system degassing operations are in progress.

The proposed changes to the TS are noted in the marked-up copy of the applicable TS (Attachment B).

B. BACKGROUND

Generic Letter (GL) 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation," was issued on September 27, 1993. This GL summarizes the results of a comprehensive evaluation of TS surveillance requirements. The evaluation was performed as part of the NRC's Technical Specification Improvement Program,

and is documented in the draft NUREG-1366, "Improvements to Technical Specification Surveillance Requirements."

As a result of the evaluation, the NRC identified that while the majority of testing at power is important, safety can be improved, equipment degradation decreased, and an unnecessary burden on personnel resources eliminated by reducing the amount of TS testing required at power.

C. JUSTIFICATION

The proposed changes to the TS are consistent with GL 93-05. Implementation of the guidance in GL 93-05 will improve plant safety and minimize tests that could cause plant transients, decrease unnecessary wear and degradation of plant equipment, and improve utilization of available personnel resources.

D. SAFETY EVALUATION

Safety considerations associated with testing at power include:

- Unavailability of safety equipment due to testing,
- Initiation of significant transients due to testing, and
- Actuation of engineered safety features (ESF) that unnecessarily cycle safety equipment.

The following factors were considered in the evaluation of equipment testing performed at power:

- Importance to safety of that system or component,
- The failure rate of that system or component, and
- The effectiveness of the test in discovering the failure.

A detailed evaluation of the risks associated with testing versus the importance of the testing for each of the proposed TS changes is discussed below.

1. TS 4.1.3.1.2

Control rod movement testing as required by TS 4.1.3.1.2 verifies that the control rods are capable of moving and are not stuck in position. This surveillance verifies that the control rods can be moved for the following:

- Controlling the amount of reactivity present in the core.

- Inserting control rods into the core quickly to bring the core to a subcritical condition.

The capability to insert control rods into the core has a higher safety significance than the capability to move and control reactivity because the capability to insert into the core is used to shut down the reactor on a reactor trip signal. The cause of an immovable control rod could be an electrical problem or a mechanical problem.

Electrical problems with the control rod drive circuitry could result in an immovable control rod. The rod would therefore not be able to move to control reactivity. However, the control rod system is designed so that on a loss of electrical power to the system, the control rods will fall into the core due to gravity. Therefore, electrical problems generally do not prevent the control rods from being inserted into the core when the reactor trip breakers are opened.

Mechanical problems could also result in an immovable control rod, and, additionally, could prevent the control rod from fully inserting into the core when the reactor trip breakers are opened. However, mechanical problems are much less common than electrical problems.

Industry data in Table 4.1 of NUREG-1366 indicate that most mechanically stuck rods are discovered during control rod drop timing tests or rod withdrawal during plant startup, rather than during TS 4.1.3.1.2 control rod movement tests.

The TS 4.1.3.1.2 control rod movement surveillance test increases the risk of a reactor trip or dropped rod. For example, NUREG-1366 indicates that three reactor trips have occurred during control rod movement testing at other nuclear facilities between 1986 and 1988.

It should be noted that many accident analyses assume that the single rod of highest worth will not insert into the core during a reactor trip. Industry experience indicates that in only one instance did more than one rod fail to fully insert, and in this event, both of the rods were partially inserted.

Based on the low frequency of problems, the low safety significance of electrical problems, and the increased risk of reactor trips combined with the low frequency with which the test has identified problems, relaxation of the surveillance frequency from at least once per 31 days to at least once per 92 days will improve plant reliability and safety and avoid unnecessary plant shutdowns.

2. TS 3/4.3.2, Table 4.3-2, Functional Unit 3.c.4)
TS 3/4.3.3.1, Table 4.3-3

Radiation monitors are designed to measure radiation levels and, in some cases, cause system realignments or isolation to minimize the exposure of plant personnel and the public to radioactive material. Radiation monitors do not directly cause any reactor trips at Diablo Canyon Power Plant (DCPP).

Industry experience indicates that radiation monitoring testing has resulted in numerous isolations of control rooms, fuel handling buildings, auxiliary buildings, and process lines. These unintentional actuations needlessly cycle and degrade plant equipment.

Several radiation monitors at DCPP were recently replaced with new monitors in 1992 and 1993. These were enhancements to increase the overall reliability of the radiation monitoring system. Additionally, the DCPP radiation monitors are self-checking, and failures can be identified by channel checks or failure alarms.

Based on the reliability of the radiation monitors and the ability to detect failures of the monitors through alternate means, the functional testing frequency can be reduced from monthly to quarterly to decrease equipment degradation and increase equipment availability without decreasing equipment reliability.

3. TS 3/4.5.1

The change to surveillance requirement 4.5.1.1a.1) is an administrative change only that does not affect the current operating methodology at DCPP. This change enhances the TS by improving clarity. The additional changes to TS 4.5.1 are discussed below.

The accumulators are designed to inject borated water into the reactor coolant system (RCS) during a loss of coolant accident (LOCA). The accumulators are passive devices that require no equipment actuations in performing their safety function. The accumulator boron concentration is required to be between 2200 and 2500 ppm boron. The normal fill and makeup source for the accumulator is the RWST.

As required by TS, the RWST contains borated water with a boron concentration between 2300 and 2500 ppm. Due to the boron concentration limits of the RWST, the accumulator cannot be diluted by adding water from the RWST. Since the accumulator cannot be diluted by adding water from the RWST, it is not necessary to verify the appropriate

boron concentration of the accumulator when the RWST is used as the source of makeup.

The NRC Staff and industry efforts to develop new standard TS recognized that accumulator instrumentation operability is not directly related to the capability of the accumulators to perform their safety function. Therefore, surveillance requirements for this instrumentation have been relocated from the standard TS, and this LAR proposes the same relocation for the DCPP TS. The only surveillance that will be retained is the surveillance to confirm that the parameters defining accumulator operability are within their required limits.

4. TS 4.5.2c.2)

TS 4.5.2c.2) currently requires that the containment be verified to be free of debris that might clog the recirculation sump following each containment entry. This surveillance assures that, if required, the residual heat removal pumps will be capable of drawing water from the sump for reinjection to the RCS.

The proposed change would clarify that a containment entry that is separate from an entry for performing work is not required if the affected work area in containment is inspected at least once daily and on the final entry. This is similar to the TS 4.6.1.3 requirements for surveillance of the containment airlocks after multiple entries within a short time period (72 hours).

5. TS 4.6.2.1d.

The containment spray system is designed to prevent the containment pressure during a large-break LOCA from exceeding its maximum design pressure. The containment spray system performs this function by spraying borated water through spray headers at the top of the containment building. The cooler spray water condenses the steam in the containment atmosphere.

In order for the system to properly function, the nozzles in the spray header must be free of debris. Currently, the spray nozzles must be flow tested using air at least once every five years. The purpose of this testing is to identify degradation of the spray headers that could prevent flow though the spray nozzles.

NUREG-1366 indicates that industry operating experience was reviewed to determine the success of the surveillance test. Of the many tests performed, only three indicated nozzle flow problems. It was determined

headers or nozzles, but were the result of construction errors.

Since this test requires clearing the containment spray system and realigning it to an unusual configuration, and since the testing has not identified any failures of the test due to system degradation, relaxing the surveillance frequency is not expected to have any impact on the reliability of the system. In addition, relaxing the surveillance frequency from at least once per 5 years to at least once per 10 years would decrease the potential for inadvertent containment spray system actuations caused by the surveillance test.

6. TS 3/4.6.4.2

The hydrogen recombiners are designed to remove hydrogen in containment generated as the result of a LOCA. The hydrogen recombiner performs its function by heating hydrogen and oxygen to the point where they chemically combine to form water. There are two trains of recombiners per unit to assure that one train is available in case of a single failure.

TS 4.6.4.2 currently requires that the hydrogen recombiner be functionally tested at least once every six months.

NUREG-1366 indicates that a review of industry operating experience was performed to assess the reliability of hydrogen recombiners. Twelve failures of recombiners were identified from 1980 through 1988. In most cases, the failure affected only one train.

Because of the past performance of the hydrogen recombiners, relaxation of the surveillance frequency to at least once each refueling interval will not decrease the reliability of the hydrogen recombiners.

7. TS 3/4.7.1.2

The AFW pumps are multistage centrifugal pumps. They are designed to supply adequate feedwater to the steam generators to ensure complete reactor decay heat removal under all conditions. Each of the three pumps is currently tested monthly.

During the performance of the monthly test, the pump is run on recirculation. Recirculation line flow is approximately 15 percent of total design flow. At the time of the design of the AFW system, 15 percent recirculation flow was considered adequate to remove heat generated within the pump. However, pump manufacturers now recommend that the recirculation flow should be 25 percent of rated flow.

Studies of AFW pump failures have been conducted by the NRC and the Electric Power Research Institute (EPRI). These studies determined that a significantly frequent cause of industry failures of AFW pumps is testing the pump by recirculating flow through a minimum flow line that is not adequately sized. NUREG-1366 indicates that, based on EPRI data, up to 26 percent of failures of AFW pump rotating elements could be reduced by less frequent performance of the surveillance test.

The benefits of surveillance testing are not directly proportional to the frequency of testing due to factors such as pump degradation and potential equipment failure resulting from the testing. Consequently, there is a point at which additional surveillance testing will actually result in a decrease in AFW pump reliability. The NUREG-1366 analysis of industry operating experience indicates that a monthly surveillance test frequency may be contributing to AFW pump unreliability due to equipment failure and degradation. Changing the surveillance frequency for each AFW pump from monthly to quarterly on a staggered test basis is consistent with the results of NUREG-1366.

Conducting quarterly testing on a staggered basis will result in monthly system testing to detect common mode failures, yet reduce the testing of each individual pump to quarterly.

8. TS 4.10.1.2

Section 3/4.10 of the TS deals with special test exceptions to other TS requirements. These exceptions may be needed to perform testing to verify that the reactor will be operated within its approved limits (for example, low power physics testing).

The exception in TS 3/4.10.1 permits the shutdown margin requirements in Mode 2 (Startup) to be suspended for measurement of control rod worth and shutdown margin. The TS 4.10.1.2 surveillance requirements state that each control rod not fully inserted shall be demonstrated capable of full insertion when tripped from at least the 50 percent withdrawn position within 24 hours prior to reducing the shutdown limits to less than the limits required in Mode 2.

However, TS 3/4.1.3.4 already requires tripping the control rods, but for the purpose of verifying that control rod drop times are less than the values assumed in the safety analyses. If these tests are performed more than 24 hours before the control rod worth measurements are needed, TS 4.10.1.2 would require the control rods to be tripped again.

The proposed change to increase the 24-hour requirement to 7 days would provide more time to allow the requirements of both surveillances to be satisfied with one test.

9. TS 4.11.2.6

The waste gas storage tanks are part of the radioactive waste processing system. TS 4.11.2.6 contains a limit on the curies (Ci) of noble gases that are allowed to be stored in the gas storage tanks and requires that the quantity of material in the tanks be determined to be less than this limit at least once every 24 hours when radioactive materials are being added to the tank.

The TS limit placed on the number of curies permitted in the waste gas tank ensures that the resulting total body exposure to an individual at the nearest exclusion area boundary would not exceed 0.5 rem following the failure of a waste gas tank.

The TS limit placed on the allowed curies in the waste gas tank is considerably above the value that would occur, even if the reactor were operating at the maximum TS specific coolant activity limit of 1 μCi/cc.

Iodine concentration in the coolant will rarely reach the TS limits, if at all, at operating reactors. However, Xe-133 activity can accumulate and approach TS limits during degas operations prior to shutdown for refueling. Therefore, the proposed change to the surveillance requirement would state that the quantity of radioactive material contained in each waste gas decay tank shall be determined to be within the limit at least once every 7 days whenever radioactive materials are added to the tank, but at least once every 24 hours during primary coolant system degassing operations.

In conclusion, for each of the changes described above, PG&E believes there is reasonable assurance that the health and safety of the public will not be adversely affected by the proposed TS changes.

E. NO SIGNIFICANT HAZARDS EVALUATION

PG&E has evaluated the no significant hazards considerations involved with the proposed amendment, focusing on the three standards set forth in 10 CFR 50.92(c) as quoted below:

"The Commission may make a final determination, pursuant to the procedures in paragraph 50.91, that a proposed amendment to an operating license for a facility licensed under paragraph 50.21(b) or paragraph 50.22 or a testing facility involves no significant hazards considerations, if operation of the facility in accordance with the proposed amendment would not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) Involve a significant reduction in a margin of safety."

The following evaluation is provided for the no significant hazards consideration standards.

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

   The changes proposed in this LAR are consistent with the guidance provided in GL 93-05. The proposed changes eliminate testing that is likely to cause transients or excessive wear of equipment. An evaluation of these changes indicates that they result in a net benefit to plant safety. The evaluation considered:

   - Unavailability of safety equipment due to testing
   - Initiation of significant transients due to testing
   - Actuation of engineered safety features that unnecessarily cycle safety equipment
   - Importance to safety of that system or component
   - Failure rate of that system or component
   - Effectiveness of the test in discovering the failure

   As a result of the decrease in the testing frequencies, the risk of testing causing a transient and equipment degradation will be decreased, and the reliability of the equipment will not be significantly decreased.

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

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

The proposed changes do not affect the method of operating any equipment at DCPP. Additionally, the proposed changes do not result in a physical modification to any plant equipment.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

   The proposed changes affect the surveillance requirements. There is no decrease in equipment reliability by the elimination of unnecessary testing that increases the risk of transients or equipment degradation.

   Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

F. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the above safety evaluation, PG&E concludes that the changes proposed by this LAR satisfy the no significant hazards consideration standards of 10 CFR 50.92(c) and, accordingly, a no significant hazards finding is justified.

G. ENVIRONMENTAL EVALUATION

PG&E has evaluated the proposed changes and determined the changes do not involve (v) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed changes is not required.