ENCLOSURE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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| In the Matter of<br><br>PACIFIC GAS AND ELECTRIC COMPANY<br><br>Diablo Canyon Power Plant<br>Units 1 and 2 | Docket No. 50-275<br>Facility Operating License<br>No. DPR-80<br><br>Docket No. 50-323<br>Facility Operating License<br>No. DPR-82<br><br>License Amendment Request<br>No. 89-15 |

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

The proposed change amends the Technical Specifications (Appendix A of the Licenses) as regards the revision of Technical Specification Table 3.3-6.

Information on the proposed change is provided in Attachments A and B.

This change has been reviewed and is considered not to involve a significant hazards consideration as defined in 10 CFR 50.92 or require an 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.

Subscribed to in San Francisco, California this 20th day of December 1989.

Respectfully submitted,

Pacific Gas and Electric Company

By _____
J. D. Shiffer
Vice President
Nuclear Power Generation

Howard V. Golub
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By _____
Richard F. Locke

Subscribed and sworn to before me
this 20th day of December 1989

_____
Adriane D. Tolefree, Notary Public
for the County of Alameda,
State of California

My commission expires December 22, 1992.

OFFICIAL SEAL
ADRIANE D. TOLEFREE
NOTARY PUBLIC - CALIFORNIA
ALAMEDA COUNTY
My Comm. Expires Dec. 22, 1992

2980S/0075K

Attachment A

REVISION OF TECHNICAL SPECIFICATION TABLE 3.3-6,
INCREASE ALARM/TRIP SETPOINT OF SPENT FUEL POOL STORAGE
AREA RADIATION MONITOR

A. DESCRIPTION OF AMENDMENT REQUEST

This license amendment request (LAR) proposes to revise Technical Specification (TS) Table 3.3-6, "Radiation Monitoring Instrumentation for Plant Operations". The proposed revision will change the alarm/trip setpoint of the spent fuel pool (SFP) area radiation monitor (RM-58) from 15 to 75 mR/hr.

The proposed change to the TS of Operating License Nos. DPR-80 and DPR-82 is noted in the marked-up copy of the applicable TS (Attachment B).

B. BACKGROUND

Radiation monitor RM-58 is located near the SFP. It contains a Geiger-Mueller (GM) detector with an indicating range of 0.1-10,000 mR/hr. The monitor provides continuous monitoring and recording readouts with alert and high radiation level alarms in the control room. Local audible and visual indicators are also provided. In addition, RM-58 actuates a transfer of the fuel handling building (FHB) ventilation system to the iodine removal mode should the TS Table 3.3-6 item 1.a radiation level be exceeded. This value is presently 15 mR/hr. The iodine removal mode uses an exhaust fan, which is equipped with a charcoal filter, to remove the maximum amount of contaminants that may be present during a fuel handling accident. The charcoal filter is 99 percent efficient at removing elemental iodine and 85 percent efficient at removing methyl iodide. The filters reduce the offsite dose following a fuel handling accident.

The SFP vent exhausts to the outside atmosphere through the plant vent where radiation monitors RM-14A and RM-14B continuously monitor radioactive releases from the SFP areas and alarm when or before the activity level of such noble gases reaches the TS 3.3.3.10 limits. The alarm on RM-14A or RM-14B signals the operators to take appropriate action as well as actuating a containment ventilation isolation.

During refueling, a fuel assembly could be damaged in the transfer canal or the spent fuel pit in the fuel handling area. Supply air for the SFP area is swept across the fuel pit and transfer canal and exhausted through the plant vent. Doors in the fuel handling area are closed to maintain controlled leakage characteristics in the SFP region during refueling operations involving irradiated fuel. Should a fuel assembly be damaged

in the canal or in the SFP and release radioactivity above a prescribed level, the radiation monitors alarm and the SFP ventilation exhausts through charcoal filters which will remove halogens prior to discharging to the atmosphere. In addition, the supply and exhaust ventilation systems servicing the SFP area can be manually shut down from the control room, limiting the leakage to the atmosphere.

The FHB ventilation system also functions to reduce the building radiation levels following a fuel handling accident. To reduce radiation levels from a fuel handling accident, the exhaust fans remove building air, and the supply fans introduce outside air to the building. The FHB ventilation system treats the exhausted air to minimize the offsite dose following a fuel handling accident. High-efficiency particulate air (HEPA) filters remove any radio-particulate prior to the air being discharged to the plant vent. Charcoal filters reduce the levels of halogen gases (primarily iodine) discharged to the plant vent.

C. JUSTIFICATION

The current TS required radiation monitor setpoint of 15 mR/hr unnecessarily results in ESF actuation and challenges safety systems. Repeated spurious alarms could cause operators to be less attentive to a recurring RM-58 alarm. FSAR Update Section 15.4.5 discusses the fuel handling accident and was used as a basis to determine a new monitor setpoint.

In 1988 and 1989, four ESF actuations occurred that were associated with exceeding the RM-58 radiation level setpoint. These events were reported in Licensee Event Report (LER) 1-88-011-01, dated December 22, 1988, LER 2-88-011-00 (2 actuations reported), dated November 2, 1988, and LER 1-89-013-00, dated December 5, 1988. Each of these events occurred because the direct radiation level in the SFP area had increased due to recent movement of spent fuel during a refueling outage. After the third event, the Units 1 and 2 RM-58 alarm set points were justifiably changed to 10 mR/hr. The 10 mR/hr is 5 mR/hr below the TS setpoint of 15 mR/hr to account for instrument error (previously they were conservatively set at 7.5 mR/hr). The 10 mR/hr is still close to direct radiation levels and associated random variations that occur in the SFP area. On November 5, 1989, RM-58 spuriously alarmed and initiated a FHB ventilation shift to the iodine removal mode. A radiation survey at the monitor showed radiation levels less than the ESF actuation setpoint (10 mR/hr), however, random fluctuations in direct levels caused the unnecessary safety system actuation.

This past history has shown that an alternative analytical basis for the set point of RM-58 needed to be developed to limit the number of spurious ESF actuations, but still provide protection for its design functions. The original basis for the RM-58 high alarm used the PG&E Zone III design

maximum dose rates of <15 mR/hr as the criteria for establishing the alarm setpoint. An analysis using FSAR Update Section 15.4.5 assumptions determined that the exposure rate due to airborne releases in the FHB would exceed 75 mR/hr in the event of an accident involving one fuel assembly (FSAR Update Expected Case Accident). Therefore, changing the TS high alarm setpoint limit from 15 to 75 mR/hr in no way affects the mitigation capability, for the Expected Case accident in the FSAR Update, by the FHB ventilation system.

A similar request to increase the area radiation monitor alarm/trip setpoint for the Sequoyah Nuclear Plant was approved by the NRC on October 19, 1987.

D. SAFETY EVALUATION

TS Bases 3/4.9.12 states that the limitations on the FHB 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.

Fuel Handling Accident in Fuel Handling Building

The basis for the RM-58 high alarm setpoint is to initiate actions to mitigate offsite dose consequences from airborne releases resulting from a fuel handling accident in the SFP area. Offsite dose consequences are mitigated by routing ventilation exhaust from the SFP area through the charcoal filter, thus stripping halogens (principally iodine isotopes). The rerouting of the ventilation is accomplished automatically upon receipt of an RM-58 high alarm. Receipt of the high alarm also signals operations personnel to evaluate the situation for further actions. PG&E performed a calculation to base the high alarm set point of RM-58 on the airborne radioactivity concentration in the FHB for the FSAR Update Expected Case Accident release during a fuel handling accident. The Expected Case Accident consequences presented in the FSAR Update is a less severe, but more probable accident than the FSAR Update Design Basis Case fuel handling accident. This resulted in a more conservative (lower) setpoint than for the Design Basis Accident Case. This calculation analyzed for the detector sensitivity to the various released nuclides as presented in the FSAR Update.

Setting the high alarm setpoint to a value more consistent with the Expected Case Accident dose rates eliminates spurious ESF actuations while limiting the offsite consequences due to this accident. A 75 mR/hr setpoint equates to a site boundary whole body dose of 1.46 mR for the duration of the accident. This accident dose would not be different if

RM-58 were set at 15 mR/hr during an Expected Case Accident. The whole body dose is the most limiting with respect to the alarm setpoint.

Inadvertent Criticality in the Spent Fuel Pool

The high density SFP racks are designed to assure that a Keff equal to or less than 0.95 is maintained with the racks fully loaded with fuel of the highest anticipated reactivity in each of two regions, and flooded with unborated water at a temperature corresponding to the highest reactivity. PG&E submitted PG&E Letter No. DCL-85-306, "Reracking of Spent Fuel Pools", on September 19, 1985. The results of the criticality analysis for normal and abnormal operations were evaluated in this report. LAR 85-13, PG&E Letter No. DCL-85-333, was submitted on October 30, 1985, and summarized the results of the SFP reracking report. Postulated events that could potentially involve accidental criticality were examined and it was concluded that the limiting value for criticality (Keff of 0.95) would not be exceeded. Therefore, an inadvertent criticality in the SFP is not considered a credible accident and an evaluation of the effect of raising the ESF actuation setpoint on RM-58 is not required.

Radiation monitor RM-59, which monitors the new fuel storage vault area, would provide indication of inadvertent criticality and changes in dose rate for radiation protection purposes. For this reason, the high alarm setpoint for RM-59 will remain unchanged at 15 mR/hr. This is consistent with Table 3.3-6 of the Westinghouse Standard Technical Specifications.

Summary

Based on the above discussion, PG&E concludes that changing the RM-58 alarm setpoint to 75 mR/hr, which is based on the Expected Case Accident, would not affect the offsite dose consequences. The proposed high alarm setpoint would provide identical mitigating action for the discussed fuel handling accident while also reducing the number of spurious ESF actuations. Radiation protection would still be provided by setting the alert setpoint on RM-58 to a value consistent with plant conditions and 10 CFR 20 requirements. Inadvertent criticality monitoring in the new fuel storage vault would still be provided by RM-59. Therefore, the proposed changes will not adversely affect the public health or safety.

E. NO SIGNIFICANT HAZARDS EVALUATION

PG&E has evaluated the no significant hazard 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 proposed change to the setpoint of RM-58 would not affect the probability of a fuel handling accident in the fuel handling area since the monitor high alarm setpoint is independent of fuel handling activities. The consequences of a fuel handling accident would not change with implementation of the proposed higher RM-58 setpoint, since 75 mR/hr is less than the radiation level that an FSAR Update Expected Case fuel handling accident would produce. The proposed high alarm setpoint would provide identical mitigating action for the FSAR Update expected case fuel handling accident, while reducing the number of spurious ESF actuations.

   Therefore, the proposed change does 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 change in the RM-58 setpoint does not require any change to the fuel handling procedures, equipment, or necessitate a physical alteration to the plant.

   Therefore, the proposed change does 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 change in the RM-58 setpoint from 15 to 75 mR/hr does not change the projected offsite dose rate at the site boundary. The increased high alarm setpoint is based on the airborne radioactivity

concentration during a fuel handling accident and allows such an accident to be adequately detected.

Therefore, the proposed change does 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 activities associated with this LAR satisfy the no significant hazards consideration standards of 10 CFR 50.92(c) and, accordingly, a no significant hazards consideration finding is justified.

G. ENVIRONMENTAL EVALUATION

PG&E has evaluated the proposed changes and determined that the changes do not involve (i) 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 criterion 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.