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. 95-01

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 to the Licenses would revise Technical Specifications (TS) (Appendix A of the Licenses) 3/4.9.14.1, "Spent Fuel Assembly Storage," TS 3/4.9.14.2, "Spent Fuel Pool Boron Concentration," TS 5.3.1, "Reactor Core - Fuel Assemblies," TS 5.6.1, "Fuel Storage - Criticality," and the associated Bases. The proposed changes would also add a new TS 3/4.9.14.3, "Spent Fuel Assembly Storage - Spent Fuel Pool Region 1."

Information on the proposed changes is provided in Attachments A through F. These changes have been reviewed and do not involve a significant hazards consideration as defined in 10 CFR 50.92 or an unreviewed environmental question. Further, there is reasonable assurance that the health and safety of the public will not be endangered by the proposed changes.

Sincerely,

Gregory M. Rueger

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

Subscribed and sworn to before me this 6th day of February 1995

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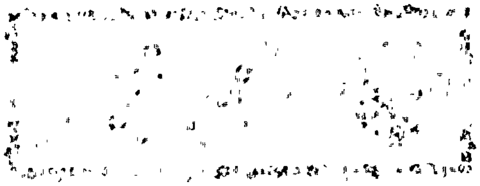

ATTACHMENT A

REVISION OF TECHNICAL SPECIFICATIONS 3/4.9.14.1, 3/4.9.14.2, 5.3.1, AND 5.6.1, AND ADDITION OF NEW TECHNICAL SPECIFICATION 3/4.9.14.3 INCREASE IN MAXIMUM FUEL ENRICHMENT LIMIT FOR NEW AND SPENT FUEL POOL RACKS

A. DESCRIPTION OF AMENDMENT REQUEST

This license amendment request (LAR) proposes to change Technical Specifications (TS) to increase the maximum acceptable enrichment of fuel in the new and spent fuel pool (SFP) racks from 4.5 to 5.0 weight percent U-235. This LAR also proposes to clarify the requirements associated with fuel rod substitutions (i.e., fuel assembly reconstitution). The LAR also proposes a change to allow Zircaloy-4 or ZIRLO fuel cladding.

1. The proposed changes to TS 3/4.9.14 are as follows:

   a. TS 3.9.14.1 and Figure 3.9-2 would be revised to allow the storage of spent fuel assemblies with initial enrichments up to 5.0 weight percent U-235 in Region 2 of the SFP. Fuel pellet diameter would be considered in combination with initial enrichment and cumulative burnup.

   b. Editorial corrections to the titles of TS 3/4.9.14.1 and 3/4.9.14.2 would be made for consistency with the TS format.

2. New TS 3/4.9.14.3 would be added. The new TS would include:

   a. Requirements for acceptable fuel storage in Region 1 of the SFP.

   b. An action statement similar to that for TS 3.9.14.1, requiring suspension of all fuel movement and crane operations except to move the non-complying fuel assemblies into an acceptable pattern. The action statement also requires verification of spent fuel pool boron concentration at least once per 8 hours.

   c. A requirement, similar to that for TS 4.9.14.1, for an evaluation that considers enrichment, boron content, and cumulative burnup of each fuel assembly prior to storing it in Region 1 of the SFP.

d. New Figure 3.9-3 for use in determining the acceptability of storing fuel in Region 1 of the SFP.

3. The proposed changes to TS 5.3.1 are as follows:

   a. The number of fuel rods in each fuel assembly, nominal length of each fuel rod, and maximum fuel enrichment would be removed.

   b. The current allowance for fuel rod substitutions as justified by analysis would be clarified to specify that the analysis be performed using NRC staff-approved methods.

   c. An allowance to use a limited number of lead test assemblies in non-limiting core locations would be added.

   d. The current specification requiring Zircaloy-4 fuel cladding would be changed to allow Zircaloy-4 or ZIRLO cladding.

4. The proposed changes to TS 5.6 are as follows:

   a. TS 5.6.1.1 would be renumbered to TS 5.6.1 and the word "borated" would be replaced with "unborated."

   b. A new requirement would be added to specify the maximum fuel enrichment allowed to be stored in the fuel racks.

   c. TS 5.6.1.2 would be deleted.

The associated Bases would also be appropriately revised.

Changes to the TS and Bases are noted in the marked-up copy of the applicable TS pages provided in Attachment B. The proposed TS pages are provided in Attachment C.

B. BACKGROUND

<u>Enrichment</u>

The new fuel storage racks were designed in accordance with the American Institute of Steel Construction, Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings. The spent fuel storage racks were designed in accordance with Safety Guide 13 and the ASME Boiler and Pressure Vessel Code, Section III, Subsection NF.

Increasing the enrichment of the fuel can potentially impact the criticality of the fuel in the new fuel and SFP racks, and also core design parameters. Criticality analyses for up to 5.0 weight percent U-235 fuel in the new and spent fuel storage racks are provided in Attachments D, E, and F, and are summarized below. Prior to any use of 5.0 weight percent U-235 fuel in the reactor, the effects of the higher enrichment fuel on core design parameters will be evaluated as part of the cycle-specific reload safety evaluation process.

As previously submitted in PG&E Letter DCL-86-034, "License Amendment Request 86-02, Reload Fuel Maximum Enrichment - Technical Specification Change," the new fuel storage racks are designed so that: (1) the fuel will have a k_{eff} of less than 0.95 if the (normally dry) racks were flooded with unborated water, and (2) the fuel will have a k_{eff} of less than 0.98 assuming a hypothetical low density moderator (foam or fog), per guidance in Section 9.1.1 of NRC Standard Review Plan NUREG-0800.

The spent fuel racks in the SFP are divided into two regions. Region 1 of the SFP contains 290 storage locations qualified for storage of new fuel or partially irradiated fuel. Each storage location is surrounded on all four sides by Boraflex panels. The Boraflex panels are neutron absorbers and decrease the k_{eff} of the stored fuel. Region 2 consists of 1034 storage locations with no Boraflex, qualified for storage of irradiated fuel based on the initial enrichment and burnup of the fuel.

As previously submitted in PG&E Letters DCL-85-333, "License Amendment Request 85-13, Reracking of Spent Fuel Pools," DCL-85-306 (referred to as the Reracking Report), and DCL-88-288, "License Amendment Request 88-08, Reload License Amendment Request to Use VANTAGE 5 Fuel Assemblies," the high density spent fuel storage racks in each region of the pool are designed to assure that a k_{eff} equal to or less than 0.95 is maintained with the racks fully loaded with fuel of the highest anticipated reactivity in each of the two regions, and flooded with unborated water at a temperature corresponding to the highest reactivity. The maximum calculated reactivity includes a margin for uncertainty in reactivity calculations and in mechanical tolerances, statistically combined, such that the true k_{eff} will be equal to or less than 0.95 with a 95% probability at a 95% confidence level.

For abnormal conditions in the SFP involving misplacement or dropping of a fuel assembly, credit was taken in the analyses of record (see Reracking Report) for the soluble boron normally present in the SFP water, to ensure a k_{eff} of less than 0.95. TS 3.9.14.2 is in place to assure the presence of soluble boron, thereby precluding the possibility of the simultaneous occurrence of two independent accident conditions (e.g., fuel assembly misplacement and loss of soluble boron). Such credit for soluble boron may be taken since it is not required to assume two unlikely, independent, concurrent events to ensure protection

against a criticality accident (Double Contingency Principle of ANSI N16.1-1975).

The current maximum fuel enrichment at Diablo Canyon is 4.5 weight percent U-235. This limit was established as a result of License Amendments 7 and 8 for Unit 1, and License Amendments 5 and 6 for Unit 2 (issued in May 1986).

Fuel Rod Substitution

License Amendments 13 and 11 for Units 1 and Unit 2, respectively, allow the replacement of damaged fuel rods with Zircaloy-4 or stainless steel rods if a cycle-specific reload evaluation supports the change. Subsequent to the approval of License Amendments 13 and 11, the NRC issued Generic Letter 90-02 Supplement 1, "Alternative Requirements for Fuel Assemblies in the Design Features Section of Technical Specifications." This Generic Letter clarifies that the evaluations performed to support replacing fuel rods with filler rods must be performed using NRC approved methods and codes and must be demonstrated to comply with all fuel safety design bases.

ZIRLO Fuel Rod Cladding

The addition of ZIRLO as an acceptable fuel cladding will allow the use of Zircaloy-4 or ZIRLO cladding. ZIRLO is an improved zirconium-based fuel rod cladding material that has a lower corrosion rate and reduced radiation-induced growth.

C. JUSTIFICATION

Enrichment

Increasing the maximum enrichment of the fuel will reduce the number of new fuel assemblies required to be purchased each cycle. Currently, approximately 45 percent of the core is replaced during each refueling outage. With higher enrichment fuel, approximately 39 percent of the core would have to be replaced after each 18-month cycle; or, in the future a fuel cycle could be extended to up to 24 months. Changes such as these would result in cost savings in fuel purchases.

The reduction of the number of fuel assemblies purchased each cycle will also reduce the number of fuel assemblies required to be stored in the SFP each cycle. With the current fuel enrichment, all storage locations in the SFP will be occupied by 2008. The capability to completely offload the core will be lost in 2006. If the maximum enrichment is increased, current SFP storage would last until 2010, and the capability to completely offload the core would be maintained until 2008.

The addition of TS 3.9.14.3 specifies the requirements for storing higher enrichment assemblies in Region 1 of the pool while providing assurance that the fuel will remain subcritical. These requirements are necessary to verify that storage of fuel up to 5.0 weight percent enrichment will remain within the criticality analyses.

The addition of the curve to Figure 3.9-2 to denote two different fuel pellet diameters provides additional flexibility for storage of spent fuel. Fuel with the smaller pellet diameter would otherwise be controlled to the current, more restrictive requirements for larger-diameter fuel pellets. The proposed new curves are more specific and more accurately define the acceptability of fuel storage in Region 2.

The changes to TS 5.6.1 are consistent with NUREG-1431, "Standard Technical Specifications - Westinghouse Plants." Explanation that "borated" water is assumed in accident conditions and "unborated" water is assumed under normal conditions is included in the changes to the TS 3/4.9.14 Bases.

The proposed increase in enrichment limits for new and spent fuel pool storage is similar to License Amendments issued for Summer, Comanche Peak Units 1 and 2, Indian Point Unit 2, Prairie Island Units 1 and 2, and South Texas Units 1 and 2.

Fuel Rod Substitution

The change to TS 5.3.1 clarifies, consistent with the example in Generic Letter 90-02, Supplement 1, that the analyses for substituting filler rods in fuel assemblies must be performed with codes and methods that are approved by the NRC. These substitutions, and reconstitution of a fuel assembly, will allow the available energy of a fuel assembly to be fully utilized in the event that a limited number of rods in an assembly are damaged. These proposed changes are consistent with the Westinghouse Standard Technical Specifications in NUREG-1431. The proposed clarification to implement Generic Letter 90-02, Supplement 1 is similar to License Amendments issued for Summer, Millstone Unit 3, Farley Units 1 and 2, Three Mile Island Unit 1, and Beaver Valley Units 1 and 2.

ZIRLO Fuel Rod Cladding

The change to TS 5.3.1 to allow ZIRLO cladding material is expected to provide an improvement in corrosion resistance and dimensional stability under irradiation. The proposed change is similar to License Amendments issued for Summer, Prairie Island Units 1 and 2, Millstone Unit 3, Salem Units 1 and 2,

Farley Units 1 and 2, Indian Point Units 2 and 3, Vogtle Units 1 and 2, North Anna Units 1 and 2, and Surry Units 1 and 2.

D. SAFETY EVALUATION

Enrichment

The safety evaluation of the new fuel racks is discussed in Section 9.1.1.3 of the Final Safety Analysis Report (FSAR) Update, and in PG&E Letter DCL-86-034. The safety evaluation of the spent fuel racks is discussed in Section 9.1.2.3 of the FSAR Update, and in PG&E Letters DCL-85-306, DCL-85-333, and DCL-88-288. The only characteristics of the fuel that are changed as a result of the increased enrichment are the fissionable and radioactive material content of the fuel pellets. The criticality analyses (Attachments D, E, and F) indicate that the change does not impact the criticality of fuel stored onsite.

Holtec International, under contract to PG&E, performed three analyses to evaluate the impact of increased enrichment on k_{eff} in the following areas: new fuel storage (Attachment D); SFP Region 1 fuel storage (Attachment E); and SFP Region 2 fuel storage (Attachment F). The design criteria identified in the FSAR Update and the previous submittals with respect to criticality were used in the criticality analyses of 5.0 weight percent enriched fuel stored in the fuel racks.

New Fuel Storage Criticality Analysis (Attachment D)

The new fuel storage vault analysis, assuming the vault was completely filled with 5.0 weight percent fuel, indicates that the normal, dry new fuel rack would have a k_{eff} of 0.415. The analysis also considers two accident cases: (1) the new fuel storage racks flooded with clean, unborated water; and (2) the new fuel storage racks flooded with an aqueous foam. For the case where the racks are flooded with unborated water, the results of the analysis indicate that the k_{eff} would be 0.945, which is below the required limit of 0.95. For the aqueous foam case, the k_{eff} would be 0.900 (which is below the required limit of 0.98) due to neutron leakage and absorption of neutrons by the racks. Integral neutron absorbers, if they continue to be used in future fuel designs, would reduce the k_{eff} even further (see Attachment D). For comparison, the previous criticality analyses of record in LAR 86-02 indicated that with 4.5 weight percent fuel, the maximum k_{eff} in the flooded and aqueous foam cases was 0.933 and 0.880, respectively.

Although the criticality analysis in Attachment D demonstrates the acceptability of fully loading the new fuel racks with 5.0 weight percent U-235 fuel assemblies, the new fuel racks are currently only seismically qualified for storage of fuel assemblies in the corner cells of the racks. Therefore, this LAR does not

change PG&E's current practice of storing new fuel in only the corner cells until the seismic calculations demonstrate the acceptability of storing assemblies in all locations.

SFP Region 1 Criticality Analysis (Attachment E)

The results of the SFP Region 1 analysis indicate that k_{eff} will remain below 0.95 if at least one of the following conditions exists:

a. the fuel has an initial enrichment less than or equal to 4.5 weight percent U-235; or, for fuel with initial enrichment from 4.5 up to a maximum of 5.0 weight percent U-235 and meeting any of the following conditions:

b.1) the combination of initial enrichment and cumulative burnup of the assemblies is within the acceptable area of Figure 3.9-3 of new TS 3/4.9.14.3; or

b.2) the assemblies initially contained a minimum of a nominal 36 mg/inch per assembly of Boron-10 (B-10) integrated in the fuel rods; or

b.3)a) the assemblies are placed in a checkerboard pattern with water cells; or
b.3)b) the assemblies are placed in a checkerboard pattern with assemblies that initially contained a minimum of a nominal 72 mg/inch per assembly of integral B-10; or
b.3)c) the assemblies are placed in a checkerboard pattern with partially irradiated fuel of at least 8000 MWD/MTU cumulative burnup; or

b.4) the assemblies are put in a pattern of alternating rows of fuel assemblies and water cells.

The Region 1 analysis in Attachment E assumes integral fuel burnable absorber (IFBA) fuel rods in the most reactive configuration with 2.25 mg/inch per rod of the isotope B-10. Fuel assemblies containing a nominal 36 mg/inch of B-10 are equivalent to assemblies containing 16 IFBA rods at 2.25 mg/inch per rod. Also, fuel assemblies containing a nominal 72 mg/inch B-10 are equivalent to assemblies containing 32 IFBA rods at 2.25 mg/inch per rod. Higher B-10 loading per rod would mean less IFBA rods will be needed in the higher enriched fuel. The reactivity of an assembly containing a nominal minimum of 72 mg/inch is equivalent to the reactivity of a fuel assembly with at least 8000 MWD/MTU cumulative burnup.

Region 1 is well removed from the cask handling area and therefore is not subject to a cask drop accident, as previously discussed in LAR 85-13 and the Reracking Report, and in the NRC's safety evaluation accepting the reracking. Other postulated accident conditions (such as a dropped fuel assembly, loss of

spent fuel pool cooling, seismic events, and tornado-generated missiles) were also previously considered in the Reracking Report and the previous increase from 3.5 weight percent to 4.5 weight percent U-235, and are not affected by an increase in fuel enrichment. The most limiting potential misplacement of an assembly is re-evaluated in the current analysis due to the increase in fuel enrichment to 5.0 percent. The results of the analysis indicate that k_{eff} would remain less than 0.95 (see Attachment E).

SFP Region 2 Criticality Analysis (Attachment F)

The SFP Region 2 analysis considers three cases. The first case is the normal storage of an assembly in its intended location. The second case is the misplacement in Region 2 of a fuel assembly that does not meet the acceptance criteria of TS Figure 3.9-2. The third case is a damaged spent fuel rack.

For the analysis of the first case, soluble boron in the SFP is not credited. Provided that the burnup and enrichment are maintained within acceptable limits as defined by TS Figure 3.9-2, the analysis indicates that the maximum k_{eff} would be 0.948, which meets the required criterion of less than or equal to 0.95.

For the second and third cases (abnormal conditions), k_{eff} will remain below 0.95 assuming credit for soluble boron in the SFP, as in the previous analyses of record for abnormal conditions. For this second case, k_{eff} would be maintained below 0.95 if credit is assumed for 400 ppm of soluble boron in the SFP. Additional soluble boron in the SFP would further reduce k_{eff}. The third case considers crushing of the spent fuel racks, and assumes a bounding failure occurs that results in the elimination of any water gap between the fuel assemblies. The results indicate that with 1160 ppm soluble boron in the SFP, the k_{eff} will be less than 0.95. Both 400 ppm and 1160 ppm are less than the 2000 ppm minimum soluble boron concentration already required by TS 3.9.14.2. Under the worst hypothetical accident scenario, the k_{eff} would be 0.757 with 2000 ppm soluble boron present in the pool water, which meets the required criterion of a k_{eff} of less than 0.95 (see Attachment F). For comparison, the analyses of record in the previous submittals for up to 4.5 weight percent fuel enrichment indicated a maximum k_{eff} of 0.938 under normal conditions, and as noted above, also already took credit for soluble boron under accident conditions to maintain k_{eff} under 0.95.

Postulated Fuel Handling Accident Offsite Dose Consequences

The maximum spent fuel gap activity and the resulting offsite dose consequences after a postulated fuel handling accident are primarily dependent on fuel burnup, and are not significantly affected by an increase in fuel enrichment. This LAR does not propose to change any currently analyzed maximum burnup limits.

For up to 5.0 weight percent U-235 and 60,000 MWD/MTU burnup, NUREG/CR-5009, "Assessment of the Use of Extended Burnup Fuel in Light Water Power Reactors," indicates that fuel handling accident offsite thryoid doses could increase by a factor of 1.2. The calculated doses in the fuel handling accident analysis of record (in FSAR Update Chapter 15 and in the Reracking Report for up to 4.5 weight percent fuel) were approximately a factor of 10 below the 10 CFR Part 100 limits. Since no increases to the maximum burnup limits are proposed by this LAR, the possible offsite dose consequences due to the proposed LAR changes are bounded by this 1.2 factor increase, and therefore would not approach the 10 CFR Part 100 limits.

Fuel Pellet Diameter

As part of the changes proposed in this LAR to specify the acceptable conditions for fuel storage in the SFP, Figure 3.9-2 for Region 2 would be changed to specify separate curves for the two existing different size fuel pellets. As evaluated in PG&E Letter DCL-88-288 (LAR 88-08), PG&E replaced Westinghouse LOPAR fuel assemblies with VANTAGE 5 fuel assemblies. Since the VANTAGE 5 fuel rod diameter is slightly smaller than the LOPAR fuel rod diameter, the SFP currently contains spent fuel rods of two different diameters. The existing curve in Figure 3.9-2 was a bounding curve for both size fuel pellets. The Region 2 criticality analysis in Attachment F considered both fuel designs in the determination that the 0.95 limit for k_{eff} will be maintained, assuming credit for 400 ppm of soluble boron during accident conditions (which is acceptable since it is within the existing TS 3.9.14.2 requirement to maintain 2000 ppm boron, as discussed above). The different fuel assembly designs (including pellet diameter) were also considered in the Region 1 analysis in Attachment E and need not be controlled as is the case for Region 2.

<u>Fuel Rod Substitution</u>

Generic Letter 90-02, Supplement 1 was issued to clarify the requirements that the NRC expected to be fulfilled when implementing fuel reconstitution programs. The change does not affect the methodology which PG&E would use to reconstitute fuel. Fuel reconstitution would currently be evaluated using NRC-approved Westinghouse codes as part of the cycle-specific core reload safety evaluation.

<u>ZIRLO Fuel Rod Cladding</u>

ZIRLO cladding has a lower corrosion rate and reduced radiation-induced growth than Zircaloy. Since the neutronic properties of ZIRLO are nearly identical to those of Zircaloy, the use of ZIRLO is not expected to have any significant effect on the core reload analyses. The NRC has previously

evaluated ZIRLO as acceptable, and has revised 10 CFR 50.44 and 50.46 to include ZIRLO as an acceptable cladding material. Any use of ZIRLO clad fuel in the reactor will be evaluated using NRC-approved codes as part of the cycle-specific core reload safety evaluation.

E. NO SIGNIFICANT HAZARDS

"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 50.22 or a testing facility involves no significant hazards consideration, 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 considerations.

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

Analyses were performed to verify that an increase in enrichment of the fuel from 4.5 weight percent U-235 to 5.0 weight percent U-235 would not result in an inadvertent criticality event in the new fuel storage racks or the SFP. The analyses indicate that for the new fuel racks, the k_{eff} will remain below 0.95 if flooded with non-borated water, and below 0.98 if flooded with optimum-density aqueous foam. The analyses indicate that for the spent fuel racks, assuming credit for soluble boron in accident scenarios, the k_{eff} will remain below 0.95 as required.

The increase in the fuel enrichment from 4.5 weight percent U-235 to 5.0 weight percent U-235 does not change any of the external dimensional characteristics of the fuel element, the fuel storage racks, or the SFP itself. The accidents originally evaluated considered those events that could lead to fuel damage and release of radioactive material primarily from mechanical means, such as physical impact on the fuel or the SFP. Because the physical design and methods of operation are the same as

previously evaluated, there is no change in the probability of occurrence of such events.

The maximum spent fuel gap activity and the resulting offsite dose consequences after a postulated fuel handling accident are primarily dependent on fuel burnup, and are not significantly affected by an increase in fuel enrichment. For up to 5.0 weight percent U-235 and 60,000 MWD/MTU burnup, NUREG/CR-5009 indicates that fuel handling accident offsite doses could increase by a factor of 1.2, which indicates that doses would still remain within 10 CFR Part 100 limits.

The Generic Letter 90-02, Supplement 1 change to TS 5.3.1 clarifies the requirements associated with fuel reconstitution. It does not change the methodology that would be used to reconstitute fuel.

The use of ZIRLO cladding will not increase the probability or consequences of an accident, since it has improved mechanical properties such as a lower corrosion rate and reduced radiation-induced growth.

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 physical and mechanical parameters associated with the fuel assemblies and spent fuel racks are the same as previously evaluated. Therefore, any malfunctions related to the physical aspects of fuel storage are the same as previously evaluated.

The conditions for fuel storage in the proposed new TS 3.9.14.3 provide new criteria for locations where a fuel assembly could be incorrectly placed. However, the incorrect placement of a fuel assembly has been analyzed and would not cause an inadvertent criticality or any other accident.

The change to 5.0 weight percent U-235 does not result in physical alterations or changes to the operation of the plant, or change the method by which any safety-related system performs its function. The use of ZIRLO cladding does not result in a significant change to the plant.

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 acceptance criteria of a k_{eff} of 0.95 (or 0.98 for the new fuel rack optimum moderation accident) provides the margin to criticality. Analyses were performed that conclude that the proposed changes to allow up to 5.0 weight percent U-235 in the new and spent fuel racks meet the acceptance criteria. The use of ZIRLO cladding will not reduce the protection of the public health or safety, as indicated in the NRC's revisions to 10 CFR 50.44 and 50.46 (57 FR 39355).

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 evaluation, PG&E concludes that the changes associated with 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

As discussed above, offsite dose consequences are not significantly affected by an increase in fuel enrichment, without a change in maximum fuel burnup. In addition, the environmental effects of transportation of this fuel and waste of this type will not be significantly impacted by increased fuel enrichment. Since fuel shipments will have an enrichment less than or equal to 5.0 weight percent U-235, and the expected burnup will be less than 60,000 MWD/MTU, the NRC staff position in NUREG/CR-5009 indicates that there will be a negligible effect of the new fuel enrichment on the overall transportation risks. Therefore, there would be no significant impact as a result of this change.

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 effluent 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.