

February 27, 2004

Mr. Gregory M. Rueger  
Senior Vice President, Generation and  
Chief Nuclear Officer  
Pacific Gas and Electric Company  
Diablo Canyon Power Plant  
P. O. Box 3  
Avila Beach, CA 93424

SUBJECT: DIABLO CANYON POWER PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF  
AMENDMENTS RE: CONTROL ROOM, AUXILIARY BUILDING, AND  
FUEL HANDLING BUILDING VENTILATION SYSTEMS (TAC NOS. MB8485  
AND MB8486)

Dear Mr. Rueger:

The Commission has issued the enclosed Amendment No. 163 to Facility Operating License No. DPR-80 and Amendment No. 165 to Facility Operating License No. DPR-82 for the Diablo Canyon Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated April 2, 2003, as supplemented by letters dated August 8, and November 13, 2003.

The amendments revise certain operational requirements of the TS for the ventilation filter testing program, the control room ventilation system, the auxiliary building ventilation system, and the fuel handling building ventilation system. The amendments also incorporate a selective implementation of the alternative source term.

A copy of the related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next regular biweekly *Federal Register* notice.

Sincerely,

***/RAI***

Girija S. Shukla, Project Manager, Section 2  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-275  
and 50-323

Enclosures: 1. Amendment No. 163 to DPR-80  
2. Amendment No. 165 to DPR-82  
3. Safety Evaluation

cc w/encls: See next page

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NRR-058

\*Safety Evaluation dated 2/27/04

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DATE	2/20/04	2/19/04	1/21/04	1/21/04	2/26/04	2/27/04

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PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-275

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 163  
License No. DPR-80

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Pacific Gas and Electric Company (the licensee) dated April 2, 2003, as supplemented by letters dated August 8 and November 13, 2003, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-80 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 163, are hereby incorporated in the license. Pacific Gas and Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

Stephen Dembek, Chief, Section 2  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: February 27, 2004

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-323

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.165  
License No. DPR-82

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Pacific Gas and Electric Company (the licensee) dated April 2, 2003, as supplemented by letters dated August 8 and November 13, 2003, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-82 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 165, are hereby incorporated in the license. Pacific Gas and Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

***/RA/***

Stephen Dembek, Chief, Section 2  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: February 27, 2004

ATTACHMENT TO LICENSE AMENDMENT NO. 163

TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 165 TO FACILITY OPERATING LICENSE NO. DPR-82

DOCKET NOS. 50-275 AND 50-323

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.7-18  
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3.7-19  
3.7-21  
3.7-23  
5.0-21

INSERT

3.7-18  
3.7-18a  
3.7-19  
3.7-21  
3.7-23  
5.0-21

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 163 TO FACILITY OPERATING LICENSE NO. DPR-80  
AND AMENDMENT NO. 165 TO FACILITY OPERATING LICENSE NO. DPR-82  
PACIFIC GAS AND ELECTRIC COMPANY  
DIABLO CANYON POWER PLANT, UNITS 1 AND 2  
DOCKET NOS. 50-275 AND 50-323

1.0 INTRODUCTION

By application dated April 2, 2003, as supplemented by letters dated August 8 and November 13, 2003, Pacific Gas and Electric Company (PG&E or the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License Nos. DPR-80 and DPR-82) for the Diablo Canyon Power Plant, Units 1 and 2 (DCPP).

The proposed amendments would revise certain operational requirements of the TS for the ventilation filter testing program (VFTP), the control room ventilation system (CRVS), auxiliary building ventilation system (ABVS), and fuel handling building ventilation system (FHBVS). The amendments also incorporate a selective implementation of the alternative source term (AST).

Specifically, the licensee requested that:

TS Section 5.5.11, "Ventilation Filter Testing Program (VFTP)" be changed as follows:

- Change the frequency of laboratory testing of the charcoal adsorber for the CRVS, ABVS and FHBVS from "at least once per 18 months and after every 720 hours of charcoal operation" to "at least once per 24 months and after every 720 hours of charcoal operation."
- Change the penetration and relative humidity acceptance criteria for the CRVS from "1.0% and 70%" to "2.5% and 95%," respectively.
- Change the penetration and relative humidity acceptance criteria for the ABVS from "6.0% and 70%" to "15% and 95%," respectively.
- Change the penetration acceptance criterion for the FHBVS from "4.3%" to "15%."

- Eliminate the TS 5.5.11.e requirement to demonstrate that the charcoal pre-heaters for the CRVS and ABVS dissipate " $5 \pm 1\text{kW}$ " and " $50 \pm 5\text{ kW}$ ," respectively, when tested in accordance with American National Standards Institute (ANSI) N510-1980 at least once per 24 months.

TS Section 3.7.10, "Control Room Ventilation System" be changed as follows:

- Add a Note to the limiting condition for operation (LCO) that reads: "The control room boundary may be opened intermittently under administrative control."
- Revise Surveillance Requirement (SR) 3.7.10.1 to read, "Operate each CRVS train for  $\geq 15$  minutes." It now requires that each control room ventilation system train be operated for  $\geq 10$  continuous hours with the heaters operating.
- Revise TS to add a new Condition B to the required TS Actions that states: "Two CRVS trains inoperable due to an inoperable control room boundary in MODE 1, 2, 3, or 4." The Required Action for this condition will be: "Restore control room boundary to OPERABLE status" and the Completion Time will be "24 hours." The existing Conditions will be re-lettered from B, C, D and E to C, D, E, and F.
- Revise TS re-lettered Condition F to read: "Two CRVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B." It now reads: "Two CRVS trains inoperable in MODE 1, 2, 3, or 4."

TS Section 3.7.12, "Auxiliary Building Ventilation System" be changed as follows:

- Revise TS Condition A from "The common HEPA filter and/or charcoal adsorber or manual initiated heaters inoperable," to read: "The common HEPA filter and/or charcoal adsorber inoperable."
- Required Action A.1 would be revised from, "Restore the common HEPA filter and charcoal absorber or manually initiated heater to operable status," to read: "Restore the common HEPA filter and charcoal adsorber to OPERABLE status."
- Revise SR 3.7.12.1 from "Operate each ABVS train for  $\geq 15$  minutes, and one train for  $\geq 10$  continuous hours with the heater initiated manually from the control room," to read: "Operate each ABVS train for  $\geq 15$  minutes."
- Add a Note to SR 3.7.12.3 which reads: "SR is not applicable to a specific ABVS train when that ABVS train is configured and performing its safety function."

TS Section 3.7.13, "Fuel Handling Building Ventilation System" be changed as follows:

- Revise the Applicability statement to read "During movement of recently irradiated fuel assemblies in the fuel handling building." It now reads "During movement of irradiated fuel assemblies in the fuel handling building."

The August 8 and November 13, 2003, supplemental letters provided additional clarifying information, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on June 24, 2003 (68 FR 37579).

## 2.0 REGULATORY EVALUATION

The licensee requested a selective implementation of the AST, as described in Regulatory Guide (RG) 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors." In December 1999, the NRC issued a new regulation, 10 CFR 50.67, "Accident Source Term," which provided a mechanism for licensed power reactors to replace the traditional accident source term used in their design basis accident analyses with an AST. Regulatory guidance for the implementation of the AST is provided in RG 1.183. A licensee seeking to use an AST is required, pursuant to 10 CFR 50.67, to apply for a license amendment.

The licensee's application addresses a selective implementation of the AST in its evaluation of the radiological consequences of the postulated fuel handling accident at DCP. As part of the licensee's proposed selective implementation of the AST, the total effective dose equivalent (TEDE) dose criterion in Standard Review Plan (SRP) Chapter 15.0-1, "Radiological Consequence Analyses Using Alternative Source Terms," replaces the whole body and thyroid dose criteria provided in SRP Chapter 15.7.4, "Radiological Consequences of Fuel Handling Accidents."

The staff also considered in its safety evaluation (SE) the relevant information contained in the following documents:

- NUREG-1431, "Standard Technical Specifications for Westinghouse Plants," Revision 2 (October 2001).
- The staff's guidelines provided in RG 1.52, "Design, Testing and Maintenance Criteria for Post Accident Engineered Safety Feature Atmosphere Cleanup System Air Filtration and Adsorption Units for Light Water Cooled Nuclear Power Plants," Revision 3 (June 2001).
- NRC Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear Grade Activated Charcoal" (June 1999).
- Technical Specification Task Force Traveler TSTF-287, Revision 5, which was approved by the staff on March 16, 2000.
- Technical Specification Task Force Traveler TSTF-51, Revision 2, which was approved by the staff on October 13, 1999.

## 3.0 TECHNICAL EVALUATION

The staff has reviewed the licensee's regulatory and technical analyses in support of its proposed license amendments which are described in Sections 4 and 5 of the licensee's

submittal. The detailed evaluation below will support the conclusion that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

### 3.1 TS 5.5.11, "Ventilation Filter Testing Program (VFTP)"

#### 3.1.1 Proposed TS Changes

The licensee has proposed to change the frequency of laboratory testing of the charcoal adsorber for the CRVS, ABVS and FHBVS from "at least once per 18 months and after every 720 hours of charcoal operation" to "at least once per 24 months and after every 720 hours of charcoal operation."

#### Evaluation

The staff has determined that a testing frequency of every 24 months will provide an acceptable level of assurance that the activated carbon adsorber material from engineered safety feature (ESF) atmospheric cleanup systems will perform as assumed in the radiological consequence analyses. In addition, the staff affirmed that this testing frequency is consistent with Regulatory Position 7.2 of RG 1.52, Revision 3. Therefore, this change is acceptable.

#### 3.1.2 Proposed TS Changes

The licensee has proposed to:

1. Change the penetration and relative humidity acceptance criteria for the CRVS from "1.0% and 70%," to "2.5% and 95%," respectively.
2. Change the penetration and relative humidity acceptance criteria for the ABVS from "6.0% and 70%," to "15% and 95%," respectively.
3. Change the penetration acceptance criterion for the FHBVS from "4.3%" to "15%."

#### Evaluation

GL 99-02 stated that (1) the laboratory test acceptance criteria contain a safety factor to ensure that the efficiency assumed in the radiological consequence analysis is still valid at the end of the operating cycle, (2) because ASTM D3803-1989 "Standard Test Method for Nuclear-Grade Activated Carbon" is a more accurate and demanding test than older tests, licensees that upgrade their TS to this new protocol will be able to use a safety factor as low as 2 for determining the acceptance criteria for charcoal filter efficiency, and (3) this safety factor can be used for systems with or without humidity control because the lack of humidity control is already accounted for in the test conditions (systems without humidity control can test at 95 percent relative humidity and systems with humidity control can test at 70 percent relative humidity).

The staff finds that PG&E has committed to ASTM D3803-1989 and that the proposed changes to the penetration and relative humidity acceptance criteria resulted from, and is reflective of, PG&E using a safety factor of 2 in accordance with the guidance provided in GL 99-02. Therefore, the staff finds that the requested changes are acceptable. (Note that the proposed test criteria for relative humidity for the CRVS and ABVS is 95 percent, and that the current test criteria for relative humidity for the FHBVS is also 95 percent).

### 3.1.3 Proposed TS Changes

The licensee has proposed to eliminate the TS 5.5.11.e requirement to demonstrate that the charcoal pre-heaters for the CRVS and ABVS dissipate " $5 \pm 1\text{kW}$ " and " $50 \pm 5\text{kW}$ ," respectively, when tested in accordance with ANSI N510-1980 at least once per 24 months.

#### Evaluation

The purpose of TS 5.5.11.e is to demonstrate the capability of humidity control for the CRVS and ABVS. The requested changes to the testing criteria for the CRVS and ABVS eliminates the need for humidity control, therefore TS 5.5.11.e is no longer needed. Therefore, the staff finds that the requested changes are acceptable.

## 3.2 TS 3.7.10, "Control Room Ventilation System"

### 3.2.1 Proposed TS Changes

The licensee has proposed to revise SR 3.7.10.1 to read, "Operate each CRVS train for  $\geq 15$  minutes." It now requires that each control room ventilation system train be operated for  $\geq 10$  continuous hours with the heaters operating.

#### Evaluation

The staff finds this change acceptable because the primary purpose of the requirement to operate heaters for 10 continuous hours in humidity control systems is to remove moisture from carbon adsorbers and to justify the operability of the system. The staff has determined that carbon adsorbers in ESF systems will remain sufficiently moisture free to perform as assumed in the radiological consequence analyses without conducting the heater test for 10 continuous hours each month, and that a 15 minute test each month is adequate to justify the operability of systems. This position is affirmed in RG 1.52, Rev. 3, in position 6.1 which states that "Each ESF atmosphere cleanup train should be operated continuously for at least 15 minutes each month, with heaters on (if so equipped), to justify the operability of the system and all its components." (Note: as indicated above, because of the changes to the testing criteria for CRVS and ABVS and the elimination of TS 5.5.11.e, a heater test will no longer be required.)

### 3.2.2 Proposed TS Changes

The licensee has proposed to:

1. Add a Note to the LCO that reads: "The control room boundary may be opened intermittently under administrative control."

2. Revise the TS to add a new Condition B to the required TS actions that states: "Two CRVS trains inoperable due to an inoperable control room boundary in MODE 1, 2, 3, or 4." The required action for this condition will be: "Restore control room boundary to OPERABLE status" and the completion time will be "24 hours." The existing Conditions will be re-lettered from B, C, D and E to C, D, E, and F.
3. Revise TS Condition F to read: "Two CRVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B." It now reads: "Two CRVS trains inoperable in MODE 1, 2, 3, or 4."

### Evaluation

The LCO is modified by a Note allowing the control room boundary to be opened intermittently under administrative controls. For entry and exit through doors, the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for control room area isolation is indicated.

If the control room boundary is inoperable in Modes 1, 2, 3, and 4 such that the CRVS trains cannot establish or maintain the required pressure, action must be taken to restore an operable control room boundary within 24 hours. The proposed change is considered acceptable because of the low probability of an event requiring an intact control room boundary occurring during the 24-hour action completion time and the compensatory measures available to operators to minimize the consequences of potential hazards.

During the period that the control building boundary is inoperable, appropriate compensatory measures consistent with the intent of 10 CFR Part 50 Appendix A, General Design Criteria (GDC) 19, "Control Room," will be utilized to protect the control room operators from potential hazards such as radioactive contamination, toxic chemicals, smoke, temperature and relative humidity, and to ensure physical security. These preplanned measures will be available to address these concerns for intentional and unintentional entry into the condition. For example, when the control room boundary is opened for other than entry through doors, the proposed Bases state that, in addition to other necessary measures, a dedicated individual will be stationed in the area and will be in continuous contact with the control room to rapidly restore the boundary.

Based on the low probability of an event occurring in this time and the availability of compensatory measures consistent with GDC 19 to minimize the consequences during an event, the proposed change is considered acceptable and is in conformance with TSTF-287.

### 3.3 TS 3.7.12, "Auxiliary Building Ventilation System"

#### 3.3.1 Proposed TS Changes

The licensee has proposed to:

1. Revise TS Condition A from "The common HEPA filter and/or charcoal adsorber or manual initiated heaters inoperable," to read: "The common HEPA filter and/or charcoal adsorber inoperable."
2. Required Action A.1 would be revised from: "Restore the common HEPA filter and charcoal absorber or manually initiated heater to operable status," to read, "Restore the common HEPA filter and charcoal adsorber to OPERABLE status."
3. Revise SR 3.7.12.1 from "Operate each ABVS train for  $\geq 15$  minutes, and one train for  $\geq 10$  continuous hours with the heater initiated manually from the control room," to read "Operate each ABVS train for = 15 minutes."

#### Evaluation

The above requested revisions are acceptable because heaters are no longer required.

#### 3.3.2 Proposed TS Changes

Add a Note to SR 3.7.12.3 which reads: "SR is not applicable to a specific ABVS train when that ABVS train is configured and performing its safety function."

#### Evaluation

For this requested change, the licensee stated, and the staff understands that in addition to its automatic capability, the ABVS also has the capability of being manually placed and operated in any of its operational configurations, including its cleanup configuration. Once in the cleanup configuration, a valid safety injection signal would not cause any change to the ABVS configuration or function. The licensee also stated that (1) the current TS SRs do not address the condition where the ABVS is already in its cleanup configuration and actively performing its safety function, and (2) the proposed note will limit the applicability of SR 3.7.12.3 when the ABVS is already in its safety function configuration and is verified to be providing that function. The staff also understands that (1) this requested change does not reduce the requirement for this surveillance to be current when the ABVS is returned to its automatic mode of operation or is taken out of its cleanup configuration, and (2) this change in applicability will eliminate testing of a not required function. Therefore, the staff finds that the addition of the proposed note is acceptable.

#### 3.4 TS Section 3.7.13, "Fuel Handling Building Ventilation System"

##### Proposed TS changes

Revise the Applicability statement by inserting the word "recently." It now reads: "During movement of irradiated fuel assemblies in the fuel handling building." The revised statement would read: "During movement of recently irradiated fuel assemblies in the fuel handling building."

## Evaluation

The licensee proposed to revise its corresponding TS Bases to identify "recently irradiated fuel" as fuel that has occupied part of a critical reactor core within the previous 100 hours. The term "recently irradiated" refers to a cycle-specific number that represents the decay period for the reduction in radionuclide inventory available for release in the event of a fuel handling accident (FHA). The licensee has determined that the appropriate decay period is 100 hours. Once the reactor has been shut down for a minimum of 100 hours, the licensee has demonstrated that the FHA radiological consequences analysis (that does not rely on either building integrity or the FHA radiological consequence mitigating systems) does not exceed offsite and control room dose criteria.

The proposed change allows greater operational flexibility. The supporting basis for this change is that the need for this system to operate diminishes as the time that spent fuel assemblies have been removed from the reactor increases. There would be a point in time at which the dose consequences of a potential release from an FHA in the fuel handling building will be below the acceptable dose limits. No other postulated fuel building accident is impacted by this operability change.

The proposed changes do not impact TS requirements for systems to prevent or mitigate events other than FHA and are consistent with the provisions of NRC approved TSTF-51. Therefore, the staff concludes that these changes are acceptable. However, should the licensee wish to move irradiated fuel from the reactor vessel prior to the decay time assumed in the FHA radiological analysis, it must first re-evaluate the FHA radiological consequence in accordance with 10 CFR 50.59.

### 3.5 Selective Implementation of the AST for FHA in the Fuel Handling Building

The fuel handling accident analysis postulates that a spent fuel assembly is dropped during refueling. The kinetic energy developed in this drop is conservatively assumed to be dissipated to the cladding on all fuel rods in the dropped assembly. The fission product inventory in the core is largely contained in the fuel pellets that are enclosed in the fuel rod clad. However, the volatile constituents of this inventory will migrate from the pellets to the gap between the pellets and the fuel rod clad. The licensee assumed that the core inventory of fission products, decayed 100 hours, is equally distributed in all fuel assemblies in the core. To account for differences in core power distribution across the core, the averaged fission product inventory in the dropped assembly is conservatively multiplied by a radial peaking factor of 1.65.

The fission product inventory in the fuel rod gap of the damaged fuel rods is assumed to be instantaneously released because of the accident. This activity is assumed to be released from the damaged fuel via the spent fuel pool to the fuel handling building from which it is assumed to be released to the environment over two hours. Fission products released from the damaged fuel are decontaminated by passage through the spent fuel pool water. The licensee assumed a decontamination factor of 200 which is consistent with the guidance provided in RG 1.183. The licensee assumed no credit for removing fission products by the FHBVS.

The assumptions found acceptable to the staff are presented in Table 2 (attached to this SE). The licensee evaluated the maximum 2-hour TEDE to an individual located at the exclusion area boundary (EAB) and the 30-day TEDE to an individual at the outer boundary of the low population zone (LPZ). The resulting doses are shown in Table 1 (attached to this SE) and they are within the dose criteria provided in SRP 15.0-1, "Radiological Consequence Analyses Using Alternative Source Terms."

The licensee also evaluated the dose to operators in the control room. The licensee assumed that the CRVS will remain in the normal mode of operation (no control room isolation) with 2100 cfm makeup air flow into the control room throughout the postulated FHA for 30 days. The licensee assumed no credit for removing fission products by the CRVS. The resulting dose is shown in Table 1 and it is within the dose criteria provided in GDC 19.

To verify the licensee's radiological consequence analyses, the staff performed its independent confirmatory dose calculations. The staff finds that the radiological consequences resulting from the postulated FHA in the fuel handling building are also within the dose acceptance criteria specified in the SRP 15.0.-1 and GDC 19. Although, the staff performed its independent radiological consequence dose calculations as a means of confirming the licensee's results, the staff's acceptance is based on the licensee's analyses.

Based on its review of the licensee's analysis as described above and as confirmed by its independent analysis, the staff finds that the licensee's radiological consequence analyses and the resulting doses due to a FHA in the fuel handling building using a selective implementation of the AST are acceptable.

### 3.6 Conclusion

As described above, the staff reviewed the assumptions, inputs, and methods used by the licensee to assess the radiological impacts of the proposed license amendment at Diablo Canyon Units 1 and 2. The staff finds the proposed TS changes and selective implementation of the AST are acceptable. The bases for the staff's acceptance are (1) the licensee's estimates of the EAB, LPZ, and control room doses comply with dose guidelines specified in SRP 15.0-1 and in 10 CFR 50.67, and (2) the proposed TS changes are consistent with the guidance provided by the staff in the documents listed in Section 2.0 of this SE.

### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified of the proposed issuance of the amendments. The State official had no comments.

### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding

that the amendments involve no significant hazards consideration and there has been no public comment on such finding (68 FR 37579). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

## 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Attachments: 1. Table 1  
2. Table 2

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**TABLE 1**

**Radiological Consequences  
for Fuel Handling Accident  
(rem TEDE<sup>(1)</sup>)**

Exclusion Area Boundary	4.265
Low Population Zone	0.112
Control Room	0.689

Dose Acceptance Criteria:

Exclusion area boundary	6.3 <sup>(2)</sup>
Control Room	5.0 <sup>(3)</sup>

<sup>(1)</sup> Total effective dose equivalent

<sup>(2)</sup> From SRP 15.0-1

<sup>(3)</sup> From 10 CFR 50.67

**Table 2**  
**Parameters and Assumptions Used in**  
**Radiological Consequence Calculations**  
**Fuel Handling Accident**

<u>Parameter</u>	<u>Value</u>
Radial peaking factor	1.65
Fission product decay period	100 hours
Number of fuel assembly	1
Fuel pool/reactor cavity water depth	23 ft
Fuel gap fission product inventory	
Noble gases excluding Kr-85	10%
Kr-85	30%
Iodine except I-131	10%
I-131	10%
Fuel pool decontamination factors	
Iodine	200
Noble gases	1
Control room	Not isolated
Makeup air flow	2110 scfm
Unfiltered infiltration	Not applicable
Recirculation flow	Not applicable
Charcoal adsorber iodine removal efficiency	Not applicable
Atmospheric relative concentrations (sec/m)	
Exclusion area boundary	
0 to 2 hours	9.9E-4
Low population zone	
0 to 2 hours	2.6E-5
Control room	
0 to 8 hours	1.96E-4
8 to 24 hours	1.49E-4
1 to 4 days	1.08E-4
4 to 30 days	6.29E-5
Duration of fission product release	2 hours