



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

December 23, 2008

Mr. John T. Conway  
Site Vice President and Chief Nuclear Officer  
Pacific Gas and Electric Company  
Diablo Canyon Power Plant  
P.O. Box 3  
Mail Code 104/6/601  
Avila Beach, California 93424

**SUBJECT: DIABLO CANYON POWER PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF AMENDMENTS RE: ADOPTION OF CHANGES TO STANDARD TECHNICAL SPECIFICATIONS UNDER TECHNICAL SPECIFICATIONS TASK FORCE (TSTF) CHANGE NUMBER TSTF-448, REVISION 3 REGARDING CONTROL ROOM ENVELOPE HABITABILITY (TAC NOS. MD7707 AND MD7708)**

Dear Mr. Conway:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 201 to Facility Operating License No. DPR-80 and Amendment No. 202 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 (TSs) in response to your application dated December 26, 2007, as supplemented on November 25, 2008.

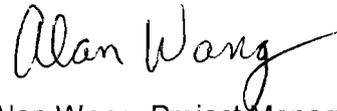
The amendments revise the required action and surveillance requirements in Technical Specification (TS) 3.7.10, "Control Room Ventilation System (CRVS)," and add a new administrative controls program, TS 5.5.19, "Control Room Envelope Habitability Program." The amendments are consistent with the TS Task Force Traveler (TSTF) TSTF-448, Revision 3, and "Control Room Habitability."

J. Conway

- 2 -

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,

A handwritten signature in black ink that reads "Alan Wang". The signature is written in a cursive style with a long horizontal stroke at the end.

Alan Wang, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosures:

1. Amendment No. 201 to DPR-80
2. Amendment No. 202 to DPR-82
3. Safety Evaluation

cc w/encls: Distribution via Listserv



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-275

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 201  
License No. DPR-80

1. The U.S. Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Pacific Gas and Electric Company (the licensee), dated December 26, 2007, as supplemented on November 25, 2008, 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 Paragraphs 2.C.(2) and 2.C.(12) of Facility Operating License No. DPR-80 are 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. 201, are hereby incorporated in the license. Pacific Gas & 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.

(12) Additional Conditions

The Additional Conditions contained in Appendix D, as revised through Amendment No. 201, are hereby incorporated into this license. Pacific Gas and Electric Company shall operate the facility in accordance with the Additional Conditions.

3. The 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



Michael T. Markley, Chief  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Facility  
Operating License No. DPR-80  
and Technical Specifications

Date of Issuance: December 23, 2008



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-323

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 202  
License No. DPR-82

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Pacific Gas and Electric Company (the licensee), dated December 26, 2007, as supplemented on November 25, 2008, 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 Paragraphs 2.C.(2) and 2.C.(12) of Facility Operating License No. DPR-82 are hereby amended to read as follows:

(2) Technical Specifications (SSER 32, Section 8)\* and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 202, are hereby incorporated in the license. Pacific Gas & 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.

(12) Additional Conditions

The Additional Conditions contained in Appendix D, as revised through Amendment No. 202, are hereby incorporated into this license. Pacific Gas and Electric Company shall operate the facility in accordance with the Additional Conditions.

3. The 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



Michael T. Markley, Chief  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Facility  
Operating License No. DPR-82  
and Technical Specifications

Date of Issuance: December 23, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 201  
TO FACILITY OPERATING LICENSE NO. DPR-80  
AND AMENDMENT NO. 202 TO FACILITY OPERATING LICENSE NO. DPR-82  
DOCKET NOS. 50-275 AND 50-323

Replace the following pages of the Facility Operating License Nos. DPR-80 and DPR-82, Appendix A, Technical Specifications, and Appendix D, Additional Conditions, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Facility Operating License (FOL) No. DPR-80

<u>REMOVE</u>	<u>INSERT</u>
FOL, page 3	FOL, page 3
FOL, page 8	FOL, page 8
--	Appendix D page 3

Facility Operating License No. DPR-82

<u>REMOVE</u>	<u>INSERT</u>
FOL, page 3	FOL, page 3
FOL, page 6	FOL, page 6
--	Appendix D page 3

Technical Specifications

<u>REMOVE</u>	<u>INSERT</u>
3.7-18	3.7-18
3.7-19	3.7-19
--	5.0-17a

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
  - (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This License shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level  
  
The Pacific Gas and Electric Company is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal (100% rated power) in accordance with the conditions specified herein.
  - (2) Technical Specifications  
  
The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 201, are hereby incorporated in the license. Pacific Gas & 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) Initial Test Program  
  
The Pacific Gas and Electric Company shall conduct the post-fuel-loading initial test program (set forth in Section 14 of Pacific Gas and Electric Company's Final Safety Analysis Report, as amended), without making any major modifications of this program unless modifications have been identified and have received prior NRC approval. Major modifications are defined as:
    - a. Elimination of any test identified in Section 14 of PG&E's Final Safety Analysis Report as amended as being essential;

(8) Control of Heavy Loads (SSER 27. Section IV.6)

Prior to startup following the first refueling outage, the licensee shall submit commitments necessary to implement changes and modifications as required to satisfy the guidelines of Section 5.1.2 through 5.1.6 of NUREG-0612 (Phase II: 9-month responses to the NRC Generic Letter dated December 22, 1980).

(9) Emergency Preparedness (SSER 27. Section IV.3)

In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of preparedness, the provisions of 10 CFR Section 50.54(s)(2) will apply.

(10) Masonry Walls (SSER-27. Section IV.4: Safety Evaluation of November 2, 1984)

Prior to start-up following the first refueling outage, the licensee shall (1) evaluate the differences in margins between the staff criteria as set forth in the Standard Review Plan and the criteria used by the licensee, and (2) provide justification acceptable to the staff for those cases where differences exist between the staff's and the licensee's criteria.

(11) Spent Fuel Pool Modification

The licensee is authorized to modify the spent fuel pool as described in the application dated October 30, 1985 (LAR 85-13) as supplemented. Amendment No. 8 issued on May 30, 1986 and stayed by the U.S. Court of Appeals for the Ninth Circuit pending completion of NRC hearings is hereby reinstated.

Prior to final conversion to the modified rack design, fuel may be stored, as needed, in either the modified storage racks described in Technical Specification 5.6.1.1 or in the unmodified storage racks (or both) which are designed and shall be maintained with a nominal 21-inch center-to-center distance between fuel assemblies placed in the storage racks.

(12) Additional Conditions

The Additional Conditions contained in Appendix D, as revised through Amendment No. 201 are hereby incorporated into this license. Pacific Gas and Electric Company shall operate the facility in accordance with the Additional Conditions.

D. Exemption

Exemption from certain requirements of Appendix J to 10 CFR Part 50 is described in the Office of Nuclear Reactor Regulation's Safety Evaluation Report, Supplement No. 9. This exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. Therefore, this exemption, previously granted in Facility Operating License No. DPR-76, is hereby reaffirmed. The facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission.

Amendment Number	Additional Conditions	Implementation Date
201	<p>Determination of CRE unfiltered air leakage as required by surveillance requirement (SR) 3.7.10.5, in accordance with TS 5.5.19.c.(i).</p> <p>The assessment of CRE habitability as required by TS 5.5.19.c.(ii).</p> <p>The measurement of CRE pressure as required by TS 5.5.19.d.</p>	<p>The amendment is effective as of the date of its issuance and the condition shall be implemented within 180 days of its issuance</p>
	<p>Following implementation, this condition will be performed as stated in the condition:</p>	
	<p>The first performance of SR 3.7.10.5, in accordance with Specification 5.5.19.c.(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from February 3, 2005, the date of the most recent successful tracer gas test, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.</p>	
	<p>The first performance of the periodic assessment of CRE habitability, Specification 5.5.19.c.(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from February 3, 2005, the date of the most recent successful tracer gas test, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.</p>	
	<p>The first performance of the periodic measurement of CRE pressure, Specification 5.5.19.d, shall be within 24 months, plus the 182 days allowed by SR 3.0.2, as measured from February 3, 2005, the date of the most recent successful pressure measurement test, or within 182 days if not performed previously.</p>	

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This License shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The Pacific Gas and Electric Company is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal (100% rated power) in accordance with the conditions specified herein.

(2) Technical Specifications (SSER 32, Section 8)\* and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 202 , are hereby incorporated in the license. Pacific Gas & 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) Initial Test Program (SSER 31, Section 4.4.1)

Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

---

\*The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

(10) Pipeway Structure DE and DDE Analysis (SSER 32 Section 4)

Prior to start-up following the first refueling outage PG&E shall complete a confirmatory analysis for the pipeway structure to further demonstrate the adequacy of the pipeway structure for load combinations that include the design earthquake (DE) and double design earthquake (DDE).

(11) Spent Fuel Pool Modification

The licensee is authorized to modify the spent fuel pool as described in the application dated October 30, 1985 (LAR 85-13) as supplemented. Amendment No. 6 issued on May 30, 1986 and stayed by the U.S. Court of Appeals for the Ninth Circuit pending completion of NRC hearings is reinstated.

Prior to final conversion to the modified rack design, fuel may be stored, as needed, in either the modified storage racks described in Technical Specification 5.6.1.1 or in the unmodified storage racks (or both) which are designed and shall be maintained with a nominal 21-inch center-to-center distance between fuel assemblies placed in the storage racks.

(12) Additional Conditions

The Additional Conditions contained in Appendix D, as revised through Amendment No. 202, are hereby incorporated into this license; Pacific Gas and Electric Company shall operate the facility in accordance with the Additional Conditions.

D. Exemption (SSER 31, Section 6.2.6)

An exemption from certain requirements of Appendix J to 10 CFR Part 50 is described in the Office of Nuclear Reactor Regulation's Safety Evaluation Report, Supplement No. 9. This exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. Therefore, this exemption previously granted in Facility Operating License No. DPR-81 pursuant to 10 CFR 50.12 is hereby reaffirmed. The facility will operate, with the exemption authorized, in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission.

E. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provision of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Diablo Canyon Power Plant, Units 1 and 2 Physical Security Plan, Training and Qualification Plan and Safeguards Contingency Plan," submitted by letter dated May 16, 2006.

Amendment No. ~~21,31,118~~, 202  
Revised by letter dated October 28, 2004  
Revised by letter dated December 11, 2006

Amendment Number	Additional Conditions	Implementation Date
202	<p>Determination of CRE unfiltered air inleakage as required by surveillance requirement (SR) 3.7.10.5, in accordance with TS 5.5.19.c.(i).</p> <p>The assessment of CRE habitability as required by TS 5.5.19.c.(ii).</p> <p>The measurement of CRE pressure as required by TS 5.5.19.d.</p>	<p>The amendment is effective as of the date of its issuance and the condition shall be implemented within 180 days of its issuance</p>
	<p>Following implementation, this condition will be performed as stated in the condition:</p>	
	<p>The first performance of SR 3.7.10.5, in accordance with Specification 5.5.19.c.(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from February 3, 2005, the date of the most recent successful tracer gas test, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.</p>	
	<p>The first performance of the periodic assessment of CRE habitability, Specification 5.5.19.c.(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from February 3, 2005, the date of the most recent successful tracer gas test, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.</p>	
	<p>The first performance of the periodic measurement of CRE pressure, Specification 5.5.19.d, shall be within 24 months, plus the 182 days allowed by SR 3.0.2, as measured from February 3, 2005, the date of the most recent successful pressure measurement test, or within 182 days if not performed previously.</p>	

3.7 PLANT SYSTEMS

3.7.10 Control Room Ventilation System (CRVS)

LCO 3.7.10 Two CRVS trains shall be OPERABLE.

-----NOTE-----  
The control room envelope (CRE) boundary may be opened intermittently under administrative controls.  
-----

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6.  
During movement of recently irradiated fuel assemblies.

ACTIONS

-----NOTE-----  
ACTIONS apply simultaneously to both units.  
-----

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CRVS train inoperable for reasons other than Condition B.	A.1 Restore CRVS train to OPERABLE status.	7 days
B. One or more CRVS trains inoperable due to inoperable CRE boundary in MODE 1, 2, 3, or 4.	B.1 Initiate action to implement mitigating actions.	Immediately
	<u>AND</u> B.2 Verify mitigating actions ensure CRE occupant exposures to radiological hazards will not exceed limits, and CRE occupants are protected from smoke and chemical hazards.	24 hours
	<u>AND</u> B.3 Restore CRE boundary to OPERABLE status.	90 days
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	C.1 Be in MODE 3.	6 hours
	<u>AND</u> C.2 Be in MODE 5.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>E. Two CRVS trains inoperable in MODE 5 OR 6, or during movement of recently irradiated fuel assemblies.</p> <p><u>OR</u></p> <p>One or more CRVS trains inoperable due to an inoperable CRE boundary in MODE 5 or 6, or during movement of recently irradiated fuel assemblies.</p>	E.1 Suspend movement of recently irradiated fuel assemblies.	Immediately
F. Two CRVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	F.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.10.1 Operate each CRVS train for $\geq 15$ minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.2 Verify that each CRVS redundant fan is aligned to receive electrical power from a separate OPERABLE vital bus.	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.3 Perform required CRVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with VFTP
SR 3.7.10.4 Verify each CRVS train automatically switches into the pressurization mode of operation on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.5 Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

5.5 Programs and Manuals (continued)

---

5.5.19 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Ventilation System (CRVS), CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem whole body or its equivalent to any part of the body for the duration of the accident. The program shall include the following elements:

- a. The definition of the CRE and the CRE boundary.
  - b. Requirements for maintaining the CRE boundary in its design condition, including configuration control and preventive maintenance.
  - c. Requirements for (i) determining the unfiltered air leakage past the CRE boundary into the CRE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.
  - d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by one train of the CRVS, operating at the flow rate required by the VFTP, at a Frequency of 24 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the 24 month assessment of the CRE boundary.
  - e. The quantitative limits on unfiltered air leakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air leakage measured by the testing described in paragraph c. The unfiltered air leakage limit for radiological challenges is the leakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air leakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.
  - f. The provisions of SR 3.0.2 are applicable to the Frequencies required by paragraphs c and d for determining CRE unfiltered leakage and assessing CRE habitability, and measuring CRE pressure and assessing the CRE boundary.
-



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 201 TO FACILITY OPERATING LICENSE NO. DPR-80  
AND AMENDMENT NO. 202 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 December 26, 2007, to the U.S. Nuclear Regulatory Commission (NRC), as supplemented by letter dated November 25, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML080110085 and ML083570337, respectively), Pacific Gas and Electric Company (PG&E, the licensee) requested changes to the technical specifications (TS) for the Diablo Canyon Power Plant, Units 1 and 2 (DCPP) in accordance with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR). The supplement dated November 25, 2008, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on January 29, 2008 (73 FR 5227).

On August 8, 2006, the commercial nuclear electrical power generation industry owners group Technical Specifications Task Force (TSTF) submitted a proposed change, TSTF-448, Revision 3, to the improved standard technical specifications (STS) (NUREGs 1430-1434) on behalf of the industry (TSTF-448, Revisions 0, 1, and 2 were prior draft iterations). TSTF-448, Revision 3, is a proposal to establish more effective and appropriate action, surveillance, and administrative STS requirements related to ensuring the habitability of the control room envelope (CRE).

In NRC Generic Letter (GL) 2003-01 (Reference 1), licensees were alerted to findings at facilities that existing TS surveillance requirements for the Control Room Envelope Emergency Ventilation System (CREEVS) may not be adequate. Specifically, the results of ASTM E741 (Reference 2) tracer gas tests to measure CRE unfiltered inleakage at facilities indicated that the differential pressure surveillance is not a reliable method for demonstrating CRE boundary operability. Licensees were requested to address existing TS as follows:

*Provide confirmation that your technical specifications verify the integrity [i.e., operability] of the CRE [boundary], and the assumed [unfiltered] inleakage rates of potentially contaminated air. If you currently have a differential pressure*

*surveillance requirement to demonstrate CRE [boundary] integrity, provide the basis for your conclusion that it remains adequate to demonstrate CRE integrity in light of the ASTM E741 testing results. If you conclude that your differential pressure surveillance requirement is no longer adequate, provide a schedule for: 1) revising the surveillance requirement in your technical specification to reference an acceptable surveillance methodology (e.g., ASTM E741), and 2) making any necessary modifications to your CRE [boundary] so that compliance with your new surveillance requirement can be demonstrated.*

*If your facility does not currently have a technical specification surveillance requirement for your CRE integrity, explain how and at what frequency you confirm your CRE integrity and why this is adequate to demonstrate CRE integrity.*

To promote standardization and to minimize the resources that would be needed to create and process plant-specific amendment applications in response to the concerns described in the generic letter, the industry and the NRC proposed revisions to CRE habitability system requirements contained in the STS, using the STS change traveler process. This effort culminated in Revision 3 to traveler TSTF-448, "Control Room Habitability," which the NRC staff approved on January 17, 2007.

Consistent with the traveler as incorporated into NUREG-1431, the licensee proposed revising action and surveillance requirements in Specification 3.7.10, "Control Room Ventilation System (CRVS)," and adding a new administrative controls program, Specification 5.5.19, "Control Room Envelope Habitability Program." The purpose of the changes is to ensure that CRE boundary operability is maintained and verified through effective surveillance and programmatic requirements, and that appropriate remedial actions are taken in the event of an inoperable CRE boundary.

Some editorial and plant-specific changes were incorporated into this safety evaluation resulting in minor deviations from the model safety evaluation text in TSTF-448, Revision 3. For instance, DCPD is a Westinghouse plant but describes its ventilation system as CRVS rather than Control Room Emergency Filtration System (CREFS) as used in NUREG-1431.

## 2.0 REGULATORY EVALUATION

The Commission established its regulatory requirements related to the content of the TSs in 10 CFR 50.36. Pursuant to 10 CFR 50.36, TSs are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls. The proposed changes affect LCOs, SRs, and administrative controls.

## 2.1 Control Room and Control Room Envelope

NRC Regulatory Guide 1.196, "Control Room Habitability at Light-water Nuclear Power Reactors," Revision 0, May 2003 (Reference 4) uses the term "control room envelope" in addition to the term "control room" and defines each term as follows:

*Control Room: The plant area, defined in the facility licensing basis, in which actions can be taken to operate the plant safely under normal conditions and to maintain the reactor in a safe condition during accident situations. It encompasses the instrumentation and controls necessary for a safe shutdown of the plant and typically includes the critical document reference file, computer room (if used as an integral part of the emergency response plan), shift supervisor's office, operator wash room and kitchen, and other critical areas to which frequent personnel access or continuous occupancy may be necessary in the event of an accident.*

*Control Room Envelope: The plant area, defined in the facility licensing basis, that in the event of an emergency, can be isolated from the plant areas and the environment external to the CRE. This area is served by an emergency ventilation system, with the intent of maintaining the habitability of the control room. This area encompasses the control room, and may encompass other non-critical areas to which frequent personnel access or continuous occupancy is not necessary in the event of an accident.*

NRC Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity At Nuclear Power Reactors," Revision 0, May 2003 (Reference 5), also contains these definitions, but uses the term CRE to mean both. This is because the protected environment provided for operators varies with the nuclear power facility. At some facilities, this environment is limited to the control room; at others, it is the CRE. In this safety evaluation, consistent with the proposed changes to the STS, the CRE will be used to designate both.

### 2.1.2 Control Room Ventilation System (CRVS)

The CRVS (the term used at DCCP for the Control Room Envelope Emergency Ventilation System) provides a protected environment from which operators can control the unit, during airborne challenges from radioactivity, hazardous chemicals, and fire byproducts, such as fire suppression agents and smoke, during both normal and accident conditions.

The CRVS is designed to maintain a habitable environment in the control room envelope for the duration of the most severe Design Basis Accident (DBA) without exceeding a 5 roentgen equivalent man (rem) whole body dose or its equivalent to any part of the body.

The CRVS consists of two redundant trains, each capable of maintaining the habitability of the CRE. The CRVS is considered operable when the individual components necessary to limit operator exposure are operable in both trains. A CRVS train is considered operable when the associated:

- Main supply fan (one), filter booster fan (one), and pressurization fan (one) is operable;
- High efficiency particulate air (HEPA) filters and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions;
- Ductwork, valves, and dampers are operable, and air circulation can be maintained; and
- CRE boundary is operable (the single boundary supports both trains).

The CRE boundary is considered operable when the measured unfiltered air inleakage is less than or equal to the inleakage value assumed by the licensing basis analyses of design basis accident consequences to CRE occupants.

## 2.2 Optional Changes and Variations From TSTF-448

DCPP does not have demisters, and while the CRVS does have heaters, it does not credit the heaters in offsite dose analyses. Therefore, the requirement to test the heaters were not adopted in SR 3.7.10.1

A deviation was made to the wording of TS 3.7.10, Required Action B.2. The TSTF-448 wording states,

Verify mitigating actions ensure CRE [control room envelope] occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.

This wording implies that there are quantitative limits for chemical and smoke hazards. DCPP does not have quantitative limits for such hazards. No credit is taken for the control room habitability systems or boundary integrity in meeting hazardous chemical criteria. Smoke hazards are only qualitatively evaluated. The proposed wording reads,

Verify mitigating actions ensure CRE occupant exposures to radiological hazards will not exceed limits, and CRE occupants are protected from smoke and chemical hazards.

The licensee stated that in the Applicable Safety Analyses of TS Bases 3.7.10, the discussion of hazardous chemical releases and smoke challenges is clarified by inserting the following:

There are no offsite or onsite hazardous chemicals that would pose a credible threat to control room habitability. Consequently, engineered controls for the control room are not required to ensure habitability against a hazardous chemical

threat. The amount of CRE unfiltered inleakage is not incorporated into PG&E's hazardous chemical assessment.

The evaluation of a smoke challenge demonstrated that smoke will not result in the inability of the CRE occupants to control the reactor either from the control room or from the remote shutdown panels (Ref. 1). The assessment verified that a fire or smoke event anywhere within the plant would not simultaneously render the Hot Shutdown Panel (HSP) and the CRE uninhabitable, nor would it prevent access from the CRE to the HSP in the event remote shutdown is required. No CRVS automatic actuation is required for hazardous chemical releases or smoke and no Surveillance Requirements are required to verify operability in cases of hazardous chemicals or smoke.

This clarification represents the current plant-specific design.

The licensee has also clarified the limiting condition of operation (LCO) section of TS Bases 3.7.10 regarding smoke and hazardous chemicals:

In order for the CRVS trains to be considered OPERABLE, the CRE boundary must be maintained such that the CRE occupant dose from a large radioactive release does not exceed the calculated dose in the licensing basis consequence analyses for DBAs [design basis accidents]. In the event of an inoperable CRE boundary in MODES 1, 2, 3, or 4, mitigating actions are required to ensure CRE occupants are protected from hazardous chemicals and smoke.

DCCP does not have CRVS automatic actuation for hazardous chemicals or smoke. Current practices at DCCP do not utilize chemicals in sufficient quantity to present a chemical hazard to the control room.

In addition, the licensee has added this to the ACTIONS section of TS Bases 3.7.10:

The CRE boundary is inoperable if unfiltered inleakage past the CRE boundary can result in CRE occupant radiological dose greater than the calculated dose of the licensing basis analyses of DBA consequences (allowed to be up to 5 rem whole body or its equivalent to any part of the body).

In the event of an inoperable CRE boundary in MODES 1, 2, 3, or 4, action must be initiated to implement mitigating actions to lessen the effect on CRE occupants from the potential hazards of a radiological or chemical event or a challenge from smoke. Actions must be taken within 24 hours to verify that in the event of a DBA, the mitigating actions will ensure that CRE occupant radiological exposures will not exceed the calculated dose of the licensing basis analyses of DBA consequences, and that CRE occupants are protected from potential smoke and chemical hazards. These mitigating actions (i.e., actions that are taken to offset the consequences of the Inoperable CRE boundary) should be preplanned for implementation upon entry into the condition, regardless of whether entry is intentional or unintentional. The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions. Actions must be taken to restore the CRE boundary to

OPERABLE status within 90 days. The 90-day Completion Time is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. In addition, the 90-day Completion Time is a reasonable time to diagnose, plan and possibly repair and test most problems with the CRE boundary.

The NRC has reviewed this deviation and agrees that the revised wording is consistent with the DCPD plant-specific design and is consistent with the current licensing basis and, therefore, is acceptable. In addition, new Action B.2 of TS 3.7.10 will address any new design or environment changes to hazardous chemicals and smoke to assure that appropriate mitigating actions and/or design feature(s) are considered.

### 2.3 Regulations Applicable to Control Room Habitability

In Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," General Design Criteria (GDC) 1, 2, 3, 4, 5, and 19 apply to CRE habitability. The DCPD were designed to comply with Atomic Energy Commission GDC for Nuclear Power Plants published in July 1967. However, in Final Safety Analysis Update Appendix 3.1A published in February 1971, the licensee provided a discussion of how DCPD conforms to the intent of the following 1971 GDCs:

- GDC 1, "Quality Standards and Records," requires that structures, systems, and components (SSCs) important to safety be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions performed.
- GDC 3, "Fire Protection," requires SSCs important to safety be designed and located to minimize the effects of fires and explosions.
- GDC 4, "Environmental and Dynamic Effects Design Bases," requires SSCs important to safety to be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents (LOCAs).
- GDC 5, "Sharing of Structures, Systems, and Components," requires that SSCs important to safety not be shared among nuclear power units unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions, including, in the event of an accident in one unit, the orderly shutdown and cooldown of the remaining units.
- GDC 19, "Control Room," requires that a control room be provided from which actions can be taken to operate the nuclear reactor safely under normal conditions and to maintain the reactor in a safe condition under accident conditions, including a LOCA. Adequate radiation protection is to be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of specified values.

Prior to incorporation of TSTF-448, Revision 3, the STS requirements addressing CRE boundary operability resided only in the following CRE ventilation system specifications:

- NUREG-1430, TS 3.7.10, "Control Room Emergency Ventilation System (CREVS)";
- NUREG-1431, TS 3.7.10, "Control Room Emergency Filtration System (CREFS)";
- NUREG-1432, TS 3.7.11, "Control Room Emergency Air Cleanup System (CREACS)";
- NUREG-1433, TS 3.7.4, "[Main Control Room Environmental Control (MCREC)] System"; and
- NUREG-1434, TS 3.7.3, "[Control Room Fresh Air (CRFA)] System."

In these specifications, the surveillance requirement associated with demonstrating the operability of the CRE boundary requires verifying that one CRVS train can maintain a positive pressure relative to the areas adjacent to the CRE during the pressurization mode of operation at a makeup flow rate. Facilities that pressurize the CRE during the emergency mode of operation of the CRVS have similar surveillance requirements. Other facilities that do not pressurize the CRE have only a system flow rate criterion for the emergency mode of operation. Regardless, the results of ASTM E741 (Reference 2) tracer gas tests to measure CRE unfiltered inleakage at facilities indicated that the differential pressure surveillance (or the alternative surveillance at non-pressurization facilities) is not a reliable method for demonstrating CRE boundary operability. That is, licensees were able to obtain differential pressure and flow measurements satisfying the SR limits even though unfiltered inleakage was determined to exceed the value assumed in the safety analyses.

In addition to an inadequate surveillance requirement, the action requirements of these specifications were ambiguous regarding CRE boundary operability in the event CRE unfiltered inleakage is found to exceed the analysis assumption. The ambiguity stemmed from the view that the CRE boundary may be considered operable but degraded in this condition, and that it would be deemed inoperable only if calculated radiological exposure limits for CRE occupants exceeded a licensing basis limit; e.g., as stated in GDC-19, even while crediting compensatory measures.

NRC Administrative Letter 98-10, "Dispositioning of Technical Specifications That Are Insufficient to Assure Plant Safety" (AL 98-10), states that " the discovery of an improper or inadequate TS value or required action is considered a degraded or nonconforming condition," which is defined in NRC Inspection Manual Chapter 9900; see latest guidance in RIS 2005-20 (Reference 3). "Imposing administrative controls in response to an improper or inadequate TS is considered an acceptable short-term corrective action. The NRC staff expects that, following the imposition of administrative controls, an amendment to the inadequate TS, with appropriate justification and schedule, will be submitted in a timely fashion."

Licensees that have found unfiltered inleakage in excess of the limit assumed in the safety analyses and have yet to either reduce the inleakage below the limit or establish a higher bounding limit through re-analysis, have implemented compensatory actions to ensure the safety of CRE occupants, pending final resolution of the condition, consistent with RIS 2005-20. However, based on GL 2003-01 and AL 98-10, the NRC staff expects each licensee to propose TS changes that include a surveillance to periodically measure CRE unfiltered inleakage in order to satisfy 10 CFR 50.36(c)(3), which requires a facility's TS to include surveillance requirements,

which it defines as "requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and *that limiting conditions for operation will be met.*"

The NRC staff also expects facilities to propose unambiguous remedial actions, consistent with 10 CFR 50.36(c)(2), for the condition of not meeting the limiting condition for operation (LCO) due to an inoperable CRE boundary. The action requirements should specify a reasonable completion time to restore conformance to the LCO before requiring a facility to be shut down. This completion time should be based on the benefits of implementing mitigating actions to ensure CRE occupant safety and sufficient time to resolve most problems anticipated with the CRE boundary, while minimizing the chance that operators in the CRE will need to use mitigating actions during accident conditions.

#### 2.4 Adoption of TSTF-448, Revision 3, by DCPD

Adoption of TSTF-448, Revision 3, will assure that the facility's TS LCO for the CRVS is met by demonstrating unfiltered leakage into the CRE is within limits; i.e., the operability of the CRE boundary. In support of this surveillance, which specifies a test interval (frequency) described in Regulatory Guide 1.197, Revision 0, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," TSTF-448 also adds TS administrative controls to assure the habitability of the CRE between performances of the ASTM E741 test. In addition, adoption of TSTF-448 will establish clearly stated and reasonable required actions in the event CRE unfiltered inleakage is found to exceed the analysis assumption.

The changes made by TSTF-448 to the STS requirements for the CRVS and the CRE boundary conform to 10 CFR 50.36(c)(2) and 10 CFR 50.36(c)(3). Their adoption will better assure that DCPD's CRE will remain habitable during normal operation and design basis accident conditions. These changes are, therefore, acceptable from a regulatory standpoint.

### 3.0 TECHNICAL EVALUATION

The NRC staff reviewed the proposed changes against the corresponding changes made to the STS by TSTF-448, Revision 3, which the NRC staff has found to satisfy applicable regulatory requirements, as described above in Section 2.0. The emergency operational mode of the CRVS at DCPD pressurizes the CRE to minimize unfiltered air inleakage. The proposed changes are consistent with this design.

#### 3.1 Proposed Changes

The proposed amendment would strengthen CRE habitability TS requirements by changing TS 3.7.10, CRVS and adding a new TS administrative controls program on CRE habitability. Accompanying the proposed TS changes are appropriate conforming technical changes to the TS Bases. The proposed revision to the Bases also includes editorial and administrative changes to reflect applicable changes to the corresponding STS Bases, which were made to improve clarity, conform with the latest information and references, correct factual errors, and achieve more consistency among the STS NUREGs. Except for plant-specific differences, these changes are consistent with STS as revised by TSTF-448, Revision 3.

The NRC staff compared the proposed TS changes to the STS and the STS markups and evaluations in TSTF-448. The NRC staff verified that differences from the STS were adequately justified on the basis of plant-specific design or retention of current licensing basis. The NRC staff also reviewed the proposed changes to the TS Bases for consistency with the STS Bases and the plant-specific design and licensing bases, although approval of the Bases is not a condition for accepting the proposed amendment. However, TS 5.5.14, "TS Bases Control Program," provides assurance that the licensee has established and will maintain the adequacy of the Bases. The proposed Bases for TS 3.7.10 refer to specific guidance in NEI 99-03, "Control Room Habitability Assessment Guidance," Revision 0, June 2001 (Reference 6), which the NRC staff has formally endorsed, with exceptions, through Regulatory Guide 1.196, "Control Room Habitability at Light-Water Nuclear Power Reactors," May 2003 (Reference 4).

### 3.2 Editorial Changes

The licensee proposed editorial changes to TS 3.7.10, "CRVS," to establish standard terminology, such as "control room envelope (CRE)" in place of "control room," except for the plant-specific name for the CRVS (plant-specific name for CREEVS), and "radiological, chemical, and smoke hazards (or challenges)" in place of various phrases to describe the hazards that CRE occupants are protected from by the CRVS. These changes improve the usability and quality of the presentation of the TS, have no impact on safety, and therefore, are acceptable.

### 3.3 TS 3.7.10, CRVS

The licensee proposed to revise the action requirements of TS 3.7.10, "CRVS," to acknowledge that an inoperable CRE boundary, depending upon the location of the associated degradation, could cause just one, instead of both CRVS trains to be inoperable. This is accomplished by revising Condition A to exclude Condition B, and revising Condition B to address one or more CRVS trains, as follows:

- Condition A One CRVS train inoperable for reasons other than Condition B.
- Condition B One or more CRVS trains inoperable due to inoperable CRE boundary in MODE 1, 2, 3, or 4

This change clarifies how to apply the action requirements in the event just one CRVS train is unable to ensure CRE occupant safety within licensing basis limits because of an inoperable CRE boundary. It enhances the usability of Conditions A and B with a presentation that is more consistent with the intent of the existing requirements, and, therefore, is acceptable.

The licensee proposed to replace existing Required Action B.1, "Restore control room boundary to OPERABLE status," which has a 24-hour Completion Time, with Required Action B.1, to immediately initiate action to implement mitigating actions; Required Action B.2, to verify, within 24 hours, that in the event of a DBA, CRE occupant radiological exposures will not exceed the calculated dose of the licensing basis analyses of DBA consequences, and that CRE occupants are protected from hazardous chemicals and smoke; and Required Action B.3, to restore CRE boundary to operable status within 90 days.

The 24-hour Completion Time of new Required Action B.2 is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions as directed by Required Action B.1. The 90-day Completion Time of new Required Action B.3 is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. The 90-day Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most anticipated problems with the CRE boundary. Therefore, proposed Actions B.1, B.2, and B.3 are acceptable.

In its letter dated November 25, 2008, the licensee proposed to revise the proposed Condition statement of TS 3.7.10 Condition C to be consistent TSTF-448. The new condition statement will add Condition B. The new condition statement is: "Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4." The wording of TS 3.7.10 Condition C contained in the December 26, 2007, LAR was a deviation from TSTF-448 and the new proposed condition is consistent with TSTF-448 and, therefore, is acceptable.

The licensee proposed to add a new condition to Action E of TS 3.7.10 that states, "One or more CRVS trains inoperable due to an inoperable CRE boundary in Mode 5 or 6, or during movement of recently irradiated fuel assemblies." The specified Required Action proposed for this condition is the same as for the existing condition of Action E, which states "Two [CRVS] trains inoperable in MODE 5 or 6, or during movement of recently irradiated fuel assemblies." Accordingly, the new condition is stated with the other condition in Action E using the logical connector "OR." The practical result of this presentation in format is the same as specifying two separately numbered Actions, one for each condition. Its advantage is to make the TS Actions table easier to use by avoiding having an additional numbered row in the Actions table. The new condition in Action E is needed because proposed Action B will only apply in Modes 1, 2, 3, and 4. As such, this change will ensure that the Actions table continues to specify a condition for an inoperable CRE boundary during Modes 5 and 6 and during refueling. Therefore, this is a conforming administrative change and, therefore, is acceptable.

In the emergency radiation state of operation, the CRVS isolates unfiltered ventilation air supply intakes, filters the emergency ventilation air supply to the CRE, and pressurizes the CRE to minimize unfiltered air leakage past the CRE boundary. The licensee proposed to delete the CRE pressurization surveillance requirement (SR). This SR requires verifying that one CRVS train, operating in the emergency radiation state, can maintain a pressure of 0.125 inches water gauge, relative to external areas adjacent to the CRE boundary during the pressurization mode. The deletion of this SR is proposed because measurements of unfiltered air leakage into the CRE at numerous reactor facilities demonstrated that a basic assumption of this SR, an essentially leak-tight CRE boundary, was incorrect for most facilities. Hence, meeting this SR by achieving the required CRE pressure is not necessarily a conclusive indication of CRE boundary leak tightness, i.e., CRE boundary operability. In its response to GL 2003-01, dated August 8, 2003 (Ref. 7), the licensee reported that it had determined that the DCPD CRE pressurization surveillance, SR 3.7.10.5, does confirm the operability of the CRE boundary and proposed to replace it with an inleakage measurement SR and a CRE Habitability Program in TS Section 5.5.19, in accordance with the approved version of TSTF-448. Based on the adoption of TSTF-448, Revision 3, the licensee's proposal to delete SR 3.7.10.5 is acceptable.

The proposed CRE leakage measurement SR states, "Perform required CRE unfiltered air leakage testing in accordance with the Control Room Envelope Habitability Program." The CRE Habitability Program TS, proposed TS 5.5.19, requires that the program include "Requirements (i) for determining the unfiltered air leakage past the CRE boundary into the CRE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197..." (Reference 5). Regulatory Guide 1.197 references ASTM E741 (Reference 2) as an acceptable method for ascertaining the unfiltered leakage into the CRE. Therefore, the proposed CRE leakage measurement SR is acceptable.

### 3.4 TS 5.5.19, CRE Habitability Program

The proposed administrative controls program TS is consistent with the model program TS in TSTF-448, Revision 3. In combination with SR 3.7.10.5, this program is intended to ensure the operability of the CRE boundary, which as part of an operable CRVS will ensure that CRE habitability is maintained such that CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem whole body or its equivalent to any part of the body for the duration of the accident.

A CRE Habitability Program TS acceptable to the NRC staff requires the program to contain the following elements:

Definitions of CRE and CRE boundary. This element is intended to ensure that these definitions accurately describe the plant areas that are within the CRE, and also the interfaces that form the CRE boundary, and are consistent with the general definitions discussed in Section 2.1 of this safety evaluation. Establishing what is meant by the CRE and the CRE boundary will preclude ambiguity in the implementation of the program.

Configuration control and preventive maintenance of the CRE boundary. This element is intended to ensure the CRE boundary is maintained in its design condition. Guidance for implementing this element is contained in Regulatory Guide 1.196 (Reference 4), which endorsed, with exceptions, NEI 99-03 (Reference 6). Maintaining the CRE boundary in its design condition provides assurance that its leak-tightness will not significantly degrade between CRE leakage determinations.

Assessment of CRE habitability at the frequencies stated in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0 (Reference 5), and measurement of unfiltered air leakage into the CRE in accordance with the testing methods and at the frequencies stated in Sections C.1 and C.2 of Regulatory Guide 1.197. Assessing CRE habitability at the NRC accepted frequencies provides assurance that significant degradation of the CRE boundary will not go undetected between CRE leakage determinations. Determination of CRE leakage using test methods acceptable to the NRC staff assures that test results are reliable for ascertaining CRE boundary operability. Determination of CRE leakage at the NRC accepted frequencies provides assurance that significant degradation of the CRE boundary will not occur between CRE leakage determinations.

Measurement of CRE pressure with respect to all areas adjacent to the CRE boundary at designated locations for use in assessing the CRE boundary at a frequency of 24 months on a staggered test basis (with respect to the CRVS trains). This element is intended to ensure that CRE differential pressure is regularly measured to identify changes in pressure warranting evaluation of the condition of the CRE boundary. Obtaining and trending pressure data provides additional assurance that significant degradation of the CRE boundary will not go undetected between CRE inleakage determinations.

Quantitative limits on unfiltered inleakage. This element is intended to establish the CRE inleakage limit as the CRE unfiltered infiltration rate assumed in the CRE occupant radiological consequence analyses of design basis accidents. Having an unambiguous criterion for the CRE boundary to be considered operable in order to meet LCO 3.7.10, will ensure that associated action requirements will be consistently applied in the event of CRE degradation resulting in inleakage exceeding the limit.

Consistent with TSTF-448, Revision 3, the program states that the provisions of SR 3.0.2 are applicable to the program frequencies for performing the activities required by program paragraph number c, parts (i) and (ii) (assessment of CRE habitability and measurement of CRE inleakage), and paragraph number d (measurement of CRE differential pressure). This statement is needed to avoid confusion. SR 3.0.2 is applicable to the surveillance that references the testing in the CRE Habitability Program. However, SR 3.0.2 is not applicable to Administrative Controls unless specifically invoked. Providing this statement in the program eliminates any confusion regarding whether SR 3.0.2 is applicable, and is acceptable.

Consistent with TSTF-448, Revision 3, proposed TS 5.5.19 states, in part, that (1) a CRE Habitability Program shall be established and implemented, (2) the program shall include the NRC-specified elements, as described above, and (3) the provisions of SR 3.0.2 are applicable to Frequencies. Therefore, TS 5.5.19, which is consistent with the model program TS approved by the NRC staff in TSTF-448, Revision 3, is acceptable.

### 3.5 Implementation of New Surveillance and Assessment Requirements by the Licensee

The licensee has proposed the following license conditions regarding the initial performance of the new surveillance and assessment requirements:

Upon implementation of the amendment adopting TSTF-448, Revision 3, the following conditions shall be considered met:

1. Determination of CRE unfiltered air inleakage as required by surveillance requirement (SR) 3.7.10.5, in accordance with TS 5.5.19.c.(i),
2. The assessment of CRE habitability as required by TS 5.5.19.c.(ii), and
3. The measurement of CRE pressure as required by TS 5.5.19.d.

Following implementation these conditions will be performed:

- (a) The first performance of SR 3.7.10.5, in accordance with Specification 5.5.19.c.(i), shall be within the specified Frequency of 6 years, plus the 18-month

allowance of SR 3.0.2, as measured from February 3, 2005, the date of the most recent successful tracer gas test, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.

- (b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.19.c.(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from February 3, 2005, the date of the most recent successful tracer gas test, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.
- (c) The first performance of the periodic measurement of CRE pressure, Specification 5.5.19.d, shall be within 24 months, plus the 182 days allowed by SR 3.0.2, as measured from February 3, 2005, the date of the most recent successful pressure measurement test, or within 182 days if not performed previously.

The new license conditions adopted the conditions in section 2.3 of the model application published in the *Federal Register* on January 17, 2007 (72 FR 2022). Plant-specific changes were made to these proposed license conditions. The proposed plant-specific license conditions are consistent with the model application and, therefore, are acceptable.

Based on the above, the NRC staff concludes the proposed changes meet the technical requirements in the regulations that are discussed in Section 2.0 of this safety evaluation. The NRC staff further concludes that the proposed TS changes in the proposed amendment meet 10 CFR 50.36 and, therefore, the proposed amendment is acceptable.

The licensee identified changes to be made to the TS Bases that are associated with the TSs that are being changed in Attachment 4 to its application. The NRC does not approve these changes. The changes to the TS Bases to the TS Bases are made by the licensee through TS 5.5.14, "Technical Specifications (TS) Bases Control Program." However, the NRC has reviewed the identified changes to the TS Bases for this amendment and has no objection to the changes.

#### 4.0 STATE CONSULTATION

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

## 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement 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 considerations, and there has been no public comment on the finding as published in the *Federal Register* on January 29, 2008 (73 FR 5227). 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, on the basis of 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.

## 7.0 REFERENCES

1. U.S. Nuclear Regulatory Commission, Generic Letter 2003-01, "Control Room Habitability," dated June 12, 2003 (ADAMS Accession No. ML031620248)
2. American Society for Testing and Materials (ASTM) E741-00, "Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution," 2000.
3. U.S. Nuclear Regulatory Commission, "NRC Regulatory Issue Summary (RIS) 2005-20: Revision to Guidance Formerly Contained in NRC Generic Letter 91-18, 'Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability,'" dated September 26, 2005 (ADAMS Accession No. ML052020424).
4. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.196, Revision 0, "Control Room Habitability at Light-Water Nuclear Power Reactors," dated May 2003 (ADAMS Accession No. ML031490611).
5. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.197, Revision 0, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," dated May 2003 (ADAMS Accession No. ML031490664).
6. Nuclear Energy Institute (NEI) 99-03, "Control Room Habitability Assessment Guidance," Revision 0, dated June 2001.

7. David H. Oatley, Pacific Gas and Electric Company, to U.S. Nuclear Regulatory Commission, "60-Day Response to Request for Information on Generic Letter 2003-01, 'Control Room Habitability,'" dated August 8, 2003 (ADAMS Accession No. ML032310415).

Principal Contributor: A. Wang

Date: December 23, 2008

December 23, 2008

J. Conway

- 2 -

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,  
/RA/

Alan Wang, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosures:

1. Amendment No. 201 to DPR-80
2. Amendment No. 202 to DPR-82
3. Safety Evaluation

cc w/encls: Distribution via Listserv

DISTRIBUTION:

PUBLIC	RidsNrrDorlLpl4 Resource
LPLIV Reading	RidsNrrLAGLappert Resource
RidsAcrsAcnw_MailCTR Resource	RidsNrrPMDiabloCanyon Resource
RidsNrrDirsltsb Resource	RidsOgcRp Resource
RidsNrrDorlDpr Resource	RidsRgn4MailCenter Resource

ADAMS Accession No. ML083290609 \*See previous concurrence \*\*per OGC waiver ML072980233

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	DIRS/ITSB/BC	OGC	NRR/LPL4/BC	NRR/LPL4/PM
NAME	AWang*	GLappert*	RElliott*	Not Required**	MMarkley <i>MM</i>	AWang <i>AW</i>
DATE	12/3/08	12/2/08	12/8/08	--	12/22/08 <i>MM</i>	12/22/08 <i>AW</i>

OFFICIAL RECORD COPY

23