

July 10, 2006

Mr. John S. Keenan  
Senior Vice President – Generation and Chief Nuclear Officer  
Pacific Gas and Electric Company  
PO Box 770000  
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SUBJECT: HUMBOLDT BAY POWER PLANT UNIT 3 - ISSUANCE OF AMENDMENT  
REGARDING TECHNICAL SPECIFICATION SECTION 3.1.2, "SPENT FUEL  
POOL LOAD RESTRICTIONS AND SECTION 5.2.2, "FACILITY STAFF," (TAC  
NO. L52673)

Dear Mr. Keenan:

The Commission has issued the enclosed Amendment No. 38 to Facility Operating License No. DPR-7 for the Humboldt Bay Power Plant, Unit 3. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated January 19, 2006.

The amendment revises TS 3.1.2 to correct an editorial error, and TS 5.2.2 to allow leaving the Unit 3 control room temporarily unmanned during emergency conditions requiring personnel to evacuate occupied buildings for their safety.

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

Sincerely,

/RA/

John B. Hickman, Project Manager  
Decommissioning Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 50-133

Enclosures:

1. Amendment No. 38 to DPR-7
2. Safety Evaluation

cc w/encls: See next page

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PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-133

HUMBOLDT BAY POWER PLANT, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 38  
License No. DPR-7

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Pacific Gas and Electric Company (the licensee), dated January 19, 2006, 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 be maintained in conformity with the application, as amended, the provisions of the Act, and the applicable rules and regulations of the Commission;
  - C. There is reasonable assurance: 1) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public; and 2) that such activities will be conducted in compliance with applicable portions of 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 Possession Only License No. DPR-7 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 38, are hereby incorporated in the license. Pacific Gas and Electric Company shall maintain the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Keith I. McConnell, Deputy Director  
Decommissioning Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Nuclear Material Safety  
and Safeguards

Enclosure: Changes to the Technical Specifications

Date of Issuance: July 10, 2006

ENCLOSURE TO LICENSE AMENDMENT NO. 38

POSSESSION ONLY LICENSE NO. DPR-7

DOCKET NO. 50-133

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

3.1-2  
5.0-2  
5.0-3

INSERT

3.1-2  
5.0-2  
5.0-3

Enclosure

### 3.1 DEFUELED SYSTEMS

#### 3.1.2 Spent Fuel Pool Load Restrictions

LCO 3.1.2            Loads carried over the fuel in the spent fuel pool racks shall be limited to a weight of no greater than 330 pounds.

APPLICABILITY:    Whenever irradiated fuel assemblies are stored in the spent fuel pool.

#### ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A.    Load weight not within limit.	A.1    Place the load in a safe position.	Immediately

#### SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.2.1        Verify the load weight # 330 pounds.	Prior to moving each load over storage racks containing irradiated fuel.

## 5.0 ADMINISTRATIVE CONTROLS

### 5.2 Organization

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#### 5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safe storage of irradiated fuel.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the Quality Assurance Plan and plant procedures.
- b. The Designated Manager shall be responsible for overall unit safe operation and shall have control over those onsite activities and resources necessary for maintenance and storage of irradiated fuel in a safe condition.
- c. The Designated Officer shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to ensure the safe storage of irradiated fuel.
- d. The individuals who train the CERTIFIED FUEL HANDLERS and those who carry out radiation protection functions or perform quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

#### 5.2.2 Facility Staff

- a. Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 5.2-1.
- b. At least one Certified Fuel Handler shall be onsite when fuel is in the spent fuel storage pool.

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(continued)

## 5.2 Organization

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### 5.2.2 Facility Staff (continued)

- c. The Unit 3 control room shall be continuously manned or, as an alternative, audible and visual annunciation of all alarms in Unit 3 shall be provided at a continuously manned control station in Units 1 or 2, considered to be the entire +27 foot elevation operating deck. A common annunciator may be used for all such alarms. However, should an emergency situation arise in which action is immediately necessary to protect worker health and safety, the Unit 3 control room (and concurrently the control station in Units 1 or 2) may be left unmanned for such time as is necessary to ensure worker health and safety is protected.
- d. An individual qualified in radiation protection procedures shall be onsite during fuel handling operations.
- e. All fuel handling operations shall be directly supervised by a qualified individual.
- f. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform functions important to the safe storage of irradiated fuel assemblies. These procedures should follow the general guidance of the NRC Policy Statement on working hours (Generic Letter No. 82-12).
- g. The Shift Foreman shall be a CERTIFIED FUEL HANDLER.

SAFETY EVALUATION BY OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

RELATED TO AMENDMENT NO. 38 TO FACILITY OPERATING LICENSE NO. DPR-7

PACIFIC GAS AND ELECTRIC COMPANY

HUMBOLDT BAY POWER PLANT, UNIT 3

DOCKET NO. 50-133

1.0 INTRODUCTION

By letter dated January 19, 2006, Pacific Gas and Electric Company (PG&E, the licensee) submitted a request for an amendment to Facility Operating License No. DPR-7 that would revise Technical Specification (TS) 3.1.2 to correct an editorial error, and TS 5.2.2 to allow leaving the Unit 3 control room temporarily unmanned during emergency conditions requiring personnel to evacuate occupied buildings for their safety.

2.0 BACKGROUND

Humboldt Bay Power Plant (HBPP) was permanently shut down in July 1976, and until recently was in safe storage condition (SAFSTOR). SAFSTOR is the decommissioning method in which a nuclear facility is placed and maintained in a condition that allows the safe storage of radioactive components of the nuclear plant and subsequent decontamination to levels that permit license termination. A Post Shutdown Decommissioning Activities Report was issued by the licensee in February 1998. A Decommissioning Plan (DP) was approved in July 1988. The licensee converted its DP into its Defueled Safety Analysis Report which they submitted on August 28, 1998, and update every two years. The licensee is now engaged in some incremental decommissioning activities. In December 2003, PG&E formally submitted a license application to the U.S. Nuclear Regulatory Commission (NRC) for approval of a dry-cask Independent Spent Fuel Storage Installation (ISFSI) at the Humboldt Bay site. A license and safety evaluation report for the Humboldt Bay ISFSI were issued on November 17, 2005.

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include TS as part of the license. The Commission's regulatory requirements related to the content of TS are set forth in 10 CFR 50.36. That regulation requires that the TS include items in five specific categories: 1) safety limits, limiting safety system settings, and limiting control settings; 2) limiting conditions for operation; 3) surveillance requirements; 4) design features; and 5) administrative controls. The regulation, however, does not specify particular items to be included in TS. Section 50.36(c)(2) provides four criteria to be used in determining whether particular items are required to be included in the TS. Many of the criteria in 50.36(c) are not applicable to decommissioning nuclear power plants and, therefore,

10 CFR 50.36(c)(6) states that technical specifications for decommissioning reactors are developed on a case-by-case basis.

The change proposed by this license amendment request (LAR) will modify TS 3.1.2, Limiting Condition for Operation (LCO) 3.1.2, Condition A, to replace the word "restriction" with the word "weight" so that action is required if the load weight, rather than the load restriction, is not within the limit. The change will also modify TS 5.2.2.c to allow the Unit 3 control room, and the associated control station in Units 1 and 2, to be temporarily unmanned in an emergency when personnel are required to evacuate occupied buildings for their health and safety.

### 3.0 REGULATORY EVALUATION

10 CFR 50.54(x) allows licensees to take reasonable action that departs from a license condition or a TS to protect the public health and safety in an emergency. On multiple occasions, licensees have invoked 10 CFR 50.54(x) to protect the health and safety of site personnel from severe weather conditions and other emergency situations. 10 CFR 50.54(x) is not expected to be utilized for routine or reasonably anticipated occurrences. 10 CFR 50.72(b) requires a report within one hour to the NRC Operations Center for any licensee actions authorized pursuant to 50.54(x).

The staff has previously approved a licensee's Physical Security Plan that contains provisions to allow personnel to leave their outside posts (thereby degrading their security system) and take shelter inside plant buildings for personnel safety during a life threatening situation such as a hurricane.

### 4.0 TECHNICAL EVALUATION

#### 4.1 TS 3.1.2, "Spent Fuel Pool Load Restrictions"

Currently the LCO for TS 3.1.2 states: "Loads carried over the fuel in the spent fuel pool racks shall be limited to a weight of no greater than 330 pounds." The Surveillance Requirements for TS 3.2.1, states: "Verify the load weight # 330 pounds." The Actions Condition statement for compensatory actions in TS 3.1.2, states: "Load **restriction** not within limit." (emphasis added) As currently stated the wording for the actions condition statement is inconsistent with the LCO and the surveillance requirement. The licensee has proposed to revise the actions condition statement to read: "Load weight not within limit." This change is administrative in nature and consistent with the intent of the LCO; therefore, it is acceptable.

#### 4.2 TS 5.2.2, "Facility Staff"

Currently TS 5.2.2.c. reads: "The Unit 3 control room shall be continuously manned or, as an alternative, audible and visual annunciation of all alarms in Unit 3 shall be provided at a continuously manned control station in Unit 1 or 2, considered to be the entire +27-foot elevation operating deck. A common annunciator may be used for all such alarms." The licensee has proposed to add to this TS the following: "However, should an emergency situation arise in which action is immediately necessary to protect worker health and safety, the Unit 3 control room (and concurrently the control station in Units 1 or 2) may be left unmanned

for such time as is necessary to ensure worker health and safety is protected.” Units 1 and 2 are operating fossil fueled power plants contiguous with the permanently shutdown Unit 3.

On June 14, 2005, a magnitude 7.2 earthquake occurred 97 miles WNW of the Humboldt Bay site and was felt onsite. Subsequently, a tsunami warning was issued for an area that included the plant site. In accordance with plant emergency procedures, site personnel evacuated the facility to the high ground evacuation site within the owner controlled area of the site. Since TS 5.2.2.c requires continuous staffing of the Unit 3 control room, or alternatively of the Units 1 and 2 control station, this necessitated that the licensee invoke the provisions of 10 CFR 50.54(x) for noncompliance with the TS. Based on this experience, and that the site will continue to be subject to potential earthquakes and tsunamis, the licensee requested the change to the TS to allow temporarily not manning the Unit 3 control room, or the Units 1 or 2 control station, when necessary to protect worker health and safety.

The HBPP was permanently shutdown in 1976, in large part due to the cost of modifications required to address seismic concerns. The plant was originally designed for peak ground acceleration of 0.2g. However, as recently as 1994, the plant experienced peak ground acceleration of 0.55g associated with an earthquake. Although some of the plant was upgraded to withstand larger ground motion prior to shutdown, the site remains subject to earthquakes that may necessitate building evacuation. Given the seismicity of the area, the plant is also subject to tsunami hazards. An extensive analysis of the tsunami hazard, performed for the licensing of the ISFSI, determined that the maximum credible wave height at the site is 43 feet above mean low water. By comparison, the level of the Unit 3 control room, or the Units 1 or 2 control station, is 27 feet above mean low water level. Clearly, both earthquakes and tsunamis, in addition to other possible events, pose a life threatening hazard to plant and control room personnel.

NRC previously evaluated potential accident scenarios for the permanently defueled and shutdown condition in a safety evaluation report (SER) for the decommissioning of Humboldt Bay Power Plant, Unit No. 3, dated April 1987. The staff evaluated multiple accident scenarios and, for all scenarios, releases remained within regulatory limits with the assumption of no operator actions. The staff analysis for the impact of tsunami flooding found that the impact of the event was bounded by other analyses, again without operator action. The primary function of the control room operator is to observe plant status indicators, to respond to alarms, and to direct recovery actions. However, due to the permanently shutdown status of the plant, all of the equipment controls and manipulations that would be necessary for an adequate response to an emergency are located in the vicinity of the equipment location, outside the control room. Therefore, there is no advantage for the operator to remain in the control room when the remainder of the site personnel are evacuated. Should the control room operator remain at his or her duty location during a potentially life threatening emergency and be seriously injured, he or she would be unavailable to perform his or her duties during the recovery from the emergency. With the limited operational staff at a permanently shutdown facility the loss of the operator could significantly impair recovery.

The staff considers 10 CFR 50.54(x) to be a provision that should only be invoked in rare and unusual circumstances. Based on the high seismicity of the Humboldt Bay area which makes it reasonable to expect that evacuation will be required for either seismic or tsunami concerns, the staff determined that consideration of this amendment rather than relying on 10 CFR 50.54(x) was appropriate. Based on the likelihood of future emergencies necessitating

evacuation of the site, that operator actions in the control room are not necessary to maintain accident doses within regulatory limits, and that recovery actions cannot be taken from the control room alone, the staff determines that the proposed change is acceptable.

## 5.0 SUMMARY

The changes proposed by this LAR will clarify an existing requirement and allow the licensee to evacuate the control room in an emergency that requires site evacuation for the protection of site staff health and safety. On the basis of its review, NRC staff concluded that the licensee's request to clarify the existing requirement will better ensure that the safety limit is not exceeded and the request to temporarily unman the control room will not hinder the licensee's response to an emergency. The staff, therefore, concludes that the LAR is acceptable.

## 6.0 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.

## 7.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an Environmental Assessment (EA) and Finding of No Significant Impact were published in the *Federal Register* on July 3, 2006. Based on the EA, the Commission has determined that issuance of this amendment will not have a significant effect on the quality of the human environment. Accordingly, it has been determined that a Finding of No Significant Impact is appropriate.

The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (see 71 Federal Register 10071-10077 (February 28, 2006)).

## 8.0 CONCLUSION

The staff 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; and 2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security nor to the health and safety of the public.

Principal Contributor: John Hickman

Date: July 10, 2006