

NOV 2 1984

Docket No.: 50-275

Mr. J. O. Shiffer, Vice President
Nuclear Power Generation
c/o Nuclear Power Generation, Licensing
Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Dear Mr. Shiffer:

Subject: Diablo Canyon Nuclear Power Plant, Unit 1 - Issuance of Facility
Operating License DPR-80

The U. S. Nuclear Regulatory Commission has issued the enclosed Facility
Operating License No. DPR-80 to the Pacific Gas & Electric Company for the
Diablo Canyon Nuclear Power Plant, Unit 1, located in San Luis Obispo County,
California. License No. DPR-80 authorizes operation of the Diablo Canyon
Nuclear Power Plant, Unit 1, at reactor core power levels not in excess of
3338 megawatts thermal (100% rated power). This license supersedes Facility
Operating License No. DPR-76, as amended.

Also enclosed are a copy of (1) a related Federal Register notice which has
been forwarded to the Office of the Federal Register for publication, and (2)
a Safety Evaluation pertaining to the issuance of the full power license.

Two signed originals of Amendment No. 7 to Indemnity Agreement No. B-75
which covers the activities authorized under License No. DPR-80 are also
enclosed. Please sign both copies and return one copy to this office.

Sincerely,

Original Signed by

Frank J. Miraglia

per Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

Enclosures:

1. Facility Operating License No. DPR-80
2. Federal Register Notice
3. Safety Evaluation
4. Amendment 7 to Indemnity Agreement B-75

OSP*
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11/1/84

cc: See next page

PREVIOUSLY CONCURRED BY:*

DL:LB#3*	DL:LB#3*	DL:LB#3*	OELD*	DL:AD/L*	DL: [Signature]	NRR	NRR
HSchierling/yt	JLee	GWKnighton	LChandler	TMNovak	DEisenhut	Case	HRDenton
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Diablo Canyon

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11/2/84

ISSUANCE OF FACILITY OPERATING LICENSE DPR-80

DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1

DISTRIBUTION

Docket File 50-275*

NRC PDR*

LPDR*

PRC System*

NSIC*

LB#3 Reading

JLee (15)

HSchierling* (10)

TNovak*

JSaltzman

LChandler*

CMiles

HDenton

JRutberg

AToalston

WMiller

RHeishman*

EJordan

LHarmon*

DBrinkman

FAnderson*

TBarnhart (4)*

IBailey

*With Technical Specifications (NUREG-1102) and Environmental Protection Plan



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

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1
DOCKET NO. 50-275
FACILITY OPERATING LICENSE

License No. DPR-80

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for licenses by Pacific Gas and Electric Company 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, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Diablo Canyon Nuclear Power Plant, Unit 1 (the facility), has been substantially completed in conformity with Provisional Construction Permit No. CPPR-39 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission, except as exempted from compliance in Section 2.D below;
 - D. There is reasonable assurance (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission set forth in 10 CFR Chapter I, except as exempted from compliance in Section 2.D below;
 - E. The Pacific Gas and Electric Company is technically qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. The Pacific Gas and Electric Company has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;
 - G. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;

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- H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Operating License No. DPR-80, subject to the conditions for protection of the environment set forth herein, is in accordance with applicable Commission regulations governing environmental reviews (10 CFR Part 50, Appendix D and 10 CFR Part 51) and all applicable requirements have been satisfied; and
 - I. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
2. Pursuant to Commission's Memorandum and Order CLI-84-13, dated August 10, 1984, Facility Operating License No. DPR-76 issued September 22, 1981, as subsequently amended, is superseded by Facility Operating License No. DPR-80, hereby issued to Pacific Gas and Electric Company to read as follows:
- A. This License applies to the Diablo Canyon Nuclear Power Plant, Unit 1, a pressurized water nuclear reactor and associated equipment (the facility), owned by the Pacific Gas and Electric Company (PG&E). The facility is located in San Luis Obispo County, California, and is described in PG&E's Final Safety Analysis Report as supplemented and amended, and the Environmental Report as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the Pacific Gas and Electric Company:
 - (1) Pursuant to Section 104(b) of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities", to possess, use, and operate the facility at the designated location in San Luis Obispo County, California, in accordance with the procedures and limitations set forth in this license;
 - (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
 - (3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (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 3338 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, both of which are attached hereto, are hereby incorporated in this license. The Pacific Gas and Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
 - (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;

- b. Modification of test objectives, methods, or acceptance criteria for any test identified in Section 14 of PG&E's Final Safety Analysis Report, as amended, as being essential;
- c. Performance of any test at a power level different from that described in the program; and
- d. Failure to complete any test included in the described program (planned or scheduled for power levels up to the authorized power level).

(4) Special Tests

PG&E is authorized to perform steam generator moisture carryover studies and turbine performance tests at the Diablo Canyon Nuclear Power Plant, Unit 1. These studies involve the use of an aqueous tracer solution of three (3) curies of sodium-24. PG&E's personnel shall be in charge of conducting these studies and be knowledgeable in the procedures. PG&E shall impose personnel exposure limits, posting, and survey requirements in conformance with those in 10 CFR Part 20 to minimize personnel exposure and contamination during the studies. Radiological controls shall be established in the areas of the chemical feed, feedwater, steam, condensate and sampling systems where the presence of the radioactive tracer is expected to warrant such controls. PG&E shall take special precautions to minimize radiation exposure and contamination during both the handling of the radioactive tracer prior to injection and the taking of system samples following injection of the tracer. PG&E shall ensure that all regulatory requirements for liquid discharge are met during disposal of all sampling effluents and when re-establishing continuous blowdown from the steam generators after completion of the studies.

(5) Fire Protection

- a. PG&E shall maintain in effect and fully implement all provisions of the approved fire protection plan and of the NRC staff's Fire Protection Evaluation in Supplements 8, 9, 13, 23, and 27 to the Diablo Canyon Safety Evaluation Report, subject to provisions b and c below.
- b. The licensee shall make no change to features of the approved fire protection program which would decrease the level of fire protection in the plant without prior approval of the Commission. To make such a change the licensee must submit an application for license amendment pursuant to 10 CFR 50.90.

- c. The licensee may make changes to features of the approved fire protection program which do not decrease the level of fire protection without prior Commission approval after such features have been installed as approved, provided such changes do not otherwise involve a change in a license condition or technical specification or result in an unreviewed safety question (see 10 CFR 50.59). However, the licensee shall maintain, in an auditable form, a current record of all such changes including an evaluation of the effects of the change on the fire protection program and shall make such records available to NRC inspectors upon request. All changes to the approved program made without prior Commission approval shall be reported to the Director of the Office of Nuclear Reactor Regulation, together with supporting analyses, annually.

(6) NUREG-0737 Conditions

Each of the following conditions shall be completed to the satisfaction of the NRC as indicated below. Each of the following conditions references the appropriate Section in SER Supplements No. 10 and/or No. 12.

a. Shift Technical Advisor (Section I.A.1.1)

PG&E shall provide a fully-trained, on-shift technical advisor to the Shift Foreman.

b. Shift Staffing (Section I.A.1.3)

Until the plant has completed its startup test program, licensed personnel who are not regularly assigned members of the shift staff, including but not limited to the Operations Supervisor, shall not be assigned shift duties to satisfy the minimum staffing requirements for operation in Modes 1, 2, 3 and 4 except for cases of emergencies such as unexpected illness. Exceptions to this requirement may be made only after prior consultation with and approval by the NRC.

c. Management of Operations (Section I.B.1)

The Pacific Gas and Electric Company shall augment the plant staff to provide on each shift an individual experienced in comparable size pressurized water reactor operation. These individuals shall have at least one year of experience in operation of large pressurized

water reactors or shall have participated in the startup of at least three pressurized water reactors. At least one such experienced individual shall be on duty on each shift through the startup test program whenever the reactor is not in a cold shutdown condition for at least the first year of operation or until the plant has attained a nominal 100% power level, whichever occurs first.

d. Procedures for Verifying Correct Performance of Operating Activities (Section I.C.6)

Procedures shall be available to verify the adequacy of the operating activities.

e. Post Accident Sampling (Section II.B.3)

PG&E shall provide the capability to promptly obtain and perform radioisotopic and chemical analyses of reactor coolant and containment atmosphere samples under degraded core conditions without excessive exposure.

f. Relief and Safety Valve Test Requirements (Section II.D.1)

PG&E shall implement the results of the EPRI test program.

g. Containment Isolation Dependability (Section II.E.4.2)

PG&E shall limit the 12-inch vacuum/overpressure relief valve opening to less than or equal to 50 degrees.

h. Calculations for Small-Break LOCAs (Sections II.K.3.30 and II.K.3.31)

PG&E is participating in the Westinghouse Owners Group effort for this item and shall conform to the results of this effort. Within one year of staff approval of the Westinghouse generic methodology for calculating small break LOCAs (II.K.3.30), PG&E shall submit a plant specific calculation (II.K.3.31) for staff review and approval.

i. Long-Term Emergency Preparedness (Section III.A.2)

(1) PG&E shall submit a detailed control room design review summary report by December 31, 1984.

(2) PG&E shall complete operator training on the Safety Parameter Display System and emergency operating procedures by March 28, 1985.

- (3) PG&E shall implement emergency operating procedures based upon Westinghouse Owners Group guidelines by March 28, 1985.

(7) Seismic Design Bases Reevaluation Program (SSER 27 Section IV.5)

PG&E shall develop and implement a program to reevaluate the seismic design bases used for the Diablo Canyon Nuclear Power Plant.

The program shall include the following Elements:

- (1) PG&E shall identify, examine, and evaluate all relevant geologic and seismic data, information, and interpretations that have become available since the 1979 ASLB hearing in order to update the geology, seismology and tectonics in the region of the Diablo Canyon Nuclear Power Plant. If needed to define the earthquake potential of the region as it affects the Diablo Canyon Plant, PG&E will also reevaluate the earlier information and acquire additional new data.
- (2) PG&E shall reevaluate the magnitude of the earthquake used to determine the seismic basis of the Diablo Canyon Nuclear Plant using the information from Element 1.
- (3) PG&E shall reevaluate the ground motion at the site based on the results obtained from Element 2 with full consideration of site and other relevant effects.
- (4) PG&E shall assess the significance of conclusions drawn from the seismic reevaluation studies in Elements 1, 2 and 3, utilizing a probabilistic risk analysis and deterministic studies, as necessary, to assure adequacy of seismic margins.

PG&E shall submit for NRC staff review and approval a proposed program plan and proposed schedule for implementation by January 30, 1985. The program shall be completed and a final report submitted to the NRC three years following the approval of the program by the NRC staff.

PG&E shall keep the staff informed on the progress of the reevaluation program as necessary, but as a minimum will submit quarterly progress reports and arrange for semi-annual meetings with the staff. PG&E will also keep the ACRS informed on the progress of the reevaluation program as necessary, but not less frequently than once a year.

(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.

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.

E. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission approved physical security, guard training and qualification, and safeguards contingency plans, including amendments made pursuant to the authority of 10 CFR 50.54(p). The approved plans, which contain safeguards information as described in 10 CFR 73.21 are entitled "Diablo Canyon

Nuclear Plant Physical Security Plan," Revision 11 dated May 27, 1982, as revised July 19, August 12, September 17, 1982; February 4, August 3, 1983; January 11, February 6, March 19, April 19, August 29, 1984; "Diablo Canyon Nuclear Plant Guard Training and Qualification Plan," Revision 2 dated February 4, 1983 as revised August 29, 1984; "Diablo Canyon Nuclear Plant Safeguards Contingency Plan," Revision 2 dated February 4, 1983 as revised August 3, 1983, August 29, 1984.

F. Antitrust

Pacific Gas and Electric Company shall comply with the antitrust conditions in Appendix C to this license.

G. Reporting

PG&E shall report any violations of the requirements contained in Sections 2.C(3) through 2.C(10), 2.E and 2.F, of this License within 24 hours. Initial notification shall be made in accordance with the provisions of 10 CFR 50.72 with written follow-up in accordance with the procedures described in 10 CFR 50.73 (b), (c), (d) and (e).

H. Financial Protection

PG&E shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

I. Term of License

This License is effective as of the date of issuance and shall expire at midnight on April 23, 2008.

FOR THE NUCLEAR REGULATORY COMMISSION


Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A - Technical Specifications
2. Appendix B - Environmental Protection Plan
3. Appendix C - Antitrust Conditions

Date of Issuance: November 2, 1984

APPENDIX B

TO FACILITY OPERATING LICENSE NO. DPR-80
DIABLO CANYON NUCLEAR GENERATING STATION
UNIT 1

PACIFIC GAS AND ELECTRIC COMPANY
DOCKET NOS. 50-275 and 50-323

ENVIRONMENTAL PROTECTION PLAN
(NON-RADIOLOGICAL)

November 1984

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DIABLO CANYON NUCLEAR GENERATING STATION
UNIT 1

ENVIRONMENTAL PROTECTION PLAN
(NON-RADIOLOGICAL)
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1.0 Objectives of the Environmental Protection Plan

The Environmental Protection Plan (EPP) is to provide for protection of environmental values during construction and operation of the nuclear facility. The principal objectives of the EPP are as follows:

- (1) Verify that the plant is operated in an environmentally acceptable manner, as established by the FES and other NRC environmental impact assessments.
- (2) Coordinate NRC requirements and maintain consistency with other Federal, State and local requirements for environmental protection.
- (3) Keep NRC informed of the environmental effects of facility construction and operation and of actions taken to control those effects.

Environmental concerns identified in the FES which relate to water quality matters are regulated by way of the licensee's NPDES permit.

2.0 Environmental Protection Issues

The staff identified in the FES-OL dated May 1973 and FES-OL Addendum, dated May 1976 certain environmental issues which required study or license conditions to resolve environmental concerns and to assure adequate protection of the environment during the operation of the Diablo Canyon Nuclear Generating Station Units 1 and 2. On June 12, 1978, the Atomic Safety and Licensing Board issued a partial initial decision in favor of licensing Diablo Canyon Units 1 and 2 subject to certain conditions for the protection of the environment. The conditions needed to resolve these concerns resulting from the environmental impact review are as follows:

2.1 Aquatic Issues

Specific aquatic issues raised by the staff or the hearing board were:

- (1) The need to control the release of chlorine and study its effects on marine life (FES-OL Sections 3.5, 5.3, 6.3, 12.3, and 13.3)
- (2) The need to study the amount, persistence, and stabilization of foam generated by the discharge of cooling water (FES-OL Addendum Section 5.2, ASLB, p. 97)
- (3) The need to confirm that thermal mixing and current patterns occur as predicted and that heat treatment is limited. (FES-OL Section 3.3 and 5.3; Addendum Sections 3.3 and 6.0)
- (4) The continuation of preoperational monitoring studies on intertidal and subtidal biota particularly bull kelp and abalone during operation. (FES-OL Sections 3.5 and 6.0; Addendum Section 5.3 ASLB, p. 98)
- (5) The need for special studies to document levels of intake entrainment on eggs and larvae of fish and abalone and impingement on fish and invertebrates. (FES-OL Sections 5.3 and 6.2; Addendum Sections 5.3 and 5.4; ASLB p. 97)

Aquatic issues are now addressed by the effluent limitations, monitoring requirements, thermal effects study and Section 316(b) demonstration requirements contained in the NPDES permit issued by the California Regional Water Quality Control Board. The NPDES permit includes applicable requirements of the State Water Resources Control Board Ocean Plan* and Thermal Plan.** The NRC will rely on this agency for resolution of the issues involving water quality and aquatic biota.

*"Ocean Plan" is an abbreviation for the Water Quality Control Plan for Ocean Waters of California.

**"Thermal Plan" is an abbreviation for the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California.

2.2 Terrestrial Issues

Specific terrestrial issues raised by the staff or the hearing board were:

- (1) A program to assure erosion control within the transmission line corridor. (FES-OL Addendum Section 4.2.2)

This requirement shall be satisfied as follows:

Conditions and monitoring requirements for the control of erosion within the transmission line right-of-way are specified by the California Public Utilities Decision No. 79726. Nonconformance with the positions of Decision No. 79726 shall be reported to the NRC.

- (2) The need for controlled use of herbicides on transmission rights-of-way if they are used. (FES-OL, Section 5.3.1)
- (3) The need to preserve a shell midden of archeological significance on the Diablo Canyon Plant site and provide access to the site by local Indians. (ASLB Hearing Transcript, pp. 3424-3442 & pp. 3361-3369)

NRC requirements with regard to these terrestrial issues are specified in Subsection 4.2 of this EPP.

3.0 Consistency Requirements

3.1 Plant Design and Operation

The licensee may make changes in station design or operation or perform tests or experiments affecting the environment provided such changes, tests or experiments do not involve an unreviewed environmental question, and do not involve a change in the Environmental Protection Plan*. Changes in plant design or operation or performance of tests or experiments which do not affect the environment are not subject to the requirements of this EPP. Activities governed by Section 3.3 are not subject to the requirements of this section.

Before engaging in unauthorized construction or operational activities which may affect the environment, the licensee shall prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activities and obtain prior approval from the Director, Office of Nuclear Reactor Regulation. When such activity involves a change in the Environmental Protection Plan, such activity and change to the Environmental Protection Plan may be implemented only in accordance with an appropriate license amendment as set forth in Section 5.3.

A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the final environmental statement (FES) as modified by staff's testimony to the Atomic Safety and Licensing Board, supplements to the FES, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level or (3) a matter not previously reviewed and evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in facility design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include a written evaluation which provide bases for the determination that the change, test, or experiment does not involve an unreviewed environmental question nor constitute a decrease in the effectiveness of this EPP to meet the objectives specified in Section 1.0. The licensee shall include as part of his Annual Environmental Operating Report (per Subsection 5.4.1) brief descriptions, analyses, interpretations, and evaluations of such changes, tests and experiments.

*This provision does not relieve the licensee of the requirements of 10 CFR §50.59.

3.2 Reporting Related to the NPDES Permits and State Certifications

Violations of the NPDES Permit or the State certification (pursuant to Section 401 of the Clean Water Act) shall be reported to the NRC by submittal of copies of the reports required by the NPDES Permit or certification. The licensee shall also provide the NRC with copies of the results of the following studies at the same time they are submitted to the permitting agency:

- i) Thermal effects study
- ii) Section 316(b) Demonstration Study

Changes and additions to the NPDES Permit or the State certification shall be reported to the NRC within 30 days following the date the change is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

The NRC shall be notified of changes to the effective NPDES Permit proposed by the licensee by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The licensee shall provide the NRC a copy of the application for renewal of the NPDES permit at the same time the application is submitted to the permitting agency.

3.3 Changes Required for Compliance with Other Environmental Regulations

Changes in plant design or operation and performance of tests or experiments which are required to achieve compliance with other Federal, State, or local environmental regulations are not subject to the requirements of Section 3.1.

4.0 Environmental Conditions

4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event that indicates or could result in significant environmental impact causally related to station operation shall be recorded and promptly reported to the NRC within 24 hours by telephone, telegraph, or facsimile transmissions followed by a written report within 30 days, as specified in Subsection 5.4.2. The following are examples: excessive bird impaction events; onsite plant or animal disease outbreaks; mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973; fish kills; increase in nuisance organisms or conditions; and unanticipated or emergency discharge of waste water or chemical substances.

No routine monitoring programs are required to implement this condition.

4.2 Environmental Monitoring

4.2.1 Herbicide Applications

The use of herbicides within the corridor rights-of-way associated with the station shall conform to the approved use of selected herbicides as registered by the Environmental Protection Agency and approved by State authorities and applied as directed by said authorities. Reporting requirements shall apply only during the period of herbicide applications for those corridor rights-of-way associated with the station.

4.2.2 Preservation of Archaeological Resources Requirements

The licensee shall avoid disturbances to the SLO-2 site in accordance with the Archaeological Resources Management Plan submitted to the NRC on April 7, 1980.

Should a disturbance of the SLO-2 site inconsistent with the allowable use of the site under the Archaeological Resources Management Plan be necessary the licensee shall report the planned disturbance to the NRC in accordance with Subsection 5.4.2..

The licensee shall develop a plan for controlled access by the Chumash Indian Tribe to the SLO-2 site for religious activities, and transmit the plan to appropriate tribal representatives for negotiation. The plan shall provide for reasonable controlled access to the site, taking into account plant-related security and public health and safety constraints. A good-faith effort shall be demonstrated by the licensee to reach agreement with the Chumash Tribe on the plan within one year from the date of license issuance.

5.0 Administrative Procedures

5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the Environmental Protection Plan. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organization structure utilized to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

5.2 Records Retention

Records and logs relative to the environmental aspects of plant operation shall be made and retained in a manner convenient for review and inspection. These records and logs shall be made available to NRC on request.

Records of modifications to plant structures, systems and components determined to potentially affect the continued protection of the environment shall be retained for the life of the plant. All other records, data and logs relating to this EPP shall be retained for five years or, where applicable, in accordance with the requirements of other agencies.

5.3 Changes in Environmental Protection Plan

Request for change in the Environmental Protection Plan shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of such changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a license amendment incorporating the appropriate revision to the Environmental Protection Plan.

5.4 Plant Reporting Requirements

5.4.1 Routine Reports

An Annual Environmental Operating Report describing implementation of this EPP for the previous year shall be submitted to the NRC prior to May 1 of each year. The initial report shall be submitted prior to May 1 of the year following issuance of the operating license. The period of the first report shall begin with the date of issuance of the operating license.

The report shall include summaries and analyses of the results of the environmental protection activities required by Subsection 4.2 of this Environmental Protection Plan for the report period, including a comparison with preoperational studies, operational controls (as appropriate), and previous non-radiological environmental monitoring reports, and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of trends towards irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of action to alleviate the problem.

The Annual Environmental Operating Report shall also include:

- (a) A list of EPP noncompliances and the corrective actions taken to remedy them.
- (b) A list of all changes in station design or operation, tests, and experiments made in accordance with Subsection 3.1 which involved a potentially significant unreviewed environmental issue.
- (c) A list of nonroutine reports submitted in accordance with Subsection 5.4.2.

In the event that some results are not available by the report due date, the report shall be submitted noting and explaining the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

5.4.2 Nonroutine Reports

A written report shall be submitted to the NRC within 30 days of occurrence of nonroutine event. The report shall (a) describe, analyze, and evaluate the event, including extent and magnitude of the impact and plant operating characteristics, (b) describe the probable cause of the event, (c) indicate the action taken to correct the reported event, (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems, and (e) indicate the agencies notified and their preliminary responses.

Events reportable under this subsection which also require reports to other Federal, State or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this subsection. The NRC shall be provided a copy of such report at the same time it is submitted to the other agency.

APPENDIX CANTITRUST CONDITIONSFACILITY OPERATING LICENSE NO. DPR-80(1) Definitions

- a. "Applicant" means Pacific Gas and Electric Company, any successor corporation, or any assignee of this license.
- b. "Service Area" means that area within the exterior geographic boundaries of the several areas electrically served at retail, now or in the future, by Applicant, and those areas in Northern and Central California adjacent thereto.
- c. "Neighboring Entity" means a financially responsible private or public entity or lawful association thereof owning, contractually controlling or operating, or in good faith proposing to own, to contractually control or to operate facilities for the generation, or transmission at 60 kilovolts or above, of electric power which meets each of the following criteria: (1) its existing or proposed facilities are or will be technically feasible of direct interconnection with those of Applicant; (2) all or part of its existing or proposed facilities are or will be located within the Service Area; (3) its primary purpose for owning, contractually controlling, or operating generation facilities is to sell in the Service Area the power generated; and (4) it is, or upon commencement of operations will be, a public utility regulated under applicable state law or the Federal Power Act, or exempted from regulation by virtue of the fact that it is a federal, state, municipal or other public entity.
- d. "Neighboring Distribution System" means a financially responsible private or public entity which engages, or in good faith proposes to engage, in the distribution of electric power at retail and which meets each of the criteria numbered (1), (2) and (4) in subparagraph "C" above.

- e. "Costs" means all capital expenditures, administrative, general, operation and maintenance expenses, taxes, depreciation and costs of capital including a fair and reasonable return on Applicant's investment, which are properly allocable to the particular service or transaction as determined by the regulatory authority having jurisdiction over the particular service or transaction.
- f. "Good Utility Practice" means those practices, methods and equipment, including levels of reserves and provisions for contingencies, as modified from time to time, that are commonly used in the Service Area to operate, reliably and safely, electric power facilities to serve a utility's own customers dependably and economically, with due regard for the conservation of natural resources and the protection of the environment of the Service Area, provided such practices, methods and equipment are not unreasonably restrictive.
- g. "Firm Power" means that power which is intended to be available to the customer at all times and for which, in order to achieve that degree of availability, adequately installed and spinning reserves and sufficient transmission to move such power and reserves to the load center are provided.

(2) Interconnection

Interconnection agreements negotiated pursuant to these license conditions shall be subject to the following paragraphs "a" through "g":

- a. Applicant shall not unreasonably refuse to interconnect and operate normally in parallel with any Neighboring Entity, or to interconnect with any Neighboring Distribution System. Such interconnections shall be consistent with Good Utility Practice.
- b. Interconnection shall be at one point unless otherwise agreed by the parties to an interconnection agreement.

Interconnection shall not be limited to lower voltages when higher voltages are preferable from the standpoint of Good Utility Practice and are available from Applicant. Applicant may include in any interconnection agreement provisions that a Neighboring Entity or Neighboring Distribution System maintain the power factor associated with its load at a comparable level to that maintained by Applicant in the same geographic area and use comparable control methods to achieve this objective.

- c. Interconnection agreements shall not provide for more extensive facilities or control equipment at the point of interconnection than are required by Good Utility Practice unless the parties mutually agree that particular circumstances warrant special facilities or equipment.
- d. The Costs of additional facilities required to provide service at the point of interconnection shall be allocated on the basis of the projected economic benefits for each party from the interconnection after consideration of the various transactions for which the interconnection facilities are to be used, unless otherwise agreed by the parties.
- e. An interconnection agreement shall not impose limitations upon the use or resale of capacity and energy sold or exchanged under the agreement except as may be required by Good Utility Practice.
- f. An interconnection agreement shall not prohibit any party from entering into other interconnection agreements, but may provide that (1) Applicant receive adequate notice of any additional interconnection arrangement with others, (2) the parties jointly consider and agree upon additional contractual provisions, measures, or equipment, which may be required by Good Utility Practice as a result of the new arrangement, and (3) Applicant may terminate the interconnection agreement if the reliability of its system or service to its customers would be adversely affected by such additional interconnection arrangement.

- g. Applicant may include provisions in an interconnection agreement requiring a Neighboring Entity or Neighboring Distribution System to develop with Applicant a coordinated program for underfrequency load shedding and tie separation. Under such programs the parties shall equitably share the interruption or curtailment of customer load.

(3) Reserve Coordination

Interconnection agreements negotiated pursuant to these license conditions shall be subject to the following paragraphs "a" through "e" regarding reserve coordination:

- a. Applicant and any Neighboring Entity with which it interconnects shall jointly establish and separately maintain the minimum reserves to be installed or otherwise provided under an interconnection agreement. Unless otherwise mutually agreed upon, reserves shall be expressed as a percentage of estimated firm peak load and the minimum reserve percentage shall be at least equal to Applicant's planned reserve percentage without the interconnection. A Neighboring Entity shall not be required to provide reserves for that portion of its load which it meets through purchases of Firm Power. While different reserve percentages may be specified in various interconnection agreements, no party to an interconnection agreement shall be required to provide a greater reserve percentage than Applicant's planned reserve percentage, except that if the total reserves Applicant must provide to maintain system reliability equal to that existing without a given interconnection arrangement are increased by reason of the new arrangement, then the other party or parties may be required to install or provide additional reserves in the full amount of such increase.
- b. Applicant and Neighboring Entities with which it interconnects shall jointly establish and separately maintain the minimum spinning reserves to be provided under an interconnection agreement. Unless otherwise mutually agreed upon, spinning reserves shall be expressed as a percentage of peak load and the minimum spinning reserve percentage shall be at least equal to Applicant's spinning

reserve percentage without the interconnection. A Neighboring Entity shall not be required to provide spinning reserves for that portion of its load which it meets through purchases of Firm Power. While different spinning reserve percentages may be specified in various interconnection agreements, no party to an interconnection agreement shall be required to provide a greater spinning reserve percentage than that which Applicant provides, except that if the total spinning reserves Applicant must provide to maintain system reliability equal to that existing without a given interconnection arrangement are increased by reason of the new arrangement, then the other party or parties may be required to provide additional spinning reserves in the full amount of such increase.

- c. Applicant shall offer to sell, on reasonable terms and conditions, including a specified period, capacity to a Neighboring Entity for use as reserves if such capacity is neither needed for Applicant's own system nor contractually committed to others and if the Neighboring Entity will offer to sell, on reasonable terms and conditions, its own such capacity to the Applicant.
- d. Applicant may include in any interconnection agreement provisions requiring a Neighboring Entity to compensate Applicant for any reserves Applicant makes available as the result of the failure of such Neighboring Entity to maintain all or any part of the reserves it has agreed to provide in said interconnection agreement.
- e. Applicant shall offer to coordinate maintenance schedules with Neighboring Entities interconnected with Applicant and to exchange or sell maintenance capacity and energy when such capacity and energy are available and it is reasonable to do so in accordance with Good Utility Practice.

(4) Emergency Power

Applicant shall sell emergency power to any interconnected Neighboring Entity which maintains the level of minimum reserve agreed upon with Applicant, agrees to use due diligence to correct the emergency and agrees to sell

emergency power to Applicant. Applicant shall engage in such transactions if and when capacity and energy for such transactions are available from its own generating resources, or may be obtained by Applicant from other sources, but only to the extent that it can do so without impairing service to Applicant's retail or wholesale power customers or impairing its ability to discharge prior commitments.

(5) Other Power Exchanges

Should Applicant have on file, or hereafter file, with the Federal Energy Regulatory Commission, agreements or rate schedules providing for the sale and purchase of short-term capacity and energy, limited-term capacity and energy, long-term capacity and energy or economy energy, Applicant shall, on a fair and equitable basis, enter into like or similar agreements with any Neighboring Entity, when such forms of capacity and energy are available, recognizing that past experience, different economic conditions and Good Utility Practice may justify different rates, terms and conditions. Applicant shall respond promptly to inquiries of Neighboring Entities concerning the availability of such forms of capacity and energy from its system.

(6) Wholesale Power Sales

Upon request, Applicant shall offer to sell firm, full or partial requirements power for a specified period to an interconnected Neighboring Entity or Neighboring Distribution System under a contract with reasonable terms and conditions including provisions which permit Applicant to recover its costs. Such wholesale power sales must be consistent with Good Utility Practice. Applicant shall not be required to sell Firm Power at wholesale if it does not have available sufficient generation or transmission to supply the requested service or if the sale would impair service to its retail customers or its ability to discharge prior commitments.

(7) Transmission Services

- a. Applicant shall transmit power pursuant to interconnection agreements, with provisions which are appropriate to the requested transaction and which are consistent with these license conditions. Except as listed below, such service shall be provided (1) between two or among more than two Neighboring Entities or sections of a Neighboring Entity's system which are geographically separated, with which, now or in the future, Applicant is interconnected, (2) between a Neighboring Entity with which, now or in the future, it is interconnected and one or more Neighboring Distribution Systems with which, now or in the future, it is interconnected and (3) between any Neighboring Entity or Neighboring Distribution System(s) and the Applicant's point of direct interconnection with any other electric system engaging in bulk power supply outside the area then electrically served at retail by Applicant. Applicant shall not be required by this Section to transmit power (1) from a hydroelectric facility the ownership of which has been involuntarily transferred from Applicant or (2) from a Neighboring Entity for sale to any electric system located outside the exterior geographic boundaries of the several areas then electrically served at retail by Applicant if any other Neighboring Entity, Neighboring Distribution System, or Applicant wishes to purchase such power at an equivalent price for use within set areas. Any Neighboring Entity or Neighboring Distribution System(s) requesting transmission service shall give reasonable advance notice to Applicant of its schedule and requirements. Applicant shall not be required by this Section to provide transmission service if the proposed transaction would be inconsistent with Good Utility Practice or if the necessary transmission facilities are committed at the time of the request to be fully-loaded during the period of which service is requested, or have been previously reserved by Applicant for emergency purposes, loop flow, or other uses consistent with Good Utility Practice; provided, that with respect to the Pacific Northwest-Southwest Intertie, Applicant shall not be required by this Section to provide the requested transmission service if it would impair Applicant's own use of this facility consistent with Bonneville Project Act, (50 Stat. 731, August 20, 1937), Pacific Northwest Power Marketing Act (78 Stat. 756, August 31, 1964) and the Public Works Appropriations Act, 1965 (78 Stat. 682, August 30, 1964).

- b. Applicant shall include in its planning and construction programs, such increases in its transmission capacity or such additional transmission facilities as may be required for the transactions referred to in paragraph (a) of this Section, provided any Neighboring Entity or Neighboring Distribution System gives Applicant sufficient advance notice as may be necessary to accommodate its requirements from a regulatory and technical standpoint and provided further that the entity requesting transmission services compensates Applicant for the Costs incurred as a result of the request. Where transmission capacity will be increased or additional transmission facilities will be installed to provide or maintain the requested service to a Neighboring Entity or Neighboring Distribution System, Applicant may require, in addition to a rate for use of other facilities, that payment of Costs associated with the increased capacity or additional facilities shall be made by the parties in accordance with and in advance of their respective use of the new capacity or facilities.
- c. Nothing herein shall require Applicant (1) to construct additional transmission facilities if the construction of such facilities is inconsistent with Good Utility Practice or if such facilities could be constructed without duplicating any portion of Applicant's transmission system, (2) to provide transmission service to a retail customer or (3) to construct transmission outside the area then electrically served at retail by Applicant.
- d. Rate schedules and agreements for transmission services provided under this Section shall be filed by Applicant with the regulatory agency having jurisdiction over such rates and agreements.

(8) Access to Nuclear Generation

- a. If a Neighboring Entity or Neighboring Distribution System makes a timely request to Applicant for an ownership participation in the Stanislaus Nuclear Project, Unit No. 1 or any future nuclear generating unit for which Applicant applies for a construction permit during the 20-year period immediately following the date of the construction permit for Stanislaus Unit 1, Applicant shall offer the requesting party an opportunity to participate in such units, up to an amount reasonable in light

of the relative loads of the participants. With respect to Stanislaus Unit No. 1 or any future nuclear generating unit, a request for participation shall be deemed timely if received within 90 days after the mailing by Applicant to Neighboring Entities and Neighboring Distribution Systems of an announcement of its intent to construct the unit and a request for an expression of interest in participation. Participation shall be on a basis which compensates Applicant for a reasonable share of all its Costs, incurred and to be incurred, in planning, selecting a site for, constructing and operating the facility.

- b. Any Neighboring Entity or any Neighboring Distribution System making a timely request for participation in a nuclear unit must enter into a legally binding and enforceable agreement to assume financial responsibility for its share of the costs associated with participation in the unit and associated transmission facilities. Unless otherwise agreed by Applicant, a Neighboring Entity or Neighboring Distribution System desiring participation must have signed such an agreement within one year after Applicant has provided to that Neighboring Entity or Neighboring Distribution System pertinent financial and technical data bearing on the feasibility of the project which are then available to Applicant. Applicant shall provide additional pertinent data as they become available during the year. The requesting party shall pay to Applicant forthwith the additional expenses incurred by Applicant in making such financial and technical data available. In any participation agreement subject to this Section, Applicant may require provisions requiring payment by each participant of its share of all costs incurred up to the date of the agreement, requiring each participant thereafter to pay its pro rata share of funds as they are expended for the planning and construction of units and related facilities, and requiring each participant to make such financial arrangements as may be necessary to ensure the ability of the participant to continue to make such payments.

(9) Implementation

- a. All rates, charges, terms and practices are and shall be subject to the acceptance and approval of any regulatory agencies or courts having jurisdiction over them.

- b. Nothing contained herein shall enlarge any rights of a Neighboring Entity or Neighboring Distribution System to provide services to retail customers of Applicant beyond the rights they have under state or federal law.
- c. Nothing in these license conditions shall be construed as a waiver by Applicant of its rights to contest the application of any commitment herein to a particular factual situation.
- d. These license conditions do not preclude Applicant from applying to any appropriate forum to seek such changes in these conditions as may at the time be appropriate in accordance with the then-existing law and Good Utility Practice.
- e. These license conditions do not require Applicant to become a common carrier.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-275DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1PACIFIC GAS ELECTRIC COMPANYNOTICE OF ISSUANCE OF FACILITY OPERATING LICENSE DPR-80

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission), has issued Facility Operating License No. DPR-80 (the License), to Pacific Gas and Electric Company (PG&E or the licensee) which authorizes operation of the Diablo Canyon Nuclear Power Plant, Unit 1 (the facility or Diablo Canyon Unit 1) at reactor core power levels not in excess of 3338 megawatts thermal (100% rated power) in accordance with the provisions of the license, the Technical Specifications and the Environmental Protection Plan. Diablo Canyon, Unit 1 is a pressurized water reactor located in San Luis Obispo County, California.

On September 22, 1981, the Commission issued to Pacific Gas and Electric Company Facility Operating License No. DPR-76, which authorized fuel loading and operation up to 5% of rated power. On November 19, 1981, the Commission suspended Facility Operating License DPR-76 following PG&E's discovery of errors in seismic design. After substantial effort and review by the licensee and the staff, the Commission reinstated the license on November 8, 1983, CLI-83-27, to the extent of authorizing fuel loading and cold system testing. Hot system testing was subsequently authorized on January 25, 1984, CLI-84-2. Full reinstatement of the License to permit criticality and low power testing (up to 5% of rated power) was authorized on April 13, 1984, CLI-84-5. Following

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additional review, the Commission, on August 10, 1984, authorized issuance of a full-power license, CLI-84-13. On August 17, 1984, the U. S. Court of Appeals, responding to a petition of the Joint Intervenors, granted a stay of issuance of a full-power license pending the Court's review of certain issues. On October 31, 1984 the U. S. Court of Appeals lifted the stay.

Facility Operating License No. DPR-80 incorporates changes to the technical specification that were made subsequent to the issuance of Facility Operating License No. DPR-76, updates and amends the license conditions in Facility Operating License No. DPR-76 in accordance with the NRC evaluation as contained in Supplement 27 to the Safety Evaluation Report and in the Safety Evaluation dated November 2, 1984, and supersedes Facility Operating License No. DPR-76, as amended.

The application for license complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I, which are set forth in the License. Prior public notice of the overall action involving the proposed issuance of an operating license authorizing full power operation was published in the FEDERAL REGISTER on October 19, 1973 (38 F. R. 29105).

The Commission has determined that the issuance of this License will not result in any environmental impacts other than those evaluated in the Final Environmental Statement (issued in May 1973, 38 F.R. 14183) and its Addendum (issued in May 1976, 41 F.R. 22895), the NRC Flood Plain Review (dated September 9, 1981) and the NRC Discussion of Environmental Effects of the

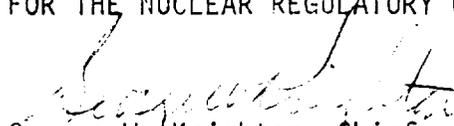
Uranium Fuel Cycle (dated September 9, 1981) since the activity authorized by this License is encompassed by the overall action evaluated in those documents.

For further details with respect to this action, see (1) the Commission's Memorandum and Order (CLI-83-27) dated November 8, 1983, Commission Memorandum and Order (CLI-84-2), dated January 25, 1984, Commission Memorandum and Order (CLI-84-5) dated April 13, 1984 and Commission Memorandum and Order (CLI-84-13) dated August 10, 1984; (2) Facility Operating License No. DPR-76 for fuel load and 5% power dated September 22, 1981; (3) Facility Operating License No. DPR-80 with Technical Specifications (NUREG-1102) and the Environmental Protection Plan; (4) the reports of the Advisory Committee on Reactor Safeguards dated June 12, 1975, August 19, 1977, July 14, 1978, November 12, 1980, February 14, 1984, April 9, 1984, June 20, 1984 and July 16, 1984; (5) the Commission's Safety Evaluation Report (NUREG-0675, Supplements 1 through No. 27); (6) the Final Environmental Statement dated May 1973 and its Addendum dated May 1976; (7) NRC Flood Plain Review of Diablo Canyon Nuclear Power Plant Site dated September 9, 1981; (8) Discussion of the Environmental Effects of Uranium Fuel Cycle dated September 9, 1981; and (9) Safety Evaluation dated November 2, 1984. These items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and the California Polytechnic State University Library, Documents and Maps Department, San Luis Obispo, California 93407. A copy of the Facility Operating License No. DPR-80 may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing. Copies of NUREG-0675 and the Final Environmental

Statement and its Addendum may be purchased by calling (301) 492-9530 or by writing to the Publications Service Section, Division of Technical Information and Document Control, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555 or purchased from the National Technical Information Service, Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161.

Dated at Bethesda, Maryland, the 2nd day of November 1984.

FOR THE NUCLEAR REGULATORY COMMISSION


George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing



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

NOV 2 1984

Safety Evaluation
Related to Issuance of
Facility Operating License DPR-80
Diablo Canyon Nuclear Power Plant, Unit 1
Docket No. 50-275

1. Introduction

This safety evaluation pertains to the issuance of Facility Operating License DPR-80 for Unit 1 of the Diablo Canyon Nuclear Power Plant authorizing facility operation at 100 percent of rated power. On September 22, 1981 the NRC issued Facility Operating License DPR-76 authorizing facility operation not in excess of 5 percent of rated power. Changes were made to the Technical Specifications and further license conditions were added to DPR-76 in Amendments 1 through 9 and in an Order to modify the License.

The staff has reviewed all provisions of license DPR-76, including those conditions previously proposed to be added to the license by an amendment authorizing full power operation, with respect to their applicability to the full power license DPR-80. A number of license conditions previously included in DPR-76 under Section 2.C have been satisfied and need not be reinstated or have been revised because the required action has been partially or totally completed, or a regulation has since been issued which encompasses the requirements of the license condition. The inclusion of new license conditions and issuance of full power Technical Specifications was previously addressed by the staff in Supplement 27 to the Safety Evaluation Report (SSER-27) dated July 1984.

Presented below is the staff evaluation for a revision to a previously proposed license condition regarding masonry walls (SSER-27, Section II.4 and IV.4) and the deletion of certain exemptions regarding fracture toughness, previously included in Section 2.D of DPR-76.

2. Masonry Walls

In SSER-27, Sections II.4 and IV.4, the staff indicated that there continued to be a need for a license condition regarding certain additional information comparing the licensee's criteria with staff criteria for evaluation of masonry walls. Since that time, the staff has conducted a site visit which included a number of discussions with the licensee, and review of additional documentation including test results. This has permitted a more detailed understanding of the licensee's criteria. As a result, the staff concludes that there is reasonable assurance that these walls will remain functional in the event of a design earthquake and that applicable regulations are met.

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However, it is still necessary for the licensee to document its analysis of the differences in margins when comparing its criteria to staff criteria even though it is not likely that structural change will result from this evaluation. The proposed license condition as discussed in SSER-27 has therefore been revised accordingly and is included under Section 2.C(10).

3. Compliance with Appendices G and H to 10 CFR Part 50 (Fracture Toughness)

In Section 2.D of the low power license DPR-76 exemptions were granted from certain requirements, among others, of Appendices G and H as related to fracture toughness. These exemptions have been deleted from the full power license DPR-80 as discussed below.

In previous safety evaluations (Supplement Nos. 9 and 13) the staff determined that exemptions to Sections III.C.2 and IV.A.4 of Appendix G to 10 CFR 50 and Section II.B of Appendix H to 10 CFR 50 would be required and were justified. Since those evaluations were published, Appendices G and H have been revised. The revised Appendices G and H were published in the Federal Register on May 27, 1983 and became effective on July 26, 1983. The exemptions to Appendices G and H, which were discussed in our previous safety evaluations, are no longer required, because the Diablo Canyon, Unit 1 materials and surveillance program complies with the revised Appendices G and H requirements. A discussion of these requirements follows.

Section III.C.2 and IV.A.4 in previous versions of Appendix G had specific requirements for preparation of reactor vessel beltline weld metal test specimens and minimum fracture toughness requirements for reactor coolant pressure boundary ferritic bolting, respectively. In lieu of these specific requirements, the current provisions of Appendix G require that reactor vessel beltline weld metal test specimens and reactor coolant pressure boundary ferritic bolting comply with the requirements in ASME Code edition and addenda permitted by section 50.55a of 10 CFR 50. In a previous safety evaluation we determined that the reactor vessel for Diablo Canyon, Unit 1 was fabricated to ASME Code edition and addenda as provided by the requirements of section 50.55a. Hence, the Diablo Canyon, Unit 1 materials comply with the revised Appendix G requirements and exemptions to Appendix G are no longer required.

Section II.B in previous versions of Appendix H required that the surveillance program conducted prior to the first capsule withdrawal comply with the 1973 edition of ASTM E-185. The current provision of Appendix H requires that the surveillance program conducted prior to the first capsule withdrawal comply with the requirements of the edition of ASTM E-185 that is current on the issue date of the ASME Code to which the reactor vessel was purchased. The Diablo Canyon, Unit 1 surveillance program complies with these requirements. Hence, the Diablo Canyon, Unit 1 surveillance program complies with the revised Appendix H requirements and an exemption to Appendix H is no longer required.



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

Docket Nos. 50-275
50-323

AMENDMENT TO INDEMNITY AGREEMENT NO. B-75
Amendment No. 7

Effective November 2, 1984, Indemnity Agreement No. B-75, between Pacific Gas and Electric Company, and the Nuclear Regulatory Commission, dated December 31, 1975, as amended, is hereby further amended as follows:

Item 3 of the Attachment to the indemnity agreement is deleted in its entirety and the following substituted therefor:

Item 3 - License number or numbers

SNM-1503 (From 12:01 a.m., December 31, 1975 to 12 midnight, September 21, 1981 inclusive)

SNM-1667 (From 12:01 a.m., October 15, 1976)

DPR-76 (From 12:01 a.m., September 22, 1981 to 12 midnight, November 1, 1984 inclusive)

DPR-80 (From November 2, 1984)

FOR THE UNITED STATES NUCLEAR REGULATORY COMMISSION

Jerome Saltzman, Assistant Director
State and Licensee Relations
Office of State Programs

Accepted _____, 1984

By _____
PACIFIC GAS AND ELECTRIC COMPANY

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September 9, 1981

Floodplain Aspects of Diablo Canyon
Nuclear Power Plant, Units 1 and 2
Docket Numbers 50-275/323

All major plant structures were substantially complete at the time Executive Order 11988, Floodplain Management, was signed by President Carter in May 1977. This includes the intake and discharge structures, the breakwaters and the switchyards. It is our conclusion that consideration of alternate locations for those structures identified as being in the floodplain is neither required nor practicable.

There are two water bodies within or adjacent to the site; Diablo Canyon Creek to the north and the Pacific Ocean to the west. Neither of these two water bodies have a distinct and well defined lowland floodplain.

The channel of the creek is a steep, narrow and deep canyon. Both the 1 percent chance (100-year) flood, which was estimated by the applicant to be 1093 cubic feet per second (cfs) at the mouth of the creek, and the 0.2 percent (500) flood, estimated to be 1900 cfs, would be well contained within the canyon. During construction, two sections of the canyon were filled in and culverts were installed in order to pass creek flow. A section of the canyon was filled in to accommodate the 500 kV and 230 kV switchyards. A 10 foot diameter culvert passes creek flow under the switchyards. Ponding of water behind the switchyards during a flood event exceeding the culvert's capacity would be confined to the creek canyon offsite. The local topography is such that if, during a Probable Maximum Flood (an event which is considerably

more severe than the 0.2 percent chance flood), the culvert were blocked, the plant would not be flooded. The second section of the canyon was filled in for a road. There is an 8 foot diameter culvert where the road embankment spans the creek near its mouth. Floods exceeding this culvert's capacity would not endanger the plant nor offsite areas. We conclude that neither the 1 percent chance flood nor 0.2 percent chance flood will constitute a hazard to the nuclear plant.

The Pacific Ocean coastline near the plant is characterized by steep bluffs rising to about 50 feet above mean sea level (msl). The 1 percent chance flood and 0.2 percent chance flood would result from tsunamis combined with high tides. The only structures that could be effected by high ocean levels are the intake and discharge structures and the breakwaters which extend offshore. All these structures have been designed to withstand and remain functional during the Probable Maximum Tsunami which is a more severe flood event than either of the above mentioned events. Because of tsunamis' long wave lengths the breakwaters will have relatively little effect on them, while the intake and discharge structures should not influence them at all. No offsite flood effects would result from interactions of tsunamis with these structures.

We therefore conclude that because of the lack of plant induced offsite flood hazards and because the plant itself is designed to withstand the effects of flood events more severe than those considered in the Executive Order, the operation of the Diablo Canyon plant will comply with the intent of Executive Order 11988.



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

September 9, 1981

DISCUSSION OF ENVIRONMENTAL EFFECTS
OF THE URANIUM FUEL CYCLE ACTIVITIES
ATTRIBUTABLE TO OPERATION OF THE
DIABLO CANYON NUCLEAR PLANT, UNIT NO. 1
PACIFIC GAS & ELECTRIC COMPANY
DOCKET NO. 50-275

PREPARED BY THE OFFICE OF NUCLEAR REACTOR REGULATION
U. S. NUCLEAR REGULATORY COMMISSION

The proposed action is the issuance of Facility Operating License No. DPR-76 to the Pacific Gas and Electric Company authorizing operation of the Diablo Canyon Nuclear Plant, Unit 1 at reactor core power levels not in excess of 166.9 megawatts thermal (5% power) in accordance with the provisions of the license, the Technical Specifications, and Environmental Protection Plan. The purpose of this Discussion of Environmental Effects is to consider the contribution of the uranium fuel cycle activities to the environmental costs of operating this nuclear power facility. Table S-3, Table of Uranium Fuel Cycle Environmental Data, 10 CFR Part 51, of the Commission's Regulations provides the basis for considering the significance of the uranium fuel cycle impacts resulting from operation of the facility.

In November 1972, a document entitled "Environmental Survey of the Nuclear Fuel Cycle" (hereinafter referred to as "Survey") was published by the Atomic Energy Commission (AEC), predecessor agency of the Nuclear Regulatory Commission. Comments on the Survey were solicited, and an informal rulemaking hearing was held on February 1 and 2, 1973. Written comments were received in response to the Federal Register notice, and recommendations for improvement were offered during the hearings.

After consideration of the written comments and the hearing record, the AEC promulgated the final fuel cycle rule (the so-called Table S-3) on April 22, 1974 (39 FR 14188). It was intended that, with the inclusion of environmental impacts from Table S-3, the environmental impact statements for individual light water reactors would set forth a full and candid assessment of costs and benefits consistent with the legal requirements and spirit of the National Environmental Policy Act (NEPA).

The environmental impact of the nuclear fuel cycle was not addressed in the cost-benefit analysis presented in the Final Environmental Statement (FES) Related to the Operation of Diablo Canyon Units 1 and 2, issued May 1973. However, during an evidentiary hearing held on October 18-19, 1977, revised Table S-3 values concerning the environmental effects as the Uranium Fuel Cycle were admitted into evidence.

On January 19, 1975, the AEC was abolished and its licensing and regulatory responsibilities transferred to the Nuclear Regulatory Commission (NRC or Commission).

On July 21, 1976, the United States Court of Appeals for the District of Columbia Circuit decided Natural Resources Defense Council v. NRC, a case involving judicial review of the fuel-cycle rule, and Aeschliman v. NRC, a related case involving the exclusion of fuel cycle issues from an individual power reactor licensing proceeding. The court approved the overall approach and methodology of the fuel cycle rule and found that, regarding most phases of the fuel cycle, the underlying Environmental Survey represented an adequate job of describing the impacts involved. However, the court found that the rule was inadequately supported by the record insofar as it treated two particular aspects of the fuel cycle - the impacts from reprocessing of spent fuel and the impacts from radioactive waste management.

In response to that court decision, the Commission issued a General Statement of Policy (41 FR 34707, August 16, 1976) announcing its intention to reopen the rulemaking proceeding on the environmental effects of the fuel cycle to supplement the existing record on waste management and reprocessing impacts to determine whether the rule should be amended and, if so, in what respect. The Commission thus indicated its intent to handle the question of the environ-

mental impacts of waste management and reprocessing generically rather than in individual licensing proceedings. The Commission directed the NRC staff to prepare on an expedited basis a well-documented supplement (NUREG-0116) to the Survey (WASH-1248) to establish a basis for identifying environmental impacts associated with fuel reprocessing and waste management activities that are attributable to the licensing of a model light-water reactor.

The revised survey was completed in October 1976, and the Commission issued the October 18, 1976 notice regarding the proposed interim rule. The comments received in response to that notice and the Commission's responses to those comments comprise NUREG-0216, Supplement 2 to WASH-1248.

On March 14, 1977, the Commission published in the Federal Register (42 FR 13803) an interim rule regarding the environmental considerations of the uranium fuel cycle. It was to be effective for 18 months (it was extended several times, the final extension being to September 4, 1979) and revised Table S-3 of 10 CFR Part 51. A rulemaking hearing was held to consider whether the interim rule should be made permanent or, if it should be altered, and if so, in what respects (42 FR 26978); this proceeding began on May 26, 1977. The Hearing Board took extensive written and oral testimony from more than twenty participants. On August 31, 1978, the Hearing Board submitted to the Commission a detailed summary of the evidentiary record, followed on October 26, 1978, by its Conclusions and Recommendations.

After studying the Hearing Board's Conclusions and Recommendations and receiving written and oral presentations by rulemaking participants, the Commission adopted as a final rule the modified Table S-3 recommended by the Hearing Board (44 FR 45362 dated August 2, 1979). The modified Table S-3 became effective September 4, 1979. The impact values in this table differ only slightly from the values in the interim rule. With two exceptions, these values will be taken as the basis for evaluating in individual light water power reactor licensing proceedings, pursuant to requirements of the NEPA, the contribution of uranium fuel cycle activities to the environmental costs of licensing the reactor in question. The exceptions are radon releases, presently omitted from the interim rule (43 FR 15613, April 14, 1978), ^{1/} and technetium-99 releases from reprocessing and waste management activities. ^{2/}

^{1/} With regard to radon releases, the matter of appropriate values was considered before the Atomic Safety and Licensing Appeal Board in the proceeding derived from ALAB-480 which involved a consolidation of numerous proceedings. In ALAB-640, issued on May 13, 1981, the Appeal Board issued findings on appropriate radon release rates. The Diablo Canyon Atomic Safety and Licensing Board found that consideration of these radon release rates associated with Diablo Canyon would not alter the cost-benefit balance (Partial Initial Decision of July 17, 1981, p.8).

^{2/} With regard to technetium-99 releases from reprocessing and waste management activities, in 44 FR 45362 the Commission found:

"In view of the Hearing Board's conclusion that the conservative assumption of complete release of iodine-129 tends to compensate for the omission of technetium from Table S-3, the Commission finds it unnecessary to reopen closed proceedings or to disturb consideration of environmental issues in presently pending proceedings to provide for consideration of technetium-99 releases."

Thus, consideration of technetium-99 releases in connection with the licensing of the Diablo Canyon, Units 1 and 2 is unnecessary.

The rulemaking record makes clear that effluent release values, standing alone, do not meaningfully convey the environmental significance of uranium fuel cycle activities. The focus of interest and the ultimate measure of impact for radioactive releases are the resulting radiological dose commitments and associated health effects. To convey in understandable terms the significance of releases in the Table, the Hearing Board recommended that the modified Table be accompanied by an explanatory narrative promulgated as part of the rule. The recommended narrative would also address important fuel cycle impacts now outside the scope of Table S-3, including socioeconomic and cumulative impacts, where these are appropriate for generic treatment. Pending further treatment by rulemaking, the Commission directed the NRC staff to address the environmental dose commitments and health effects from fuel cycle releases, fuel cycle socioeconomic impacts, and possible cumulative impacts in the environmental analysis accompanying a proposal to issue a limited work authorization, construction permit, or operating license for a power reactor. The Commission directed the NRC staff to prepare such a narrative. The staff prepared narrative was published on March 4, 1981 in the Federal Register (46 FR 15154-15175).

The narrative is of an explanatory nature, providing a discussion of the environmental dose commitments and health effects, socioeconomic impacts, and possible cumulative impacts associated with the uranium fuel cycle activities representative of a fuel cycle for the Diablo Canyon Nuclear Plant, Units 1 & 2.

The fuel cycle effects presented in Table S-3, as discussed in the explanatory narrative are sufficiently small so that, when they are superimposed upon the other environmental impacts assessed with respect to operation of the reactor, the changes in the overall environmental impact from operation of the Diablo Canyon Nuclear Plant, Units 1 & 2 are not substantial. Giving due consideration to the values given in Table S-3 and the information set forth in the explanatory narrative, the NRC staff concludes that the overall cost-benefit balance developed in the Diablo Canyon proceeding remains unaltered.