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SAN LUIS OBISPO MOTHERS FOR PEACE
before the
ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the matter of
Pacific Gas and Electric Co.
Diablo Canyon Nuclear Power Plant
Unit Nos. 1 and 2

Docket No. 50-275-OLA - 2
50-323-OLA
ASLBP No. 92-669-03-OLA-2
March 12, 1993

San Luis Obispo Mothers for Peace
Late-filed Contention

In accordance with 10 CFR 2.714(a)(1), this document supplements the San Luis Obispo Mothers for Peace Supplement to Petition to Intervene. On January 21, 1993, the Mothers for Peace was granted a hearing and petition for leave to intervene in the proceeding involving the proposed amendment of the operating licenses for the Diablo Canyon Nuclear Power Plant, Units 1 and 2. This amendment would extend the life of those licenses by more than 13 years for Unit 1 and almost 15 years for Unit 2. For the reasons set forth below, the Mothers for Peace is submitting the following to supplement its original Supplement to Petition to Intervene.

XI. The San Luis Obispo Mothers for Peace challenges the Environmental Assessment and Finding of No Significant Impact (EAFIS NDS. MB4006 and MB4007) issued February 3, 1993. The NRC should be required to prepare an Environmental Impact Statement.

Basis: The Environmental Assessment and Finding of No Significant Impact issued February 3, 1993 ("EAFIS") concludes that "the extension of Diablo Canyon's Operating License... will not create any new or unreviewed environmental impacts. This change does not involve any physical modifications, and there are no new or unreviewed environmental

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impacts that were not considered as part of the Final Environmental Statement ("FES") dated May 1973..." [pg. 2]. The San Luis Obispo Mothers for Peace ("SLOMFP") challenges this conclusion and contends that extension of the operating license term for Diablo Canyon Nuclear Power Plant ("DCNPP") will, in fact, significantly increase the risk of adverse impacts to the human environment, in ways that were not considered in the FES twenty years ago. Because the proposed operating license extension could significantly and adversely affect the quality of the human environment, the National Environmental Policy Act requires that the NRC prepare an Environmental Impact Statement ("EIS") to evaluate the increased risks to the surrounding population and environment, to weigh the costs and benefits of the proposed operating license extension, and to consider alternatives to the proposed action.

The proposed operating license extensions pose a significant, previously unconsidered risk to the human environment in the following respects:

1) Aging

The proposed operating license extension will greatly extend the life of the DCNPP beyond its original term of 40 years after commencement of construction, to as much as 55 years. This is because the period that is being "recaptured," i.e., the time between issuance of the construction permit and operating license, was extremely long: Unit 1 did not receive an operating license until over 13 years after construction began, and Unit 2 did not receive its operating license until almost 15 years after construction began.

As stated by the NRC in NUREG-1144, Rev. 1 Nuclear Plant Aging Research [INPAR] Program Plan: Components, Systems, and Structures [NRC: 1987], "Aging is a complex process that begins as soon as a component or structure is produced and continues throughout its service life." *Id.* at 2-2. The list of aging effects summarized in NUREG-1144 includes deterioration which occurs not just during operation but during storage as well:

-- Material degradation mechanisms are active during storage and operation. Typical causes of degradation include: neutron embrittlement, fatigue, erosion, corrosion, oxidation, thermal embrittlement, and chemical reactions.

-- Stressors can be introduced by improper storage, operating environment, or external environment. Irradiation, primary and secondary coolant chemistry, and introduced by the operating environment. Freezing and thawing, brackish water, and humidity are typical examples of stressors introduced by external environment. Synergistic influence of electrical and mechanical stressors in combination with other internal and external environment also contribute to degradation-processes.

-- Service wear: accumulation of fatigue damage due to plant operational cycling, service wear of rotating equipment, and wear of the drive rod assembly in a control rod drive mechanism are typical examples.

-- Excessive testing: frequent testing of emergency diesel generators is a typical example.

-- Improper installation, application, or maintenance: investigation by NRC [Ref. 4] 1 has indicated that 30% of the nuclear plant abnormal occurrences can be attributed to faulty and improper maintenance.

Id. at 2-2.

As stated in NUREG-1144, Rev. 1, "No nuclear plant, including those still under construction or being mothballed, should be considered immune" from the effects of aging. *Id.* Thus, from the time construction began,

1 G. Cwalina et al., "Status of Maintenance in the U.S. Nuclear Power Industry 1985: Findings and Conclusions," NUREG-1212, Vol. 1, June 1986.

DCNPP was subject to aging effects for many years, including the particularly corrosive effects of exposure to salt air. Indeed, there are numerous recorded instances of corroded and degraded systems, structures, and components at DCNPP. The Fuel Handling Building ventilation system was declared inoperable due to the degradation of the FHB seals, LER 89-019-01 [September 19, 1991]; leakage occurred from the chemical and volume control system due to thermally induced premature degradation of the diaphragm valve, LER 1-92-009-00 [July 27, 1992]; corrosion was discovered on piping associated with diesel fuel oil and two fire suppression system carbon dioxide lines, LER 1-92-006-00, Unit 1 [August 6, 1992]; auxiliary salt water pumps show evidence of aggressive salt water corrosion, NRC IR 92-22 [August 25, 1992]; weld defects were identified in the steam generator feedwater nozzles of Unit 1, NRC IR [November 5, 1992]; feedwater flow control bypass line snubber failed due to stress corrosion cracking, LER 1-92-023-00 [November 30, 1992]. Moreover, as demonstrated in SLOMFP's Contention I, which was admitted for litigation by the Licensing Board, NRC and PG&E records demonstrate defects in PG&E's maintenance and surveillance program. 2 Faulty and improper maintenance may not only fail to correct aging effects, but may actually contribute to the aging process. NUREG-1144, Rev. 1, at 2-2.

As discussed in NUREG-1144, Rev. 1, the potential impacts of aging on accident risk are significant. Aging affects "essentially all types of safety-related systems." *Id.* at 2-3. Aging effects "can contribute to both: (a) the probability of initiation of transients and accidents, and

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Rather than repeat the entire basis of Contention I, SLOMFP incorporates it into the basis of this contention.

(b) the probability of failure of the mitigating equipment during operation." *Id.* If aging effects are not found and corrected, this can "result in an undetected reduction in the defense-in-depth concept." *Id.* Age degradation "can also cause a loss of operational readiness in engineered safety systems, which are required to mitigate the consequences of a failure of a vital component, such as an assumed break in the primary system boundary." *Id.*

Of "potentially the greatest concern" is the fact that aging can lead to "a higher probability of common mode failures in nuclear power plants." *Id.* Aging "can lead to wide-scale degradation of a physical barrier or to simultaneous degradation of redundant components." *Id.*

It is also clear, for a number of reasons, that the increased risks associated with aging cannot be dismissed by relying on maintenance and surveillance programs. First, too little is known about the aging process to state confidently that it can be controlled by current methods. As the NRC has conceded, "many age-related uncertainties exist because neither [NRC] nor the industry completely understand the nature and effects of aging on the plants." GAO/RCED-89-90, License Renewal Questions for Nuclear Plants Need to Be Resolved [GAO: April 1989] at 16-17. The NRC's program of age-related research covers only about 25 percent of the major equipment important to plant safety. Furthermore, the report is not expected to be complete until 1997. GAO/RCED-91-207, "Research Efforts Under Way to Support Nuclear Power Plant License Renewal" (September 1991) at 6.

Second, in some cases the technology for detecting aging effects simply does not exist. For example, researchers at Oak Ridge National

Laboratories have concluded that current requirements for detecting check valve deterioration are "inadequate for timely detection" because "neither the flutter nor the resulting wear can be detected prior to valve failure." NUREG-1377, Rev. 2, NRC Research Program on Plant Aging: Listing and Summaries of Reports Issued Through June 1991 (NRC: July 1991) at 15, citing NUREG/CR-4302, M.D. Haynes, "Aging and Service Wear of Check Valves Used in Engineered Safety Feature Systems of Nuclear Power Plants: Aging Assessments and Monitoring Method Evaluations, Vol. 2, ORNL-6193/U2 (April 1991). Similarly, NUREG-1144, Rev. 1, reported the existence of "some doubt" that artificial aging of safety equipment for environmental qualification testing "realistically represent[s] the effects of inservice degradation," because natural aging may have more severe effects on the equipment than artificial aging. The report notes that:

Because of the evidence that artificial or accelerated aging techniques may be inadequate, it is difficult to assess the increased degree of vulnerability of safety equipment at this time. This equipment, degraded by age-related service and wear, may be vulnerable to common mode failure during accidents and transients that involve abnormal stresses and demands on the equipment.

Id. at 2-3. Thus, not only are some aging effects difficult to detect, but the failure to detect them may greatly increase the risk of an accident, from a single mode to a common mode failure.

Third, as discussed above, operating and maintenance practices may be important contributors to aging problems, not necessarily solutions. As stated in GAO/RCED-89-90, "the operating and maintenance practices of each utility exacerbate [the] uncertainties" related to aging. *Id.* SLOMFP has already identified numerous problems with PG&E's maintenance and surveillance program. See Contention I. At best, PG&E's maintenance and surveillance program is an uncertain factor that must be examined for its

potential role as a contributor to the increased risks associated with aging. Its existence certainly cannot be relied on as an excuse not to prepare an EIS. See page 4 of the EA.

Impacts of Aging Were Not Considered in 1973 FES

In the EA for DCNPP, the NRC claims that the proposed operating license extension will not create any "new or unreviewed environmental impacts." EA at 2. The EA also states that the 1973 FES considered a 40-year operating life for DCNPP. *Id.* Neither of these statements provides sufficient support for the NRC's decision not to prepare an EIS.

First, the NRC has learned a great deal about aging of nuclear power plants since 1973 that could not possibly have been considered in the 1973 FES. Aging was of little concern to the NRC at that time. Only in the past few years, as nuclear plants began to experience widespread and significant aging problems and as the agency looked to the issue of license renewal, has significant research on the subject been undertaken. At this point, the NRC is just discovering how little it knows about aging, and trying to amass enough information about it to begin to make decisions about license renewal. It is absurd to suggest that the NRC anticipated the complex problems raised by aging of the equipment at DCNP at the time it prepared the 1973 FES.

Second, SLOMFP has studied the 1973 FES and can find no direct statement to the effect that it was evaluating the risks of a 40-year operating life, as opposed to a 40-year existence. Moreover, the FES did not anticipate that DCNPP would operate for an additional 40 years after it had already been in existence for 15 years. In fact, the FES couldn't have considered the full length of the period between construction permit and

operating license because it was written 1973, eleven years before the operating license for Unit 1 was issued and 13 years before the operating license for Unit 2 was issued. Thus, the 1973 FES did not consider the full term of degradation and aging effects to which the DCNPP would be subjected over the 55-year lifetime that is now being proposed.

2) Change in Population

The EA comments that "population size and distribution is the only time-dependent parameter." EA at 3. Yet the EA assumes that the "Low Population Zone [LPZ], and nearest population center distance will continue to meet the requirements of 10 CFR 100.11 (a) for the proposed 40-year license terms. *Id.* Additionally, the EA concludes that "the proposed license amendment will not significantly change previous conclusions on the potential environmental effects of offsite releases from postulated accidents." *Id.* But the population size and distribution of San Luis Obispo County has changed. In its License Amendment Request, PG&E notes that 10 miles is currently the Population Center Distance. However, because of dramatic population growth in the community of Baywood-Los Osos, the new Population Center Distance will become 8 miles. License Amendment Request 92-04 [July 9, 1992] at 30. Substantial population growth in the Baywood-Los Osos community was not anticipated or analyzed in the 1973 FES. The FES projected the San Luis Obispo County population to reach 223,000 by the year 2000. FES at 2-12. As of January 1, 1992, the county population has **already** reached 221,902. State Department of Finance. At a projected 2.15% growth increase per year [License Amendment Request at 30], the projected county population for the year 2025 changes even more substantially. An EIS is needed to determine whether or not this change in

population affects previous conclusions on the potential environmental impacts of offsite releases.

3) Cumulative exposure to low level radiation

The Mothers for Peace requests that an EIS be performed for the purpose of determining the cumulative and chronic impact of low level radiation on the population surrounding the DCNPP. The EA states that "the plant's contribution to the local population dose within a 50-mile radius is expected to remain insignificant in comparison to that from background radiation." EA at 5. Planned and unplanned atmospheric and aquatic releases and the generation, storage and transportation of high and low level radiation exposes the local population to radiation through a variety of pathways: the air, the soil and the water. Local fish, fruits and vegetables, cow's milk and drinking water all may have some degree of contamination. FES [May 1973] at 5-55. Planned releases occur with regularity and "have remained within the bounds of the FES..." EA, at 6. Accidental releases of radiation, however, are unpredictable and have occurred.

-- May 8, 9, 1985, unplanned release of radiation from Unit 1 waste gas system [NRC IR 6/7/85];

-- April 10, 1987, Unit 2, a significant release of radioactive material during a loss of residual heat removal system incident [EA 87-131, 8/7/87];

-- May 5, 1987, a 1,300 gallon leak of radioactive water; November 1, 1990, radioactive water leak in containment;

-- reported in a November 5, 1992 NRC IR - high airborne radiation release as a result of shot peening activities;

-- on December 18, PG&E violated the U.S. Department of Transportation regulations when it exceeded the 10 millirem limit in the transportation of low level waste to the disposal site in the State of Washington. This shipment was received on December 21 and measured 12

millirems. [Letter to PG&E from State of Washington, Department of Health, January 13, 1993]

The human population is continually being exposed to unpredictable amounts of radiation. There has been a great deal of speculation regarding the safety of this exposure on human health. The Japanese had a single-dose situation with the atomic bombs; it is a more complex situation where people are exposed over a period of time. John Gofman and Alice Stewart both argue that there is no safe dose or dose rate; in fact, low doses of ionizing radiation received over time can be more harmful than single high doses. Radiation-Induced Cancer for Low-Dose Exposure, John Gofman, Committee for Nuclear Responsibility [1990] and MIT Technology Review [February 11, 1993]. The local papers in San Luis Obispo County have published the cancer rates; there exists an unusually high rate of lung and breast cancer in the county. A representative from the Environmental Protection Agency paid a visit to the county in January of 1993 to investigate this situation.

The correlation between exposure to low doses of radiation and the risk of contracting cancer did not exist when the FES was completed in 1973. An EIS is now required to analyze the effects of chronic low level radiation on the local population - before PG&E is granted an additional 13 to 15 years to their operating licenses.

4) High level radioactive waste storage

According to the EA, "the total amount of uranium required for the proposed 40-year operating license terms is expected to be less than the amount projected in the FES." FES at 7. Perhaps less high level waste will be generated than originally anticipated, but the document fails to indicate that PG&E has no plans for storage of this waste after the year²

2010. The plant has already re-racked its spent fuel pools to enable them to store more rods than originally planned. "The spent fuel pools currently have onsite storage capacity for plant operation through about 2007 while maintaining the capability for a full-core off-load. After 2007, storage space would no longer be available for a full-core off-load. The existing spent fuel storage racks will be filled by 2010." License Amendment Request 92-04 (July 9, 1992) at 25.

The EA does not discuss how spent fuel is to be stored at DCNPP when there is no room in the spent fuel pool. Thus, there is no means for the public to evaluate the risks associated with storage of high level waste generated during the proposed extension period.

The problems of fuel storage at DCNPP are unique within the nuclear power plant industry because the plant is located in the State of California, where seismic activity is a constant, real, and serious threat to safety, and within 2 1/2 miles of an active earthquake fault (Hosgri). The disposal of this high level radioactive waste presents a potentially significant and dangerous environmental impact. When the FES was compiled in 1973, the Hosgri Fault had not even been discovered; an EIS is essential to determine the extent of this impact on the human environment.

5. Low level radioactive waste storage

According to the EA, the "volume of solid low level radioactive waste generated at DCPN has historically been among the lowest in the nuclear power industry." EA at 6. But the document fails to acknowledge the difficulty and expense of disposing of this dangerous waste. The Mothers for Peace understands that the waste generated at DCNPP has previously been sent to the disposal facility in Washington; but that plant is no longer

accepting radioactive waste from California. PG&E must now transport their waste to the disposal facility at Barnwell, South Carolina. This site will continue accepting waste from California until July 1994. What happens to the radioactive waste generated at DCNPP after that date is unknown. "Civilian Nuclear Waste Disposal," Mark Holt, Congressional Research Service, Environment and Natural Resources Policy Division (updated July 22, 1992) at 11.

Twenty years ago, when the FES for DCNPP was written, the contamination problems and the controversy surrounding the low level waste disposal facilities did not exist. This issue requires further investigation; an EIS is essential.

6) Cost benefits

The EA states: "If the plant is not operated beyond 2008, it is likely that it would be necessary to construct new baseload capacity... operation of DCPD during the requested extension period would only require incremental yearly costs... In summary, the cost-benefit advantage of DCPD compared to alternative electrical power generating capacity improves with the extended plant lifetime." pg. 12. The Mothers for Peace find these conclusions untrue. The energy produced by DCNPP in the years of the proposed license extension will be costly. The Division of Ratepayer Advocates (DRA) of the California Public Utilities Commission prepared a document in response to PG&E's claim in their application that granting the recapture will "reduce future electric rates." License Amendment Request 92-04 (July 9, 1992) at 3. DRA claims that:

Prices for Diablo Canyon's generation after 2016 have not been set. However, there is no reason to expect Diablo Canyon's prices during the remainder of the recapture period to be significantly below market levels, nor has PG&E presented any evidence suggesting that this will

occur. In any case, PG&E is incorrect in asserting that Diablo Canyon will be cost-competitive by 2008. During the portion of the recapture period where Diablo Canyon's prices are known, 2008 to 2016, operation of Diablo Canyon will increase ratepayer costs by billions of dollars. Edmund Texeira's (DRA) letter to Herschel Rosenthal, chairman of the Senate Energy and Public Utilities Committee (December 8, 1992) at 4.

The entire text of this document sheds light on the question of the need for new baseload capacity and the economics of extending the operating life of DCNPP versus the use of alternative energy sources for producing an equivalent electrical power capacity. This document is attached as Appendix A.

During the December 10, 1992 prehearing conference, Judge Bechhoefer requested that the NRC Staff accept the San Luis Obispo Mothers for Peace Supplement to Petition to Intervene (October 26, 1992) as a comment in the preparation of the EA. Transcript at 188, 189. The DRA document noted above provided the NRC Staff with valuable information for the preparation of the EA. Neither the receipt nor the content of these documents were acknowledged in the EA.

The EA assumes that the productivity of DCNPP will remain high and that operation will be safely performed. EA at 10. But PG&E has admitted the long-term risks that face continued operation at DCNPP. PG&E acknowledges the risk of unscheduled outages as the plant gets older; the risk of higher than expected maintenance and capital costs as major plant equipment, such as steam generators, is repaired or replaced; and the risk of reduced plant performance or higher costs in order to comply with new NRC regulatory requirements or new government taxes. Protest of Pacific Gas and Electric Company to Petition by Toward Utility Rate Normalization to Modify Decision 88-12-083 (October 16, 1992) at 10.

Justification for Late-Filed Contention

1) SLOMFP has good cause to file Contention XI at this time because the EA was not issued until February 3, 1993, and SLOMFP did not receive it until February 12. Because the EA was not available to SLOMFP before February 12, it could not have prepared a contention challenging the EA before that. In fact, the Licensing Board rejected a previous contention by SLOMFP which challenged the lack of an EIS for the proposed operating license extension, on the ground that it was premature.

SLOMFP has proceeded as quickly as possible to evaluate the EA and to assemble enough evidence in support of Contention XI to satisfy the Commission's standard for admissibility of the contention, and we have filed our contention within the reasonable time period of 30 days. We note that during the time we were preparing this contention we were also required to engage in the time-consuming activity of preparing essentially all of our discovery in this case.

2) There are no other means by which SLOMFP can protect its interest in having an EIS prepared for the proposed operating license extension.

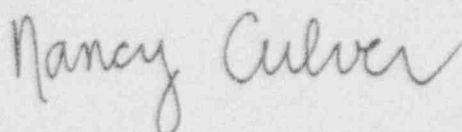
3) SLOMFP's participation in the litigation of this contention will lead to the development of a sound record. SLOMFP has obtained technical assistance in preparing its case on this issue and expects to be able to provide expert testimony on the significant aging risks posed by the proposed operating license extension.

4) There is no other party to this case which can represent SLOMFP's interests.

5) Admission of this contention at this time can be expected to broaden and delay this proceeding. However, any such delay would not be

the fault of SLOMFP. Moreover, the litigation of this issue would not prevent or delay the operation of DCNPP.

Respectfully submitted,

A handwritten signature in cursive script that reads "Nancy Culver". The signature is written in dark ink and is positioned above the typed name and title.

Nancy Culver, President
San Luis Obispo Mothers for Peace

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Certificate of Service

I hereby certify that copies of the foregoing **San Luis Obispo Mothers for Peace Late-filed Contention** have been served upon the following persons by U.S. mail, first class.

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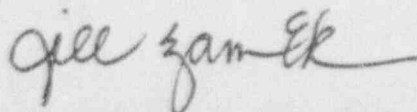
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Dated March 12, 1993, San Luis Obispo County, CA
Jill ZamEk



Appendix A

California Public Utilities Commission

DRA

DIVISION OF RATEPAYER ADVOCATES

505 Van Ness Avenue
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EDMUND J. TEXEIRA
Director

Phone (415) 703-2061
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December 8, 1992

The Honorable Herschel Rosenthal, Chairman
SENATE ENERGY & PUBLIC UTILITIES COMMITTEE
State Capitol, Room 2035
Sacramento, California 95814

Dear Senator Rosenthal:

SUBJECT: Diablo Canyon License Recapture

In response to your request, the Division of Ratepayer Advocates (DRA)[1] of the California Public Utilities Commission (CPUC) has reviewed the application filed by Pacific Gas & Electric Company (PG&E) to recapture the construction period of the Diablo Canyon Nuclear Power Plant, Units 1 & 2, thereby extending their operation by 13 to 15 years. DRA has a number of concerns regarding statements made by PG&E. Specifically, Section 3 of PG&E's application, regarding the justification for the recapture, contains a number of errors and omissions. Use of accurate information would show that the recapture will increase ratepayer costs and harm the economy in California.

INTRODUCTION

A. Diablo Canyon

Under current ratemaking treatment for the Diablo Canyon Units, ratepayers incur significant costs to pay for the operation of the facility. Table 1 shows the current and forecasted prices for Diablo Canyon's generation.

1 Although DRA is under the administrative umbrella of the CPUC, it acts independently of the Commission (Cal. PU. Code Section 309.5). These statements reflect the position of the DRA only, and do not represent the opinion of the CPUC.

TABLE 1
 PRICES FOR DIABLO CANYON GENERATION*
 (Nominal Cents/KWH)

	<u>YEAR</u>	<u>PRICE</u>
	1989	8.3
	1990	8.9
	1991	9.5
	1992	10.2
	1993	11.0
	1994	11.9
	1995	12.2
	1996	12.5
	1997	12.8
	1998	13.1
	1999	13.4
	2000	13.7
	2001	14.1
	2002	14.4
	2003	14.8
	2004	15.2
	2005	15.6
	2006	16.0
	2007	16.4
	2008	16.8
	2009	17.3
	2010	17.7
	2011	18.2
Recapture	2012	18.7
Period	2013	19.2
	2014	19.7
	2015	20.3
	2016	20.8

* Values after 1994 assume an annual inflation rate (CPI) of 4%. Prices during the recapture period are highlighted; the recapture period extends beyond the settlement term. These prices do not include \$54 million collected annually for a decommissioning cost reserve.

These prices are the result of a settlement negotiated by DRA, PG&E and the California Attorney General, which was subsequently approved by the CPUC. DRA continues to support the settlement. While the pricing schedule shown in Table 1 assumes that the recapture is obtained, the settlement contains other provisions should the Nuclear Regulatory Commission (NRC) deny PG&E's request. Thus, the settlement is not dependent on PG&E's successfully recapturing the construction period.

Since Diablo Canyon's costs were first placed into rates, PG&E's average residential rate for electricity has increased from 8.6 cents/kwh in 1988 to over 11.5 cents/kwh in 1991. In comparison, nationwide electric rates have remained nearly constant during the same time span. Although not all of the increase in PG&E's rates can be attributed to Diablo Canyon, its payments currently account for over 20% of the costs borne by PG&E's ratepayers for electric service[2]. The Units also comprise a significant portion of PG&E's resource mix, representing over 10% of the utility's installed capacity.

B. PG&E's Application

On July 7, 1992, Pacific Gas & Electric Company filed an application with the NRC to modify the operating licenses for the Diablo Canyon Units (NRC Docket Nos. 50-275-OLA-2, 50-323-OLA-2). PG&E seeks to have the licenses changed to extend the term of operation of the units from 2008 to 2021 for Unit 1, and from 2010 to 2025 for Unit 2. This request is made under the NRC's policy regarding the "recapture" of construction time[3].

PG&E's application covers a number of topics. Section 3 contains PG&E's justification for the amendment, asserting a number of benefits from extending the operation of Diablo Canyon. Sections 4 and 5 address the safety and environmental impacts, respectively, of the proposed amendment. PG&E asserts that no increase in safety or environmental impacts will occur due to the extension. Section 6 asserts that no new hazards are expected to arise due to the extension.

2 A consumer advocacy group, Towards Utility Rate Normalization (TURN), has recently filed a petition with the CPUC to modify the prices contained in the settlement. DRA has filed no comments regarding this petition. The CPUC has not yet ruled on TURN's request.

3 The NRC issues 40 year operating licenses for nuclear power plants. Initially, the 40 year period commenced when the construction of the facility began. Later, this policy was revised to have the period commence on the date of initial operation of the power plant. The NRC has established a policy of allowing modifications to the early licenses to "recapture" the difference between the construction start date and the date of initial operation, thereby extending the duration of the operating license.

DRA'S CONCERNS

DRA has no comments regarding PG&E's claims on the safety and environmental impacts of the proposed amendment. However, DRA has a number of concerns regarding other aspects of PG&E's filing.

The application filed by PG&E to amend Operating Licenses DPR-80 and DPR-82 contain a number of inaccuracies. DRA is specifically concerned with Section 3 of PG&E's application, regarding the justification for the proposed license amendments. PG&E has asserted that granting the recapture will provide four benefits to its ratepayers: cost savings; filling a need for baseload generation; air emission reductions; and, improvements in the state and local economy (Application, pp. 2 and 3). DRA addresses each of these purported benefits below.

A. Cost Savings

PG&E indicates that Diablo Canyon is expected to be "cost-competitive with new power plants" in 2008 and beyond, and that granting the recapture will "reduce future electric rates" (Application, Section 3.2, p. 3). However, PG&E has not presented any data to support this contention.

In fact, based on estimates used by the California Energy Commission (CEC) and the CPUC (the two state agencies which regulate resource development in California) and forecasts made by PG&E itself, Diablo Canyon is expected to be significantly more expensive than the cost of replacement power through 2016.⁴ A number of resource options, including fossil fueled resources, renewable resources and conservation programs, are expected to be considerably less expensive than Diablo Canyon.

Prices for Diablo Canyon's generation after 2016 have not been set. However, there is no reason to expect Diablo Canyon's prices during the remainder of the recapture period to be significantly below market levels, nor has PG&E presented any evidence suggesting that this will occur. In any case, PG&E is incorrect in asserting that Diablo Canyon will be cost-competitive by 2008. During the portion of the recapture period where Diablo Canyon's prices are known, 2008 to 2016, operation of Diablo Canyon will increase ratepayer costs by billions of dollars.

4 These forecasts can be found in the CEC's most recent resource planning proceeding (CEC Docket 90-ER-92) and in the CPUC's Biennial Resource Planning Update (CPUC Docket I.89-07-004).

In addition, the CPUC, the CEC and PG&E itself have all expressed concerns regarding commitments to resources in advance of need. Future technologies may be much less expensive than currently available resources[5]. If future needs are filled by premature commitments to existing resources and technologies, utilities may not be able to take advantage of the benefits of the new technologies. However, in this instance, PG&E is seeking an extension for Diablo Canyon more than 15 years before its existing license expires.

B. Baseload Generation

PG&E also errs in its assertion that the baseload operation of Diablo Canyon is beneficial to its ratepayers (Application, Section 3.1, p. 2). In fact, PG&E itself has complained of an excess of baseload resources, and has asserted a need for greater operational flexibility. PG&E wants to require all new generation (which would be operating during the period of the recapture) to be dispatchable by the utility. PG&E recently negotiated an increase in its control of the operation of qualifying facilities (QFs) signing new contracts.

Excess baseload generation causes PG&E to have too many resources operating at times of low system demand. This limits the ability of PG&E to take advantage of low cost, spot energy purchases. It also causes operating problems because of the need to have some units available to follow load. Replacing Diablo Canyon with resources which have greater operational flexibility would resolve these problems, lowering ratepayer costs.

PG&E also indicates that replacing Diablo Canyon could significantly exacerbate the need for new centralized power plants (Ibid.). However, current PG&E resource plans indicate that the majority of new demand needs will be met by conservation and other demand-side management (DSM) programs, as well as spot purchases. The relatively small amount of new generation resources are anticipated to be retrofits to existing utility power plants or new QF facilities, not large, new centralized power plants. In any event, "exacerbating" the development of replacement resources is not a detriment to PG&E's ratepayers, if they have lower costs than Diablo Canyon and provide greater operational flexibility.

5 The estimates used by the CEC, CPUC and PG&E for resource planning do not assume any improvement in resource efficiencies or costs over time due to improvements in technologies. Thus, the forecasts discussed above likely underestimate the difference between new resources and the higher costs of Diablo Canyon.

C. Air Emission Reductions

PG&E asserts that granting the recapture will significantly reduce air emissions which would have been produced by the resources replacing Diablo Canyon (Application, Section 3.3, p. 3). However, PG&E assumes that Diablo Canyon will be replaced with 100% gas-fired generation. As mentioned above, current resource plans indicate that the majority of new resources will be DSM, wind, geothermal and spot purchases, not gas-fired, baseload resources. Little, if any, increase in air emissions would occur if Diablo Canyon were replaced with these resources.

In addition, the resource selection methodology used in California explicitly quantifies the value of reducing air emissions. To the extent a competing resource has less air emissions than a gas-fired resource, this benefit will be reflected in a cost comparison of the two facilities. The high cost of Diablo Canyon outweighs any air emission benefits it may have compared to other options.

D. State and Local Economy Benefits

PG&E indicates that continued operation of Diablo Canyon will benefit the state and local economies, because of state and local taxes on the facility (Application, Section 3.4, p. 3). However, PG&E fails to consider the benefits of jobs and property taxes that would occur from constructing and operating the resources that would replace Diablo Canyon's generation. It is the net difference between the amount of taxes and jobs created by Diablo Canyon versus alternatives which is relevant. However, PG&E has not shown that there will be more jobs and tax revenues from continuing to operate Diablo Canyon than from building and operating replacement resources.

In addition, the rate increase that would result from granting the recapture will have a negative impact on the state and local economy. If Diablo Canyon is just 1 cent/kwh more expensive than other options, PG&E's rates will increase by over \$140 million annually. As previously discussed, Diablo Canyon is expected to cost many cents/kwh more than alternatives. Over the recapture period, Diablo Canyon is expected to increase PG&E's rates by billions of dollars.

High energy costs are at least partially responsible for the decline in the state economy. PG&E's rates are already over 35% above the national average. A sizable rate increase from extending operation of Diablo Canyon would have a significant detrimental impact on the state and local economies.

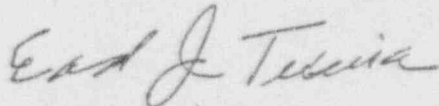
CONCLUSION

DRA believes it is essential that the NRC have the best and most accurate information available, prior to making any determination on PG&E's request. PG&E has not provided the NRC with the information needed to accurately assess the justification for the license amendment. In particular, PG&E's application relies on the four benefits listed below as justification for extending the operating period of Diablo Canyon:

1. Cost-Savings;
2. Need For Baseload Generation;
3. Air Emission Reductions; and,
4. State and Local Economy Benefits.

As discussed above, none of these benefits are expected to occur, nor has PG&E presented any evidence to support its claims. Based on PG&E's forecasts and those used by California state agencies, granting the recapture will benefit neither PG&E's ratepayers nor the economy. Quite the opposite will occur. Extending the operation of Diablo Canyon is expected to increase PG&E's electric rates.

Sincerely,



EDMUND J. TEXEIRA
Director
Division of Ratepayer Advocates

GIG/EJT:st

cc: The Honorable Gwen Moore
President Daniel Wm. Fessler
Commissioner Patricia M. Eckert
Commissioner John B. Ohanian
Commissioner Norman D. Shumway
Neal J. Shulman, Executive Director
Peter Arth Jr., General Counsel
CPUC A.84-06-014 and A.85-08-025 Service Lists