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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE COMMISSION

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In the Matter of )

PACIFIC GAS AND ELECTRIC COMPANY )

(Diablo Canyon Nuclear Power )  
Plant, Units 1 and 2) )

Docket Nos. 50-275 O.L.  
50-323 O.L.

JOINT INTERVENORS'  
PETITION FOR REVIEW  
OF ALAB-811

Pursuant to 10 C.F.R. § 2.786, the SAN LUIS OBISPO MOTHERS FOR PEACE, SCENIC SHORELINE PRESERVATION CONFERENCE, INC., ECOLOGY ACTION CLUB, SANDRA SILVER, GORDON SILVER, ELIZABETH APFELBERG, and JOHN FORSTER ("Joint Intervenors") hereby petition the Commission to review ALAB-811, issued by the Atomic Safety and Licensing Appeal Board ("Appeal Board") in the above-entitled proceeding on June 27, 1985. In that decision, the Appeal Board upheld the adequacy of the design of Diablo Canyon, Unit 2.

For the reasons stated herein, the Joint Intervenors submit that the Appeal Board's decision is erroneous as a matter of law and fact and hence that Commission review is essential in order to protect the health and safety of the public, to verify the design adequacy of Unit 2, and to ensure the integrity of the Commission's regulations. In order to remedy the Appeal Board's error, the Joint Intervenors request the Commission to (1) grant

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review of ALAB-811 and (2) reverse the Appeal Board's decision set forth therein.<sup>1/</sup>

First, it is important to recall the context in which the issue of design quality assurance must be considered for the Diablo Canyon Nuclear Power Plant ("Diablo Canyon"). In an order issued on August 16, 1983, the Appeal Board noted the confidence of design adequacy that is generally provided by "an effectively functioning design quality assurance program" and observed that:

In the case of Diablo Canyon, however, this confidence has been seriously eroded by the existence of significant evidence that the design quality assurance program was faulty (i.e., it failed to comply with 10 CFR Part 50, Appendix B). Hence, there is now substantial uncertainty whether any particular structure, system or component was designed in accordance with stated criteria and commitments. (Order, at 4-5.)

Accordingly, the Appeal Board ordered that

the applicant has the burden of going forward and the burden of proving the adequacy of the IDVP and the ITP to establish that the plant is properly designed. . . . (Id. at 6.)

Second, at the hearings held in November 1983 on the reopened design issues, PGandE contended that the "verification program" -- e.g., IDVP and ITP -- (1) established that the plant had been properly designed, despite conceded breakdowns in quality assurance during the 1970's and (2) provided at least the level of assurance that would have been provided by an effectively functioning quality assurance program. In ALAB-763, the Appeal Board

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<sup>1/</sup> All matters of fact and law described herein were previously raised. See, e.g., Joint Intervenors' Response to September 10, 1984 Order.

essentially agreed, concluding that "the scope and the execution of the applicant's verification programs have been sufficient to establish that Diablo Canyon Unit 1 design adequately meets its licensing criteria." (ALAB-763, at 101.) As to questions regarding the design of Unit 2, however, the Board deferred a decision, choosing instead to sever the issues in light of differences in the verification effort for that unit, the fact that the applicant's verification program and the Staff's own review were still ongoing, and the fact that the Staff SER supplement on Unit 2 verification had not yet been prepared. (Id. at 20.)

Third, the hearing record established more specifically that:

(a) Units 1 and 2 were designed substantially by the same design organization (PG&E Panel 1, ff. Tr. D224, at 29; Tr. D2772);

(b) Much of the design work for Unit 2 was, thus, completed under the applicant's deficient design quality assurance program (Tr. D2772);

(c) Because of its limited scope, the IDVP did not cover or reverify the design of Unit 2 (IDVP Final Rept., PG&E Exh. 90, p.1.1-1; ALAB-763, at 20);

(d) Units 1 and 2 are not identical (Tr. D.2274). Differences exist in numerous respects described at PG&E Panel 1, ff. Tr. D224, at 29, and in PGandE's recent letters to the NRC on the issue (Letters, Schuyler to Knighton, DCL-84-278 (July 31, 1984) and DCL-84-310 (September 21, 1984));

(e) It is possible that design errors not found in Unit 1 could have occurred in Unit 2 (Tr. D1321-22, 2776).

(f) The applicant's ITP was limited, particularly in the area of nonseismic design, so that the ITP alone provides an insufficient basis for confidence in the adequacy of the Unit 2 design. For example, although it is unclear how much of the nonseismic design was reviewed by the ITP, there is no dispute (1) that it was significantly less than 50%, even for Unit 1, or (2) that it was "not intended to be a comprehensive program equivalent to that performed for Phase I."

(PG&E Exh. 90, at 1.4-4-1.4-5.) Further, the ITP -- characterized by the IDVP only as "issue-oriented, responding on a case-by-case basis to specific non-seismic concerns" (id.) -- was not documented as a review process and failed to identify the nature or number of systems reviewed or the criteria against which the design of each was verified (PG&E PFFCL, at 25). In short, the scope of the ITP was strictly limited even for Unit 1, although the extent of the limitation remains uncertain, particularly as applied to Unit 2;

(g) The Appeal Board's decision in ALAB-763 is predicated on the "applicant's verification effort," which included the IDVP and ITP (ALAB-763, at 43-44). For Unit 2, the limited ITP constitutes the applicant's entire reverification effort, though, as noted in subparagraph (g) above, the ITP was never conceived or designed for such a purpose.

Fourth, facts revealed since the November hearings undermine the reliability even of the limited ITP review. In particular, the investigation and findings of NRC Staff Inspector

Isa Yin, who substantiated the allegations of former DCP engineer Charles Stokes, establish a generic breakdown in the ITP's small and large bore piping work for Diablo Canyon. This breakdown resulted from numerous continuing deficiencies in the applicant's quality assurance program even since 1981, including a "Quick Fix" program that resulted in approximately 70% of the plant's small bore piping support design being "deviated" (SSER 25, Comments of Isa Yin). The existence of this breakdown undermines the Appeal Board's conclusion in ALAB-811 that the ITP, in and of itself, constitutes an adequate substitute for an effectively functioning QA program for the design of Unit 2.

Fifth, as the Appeal Board itself noted in ALAB-763, the applicant's verification of the design of Unit 2 was still in progress at the time the hearings were held, and the NRC Staff had not reviewed that verification effort or issued an SSER for Unit 2. (ALAB-763, at 20.) Consequently, the record does not now reflect (1) what has actually been done to verify the design of Unit 2; (2) the extent of deficiencies discovered; (3) the number and nature of modifications; and (4) the extent to which that reverification has been completed. In contrast to "inspection activities" that arguably need not be completed prior to a decision on the design adequacy of Unit 2, the focus of concern here is the fundamental and essential determination that Unit 2 has been designed to the requisite level of adequacy for initial licensing; in other words, the question here relates not to normal periodic inspection required at all nuclear plants, but design reverification undertaken as a substitute for a concededly deficient quality assurance program. Consequently, completion and



review of the reverification must precede a decision regarding the adequacy of the Unit 2 design.<sup>2/</sup>

In light of all of these points, the Joint Intervenor submit that the Appeal Board erred in concluding that PGandE has met its burden of proving "the adequacy of the IDVP and the ITP to establish that the plant is properly designed . . . ." (Order, at 6 (August 16, 1983).) In contrast to its conclusions regarding Unit 1, the limitations on verification of Unit 2 -- e.g., the lack of IDVP involvement, the limited and uncertain nature of the ITP, the incomplete nature of the Unit 2 reverification (or lack thereof) and Staff review at the time of the reopened design hearings, and the subsequent evidence of QA deficiencies in the ITP revealed by plant workers and the NRC Staff since that time -- all undermine similar conclusions of design adequacy for Unit 2. Consequently, the "substantial uncertainty" found by the Appeal Board in the above-cited order continues to exist as to Unit 2 and must be dispelled prior to the issuance of an operating license for the facility.

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<sup>2/</sup> The fact that the Commission's November 19, 1981 Order did not require an IDVP for Unit 2 does not imply that, for purposes of initial licensing, no reverification effort was needed for Unit 2. At the time of the Commission's Order Suspending License, only Unit 1 had been licensed, and the Commission did not have before it any question of licensing or enforcement for Unit 2. Thus, the critical point now is that the conceded quality assurance breakdown, which the Appeal Board previously found has undermined the requisite confidence in the plant's design, applied equally to Units 1 and 2. Therefore, the Joint Intervenor submit that the same measures needed to restore that confidence in the design of Unit 1 are needed to restore confidence in the design of Unit 2.

For these reasons, the Joint Intervenors submit that ALAB-811, and the Appeal Board's approval of Unit 2's design embodied in it, are erroneous as a matter of law and fact. To remedy the deficiencies in the record as outlined above, PGandE must be required to demonstrate on the record the verification and adequacy of Unit 2's design, just as they were required to do for Unit 1. Until PGandE has done so, the requisite reasonable assurance erroneously found by the Appeal Board simply does not exist. Accordingly, ALAB-811 must be reversed.

#### CONCLUSION

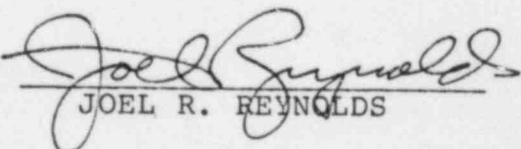
For the reasons stated herein, the Joint Intervenors request that this Petition for Review be granted and ALAB-811 be reversed.

Dated: July 12, 1985

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 12th day of July, 1985, I have served copies of the foregoing JOINT INTERVENORS' PETITION FOR REVIEW OF ALAB-811, mailing them through the U.S. mails, first class, postage prepaid, to the attached list.

Christina Concepcion  
CHRISTINA CONCEPCION



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