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August 2, 1982

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Commissioner Thomas M. Roberts  
Commissioner James Asselstine  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Re: In the Matter of Pacific Gas and Electric  
Company (Diablo Canyon Nuclear Power Plant,  
Units 1 and 2), Nos. 50-275 O.L. and  
50-323 O.L.

Dear Chairman Palladino and Members  
of the Commission:

This letter is submitted on behalf of the Joint  
Intervenors to the above-entitled proceeding in response  
to the Commission's invitation to comment on the Phase II  
Program Management Plan issued by Teledyne Engineering  
Services ("Teledyne") on June 18, 1982. For the reasons  
discussed below, the program as proposed by Teledyne is  
seriously deficient.

On July 1, 1982, the NRC released a Brookhaven  
National Laboratory ("BNL") study analyzing in detail  
certain aspects of the seismic design of the Diablo Canyon  
Nuclear Power Plant ("Diablo Canyon"). Focusing on the  
annulus area of Unit 1, BNL raised significant questions  
about the accuracy of the mathematical model used by  
URS/Blume and PGandE to determine the seismic design  
response spectra for the facility. This study establishes  
the existence of serious flaws in the fundamental design  
basis for Diablo Canyon, flaws so pervasive that last week  
even PGandE conceded publicly that reverification of the  
entire seismic design of the facility is necessary.

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Such revelations should more appropriately have arisen out of the independent design verification program ("IDVP") instituted by the Commission last November. That they did not, however, suggests that the program as outlined in the NRC Staff letter accompanying the Commission's November 19 Order and as implemented by Teledyne is inadequate to provide the thorough, accurate, and comprehensive review of the Diablo Canyon design necessitated by the circumstances of this case. Indeed, the failure of the IDVP to uncover and disclose to the Commission and the public the full extent of the discrepancies and errors in calculation of response spectra found by BNL constitutes the strongest possible evidence of the need to expand the scope of the audit program to require throughout the plant the kind of detailed review conducted by BNL in the annulus area of Unit 1. BNL's report belies PGandE's oft-repeated contention that the over 200 errors disclosed to date are no more than isolated and insignificant discrepancies, easily explained and quickly dismissed; on the contrary, the BNL report establishes that those errors are only the tip of the iceberg and mandates that the IDVP be expanded accordingly.

Moreover, it demonstrates clearly the value of allowing broad access to the audit process and the information derived from it, both by outside consultants and by all parties to this proceeding. By obtaining input from BNL and releasing BNL's findings promptly to all parties, the NRC has significantly enhanced the accuracy and, ultimately, the credibility of the Diablo Canyon review process in that errors neither detected nor disclosed by the IDVP have been uncovered by BNL and, presumably, will now result in corrective action. It is essential, however, that the IDVP be modified to reflect these important developments, both by broadening its scope and requiring full and timely disclosure to the public of all findings.

Accordingly, in light of the important questions raised by BNL, the significant deficiencies in Quality Assurance/Quality Control ("QA/QC") practices found by R.F. Reedy, Inc., in its March 1982 report, and the over 200 design errors revealed since the Diablo Canyon low

power license was suspended, we respectfully urge the Commission to require the following specific changes in the Diablo Canyon audit program:

1. The Phase I/Phase II dichotomy is invalid and must be eliminated. The full audit process should be completed and all modifications made prior to consideration by the Commission of any request to reinstate the suspended low power license. Whatever the Commission's rationale for the two-phase program at the time the license was suspended, there is absolutely no logic to the dichotomy in light of the continuing proliferation of design and construction errors at Diablo Canyon. The errors have not been isolated in any one particular area of the plant, nor is there any basis upon which to conclude that they are limited solely to seismic-related design activities prior to June 1978. In order to promote public confidence in the review and assure safety in the event of operation, plant licensing must be deferred until the full audit and modification process has been completed.

2. Just as BNL used three-dimensional ("3-D") mathematical models in its analysis of the Unit I annulus area, so must 3-D modeling be utilized to recalculate the seismic floor response spectra for the entire plant. The importance of seismic design at Diablo Canyon mandates the use of state-of-the-art techniques (such as those used by BNL) to obtain as realistic a representation of the earthquake forces on the plant systems and components as is technically possible. Using such techniques, BNL calculated support forces significantly larger than those calculated by PGandE using a 2-D model. BNL Report, at 11-12. Further, because there is no basis to conclude that the kinds of errors disclosed to date are limited to Blume's and PGandE's calculation of the vertical response spectra, similar modelling is necessary to recalculate the horizontal response spectra for the entire facility as well. Once the design spectra have been reverified, all structures, equipment, components, and systems should be requalified accordingly and, where necessary, modified to assure adequate design and construction.

3. The audit should be expanded to include construction QA/QC in order to determine if the systemic deficiencies in design practices found by R.F. Reedy, Inc., extended also to construction. Where problems are discovered, additional sampling should be conducted to determine and remedy the full extent of any errors. In light of the virtually complete absence of proper QA/QC practices for the period reviewed by Reedy, there is little basis for confidence that PGandE and its subcontractors observed the applicable QA/QC standards in construction, and the audit must, therefore, address that uncertainty.

4. Once the proper plant design has been recalculated and all modifications made, a physical inspection must be conducted to determine whether the plant has actually been constructed in accord with its design specifications. The errors in proper design QA/QC practices increase the likelihood that important discrepancies between design and the as-built facility may exist. An appropriate sample of structures, systems, and components should be taken and, where discrepancies are discovered, the sample should be expanded to ascertain the generic implications of the discrepancy for the plant as a whole.

5. Given the pervasive pattern of errors disclosed to date, the design audit should extend to all structures, components, and systems important to safety. Once again, in the absence of such a review, there is no basis for the requisite "reasonable assurance" that the plant is designed and will operate in accord with the Commission's regulations.

6. It is essential that the design verification program be conducted in an independent, technically competent, and thorough manner. To that end, we urge the Commission to retain BNL to monitor the modeling activities apparently contemplated by PGandE and to participate fully in the ongoing design audit at Diablo Canyon. In addition, BNL should be retained by the NRC to

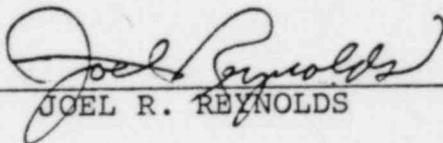
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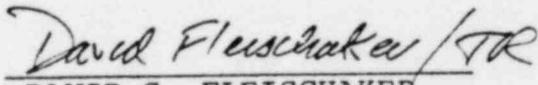
conduct analyses similar to that described in its recent report for the Turbine and Auxilliary Buildings at Diablo Canyon.

Respectfully submitted,

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