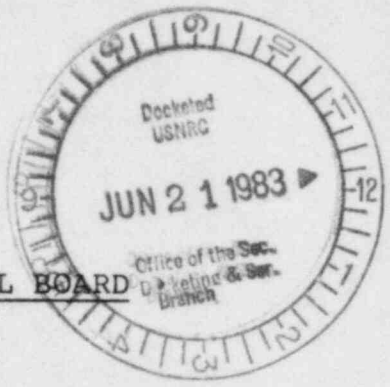

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of	)	
PACIFIC GAS AND ELECTRIC COMPANY	)	Docket Nos. 50-275 O.L. 50-323 O.L.
(Diablo Canyon Nuclear Power Plant, Units 1 and 2)	)	

JOINT INTERVENORS' REPLY TO PACIFIC GAS AND ELECTRIC COMPANY AND NRC STAFF RESPONSES TO MOTIONS TO REOPEN ON ISSUE OF CONSTRUCTION QUALITY ASSURANCE

Pursuant to the June 7, 1983 Order of this Appeal Board, the Joint Intervenors hereby reply to the responses of Pacific Gas and Electric Company ("PGandE") and the NRC Staff ("Staff") to the pending motions to reopen the Diablo Canyon record on the issue of construction quality assurance ("CQA/QC"). In the interest of brevity and because much of the evidence submitted by the Joint Intervenors in support of their May 10, 1983 motion has not been disputed by PGandE or the Staff, no attempt will be made in this Reply to reiterate the content of and evidentiary basis for the motion. This Reply will focus only on several points central to the PGandE and Staff responses.

1. Neither PGandE nor the Staff disputes the existence of CQA/QC deficiencies at Diablo Canyon. Instead, they seek to convince this Board that the conceded deficiencies either have

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no significant impact on safety or are being adequately remedied independent of this adjudicatory proceeding. In so doing, PGandE and the Staff invite this Board to adopt an essentially myopic view of the substantial evidence presented, a view which ignores the fundamental importance of quality assurance in nuclear power plant design and construction and the potential generic implications of the deficiencies disclosed to date at Diablo Canyon. For example, both parties erroneously characterize as "insignificant" each of the notices of violation issued by the NRC and the so-called "findings" and "observations" arising out of the Independent Design Verification Program ("IDVP") CQA/QC audit. To the contrary, independent of their individual safety significance, those violations, "findings," and "observations" -- viewed as a whole -- constitute significant undisputed evidence that an adequate CQA/QC program was never implemented at Diablo Canyon during its construction. Indeed, had PGandE and its contractors done so -- as the Commission's QA/QC regulations required -- such deficiencies should and would have been detected long ago.

Moreover, the scope of the limited CQA/QC audit conducted by the IDVP is such that matters of obvious significance -- e.g., insufficient independence between quality control and production, improper marking of nonconformances, or inadequate staffing of inspection personnel -- have not been detected because the IDVP has no intention of reviewing those matters. Obviously, the failure of the IDVP even to look precludes any assurance that such problems don't exist,

particularly where, as in this proceeding, their existence has been disclosed in a number of instances by other sources. Similarly, the IDVP has failed to perform such basic audit tasks as reviewing records of past nondestructive examinations, redoing a sample of those examinations (e.g., ultrasound, x-rays, radiographs, etc.), reviewing pre-op tests for validity, and redoing a sample of those tests. Its reliance only on visual examinations virtually ensures that the IDVP audit will do no more than scratch the surface of Diablo Canyon's construction deficiencies.

2. Both PGandE and the Staff rely heavily upon the Staff's own investigation of the Tennyson and Roam allegations of CQA/QC violations. They argue, in essence, that there is little, if anything, to the Tennyson/Roam testimony in light of the Staff's own investigation and conclusion that virtually all of the allegations are unsubstantiated.

The Staff's conclusions are evidence not that Tennyson and Roam were wrong, but rather that the Staff is apparently incapable of conducting an adequate investigation in the context of this proceeding. The Staff failed even to interview Richard Roam, one of the two principal personnel involved, and, in its interview of Tennyson, the Staff completely ignored some of the most significant evidence uncovered by the Attorney General -- namely, the specific daily incidents of pressure by PGandE of Foley QA/QC personnel, urging them to be less careful, find fewer nonconformances, and get out of the way of production. See Joint Intervenors' Motion to Reopen, at 12-13. Further, the

Staff failed even to ask Tennyson about the incredible amounts of overtime that QA/QC personnel were working at the site during the height of the redesign and reconstruction in early 1983. In its Investigation Report, the Staff concluded that the Tennyson/Roam allegations regarding excessive work hours were "not substantiated," yet in the very next sentence found that from December 1982 to March 1983 "90% of all Quality Control Inspectors and Supervisors worked more than 60 hours a week . . . , with three inspectors working 80 hours a week or more" (emphasis added). (PGandE Response, Attachment 2, at 14.) Such an obvious inconsistency undermines the validity of the Staff's investigation effort.

The Staff found adequately substantiated the allegation that red tags were being pulled prematurely in order to facilitate construction. Nevertheless, it then proceeded to denigrate the significance of the clear regulatory violation. Id., at 3-5. Once again, the Staff simply ignored the far more significant root cause of the violation -- the improper and rampant disregard by PGandE of the regulatory requirement that quality control be independent of the pressures of production. As a direct consequence of PGandE's obsession with speed and scheduling (as evidenced by the unprecedented 7,000 workers now on site), QA/QC violations inevitably will occur -- indeed, clearly have occurred at Diablo Canyon -- and public confidence in the quality of design and construction will necessarily be undermined. The Staff investigation failed even to address this issue.

3. PGandE contends that the existence of deficiencies is not surprising given the massive number of manhours of construction work on-site during the past year. (PGandE Response, at 76-80.) The Joint Intervenors agree. It does not follow, however, that PGandE's self-imposed frenzy of construction activity is any justification for the CQA/QC deficiencies. To the contrary, the unprecedented construction level is an important reason for concern that inadequate attention is being given even today to the Commission's quality assurance requirements. If the level of construction activity cannot be maintained without increasing QA/QC violations, then a reduction in that level of construction should be required. The conceded existence of notices of violations issued by the NRC and "findings" or "observations" issued by the IDVP is concrete evidence that quality is being sacrificed for speed at Diablo Canyon.

4. Both PGandE and the Staff suggest that the number of discreet CQA/QC errors discovered to date is not so significant as to satisfy the "changed result" standard for reopening of the record. However, they ignore the fact that, in October 1981, after the discovery of only the initial design errors in the Unit 1 annulus, NRR Director Harold Denton acknowledged that prior disclosure of even the few errors then disclosed would have prevented issuance of the low power license. Meeting Transcript, at 117 (October 9, 1981). One month later, the Commission, based on evidence of only 14 errors, stated in its Order Suspending License that "had this

information (regarding QA/QC design errors) been known to the Commission . . . , Facility License No. DPR-76 would not have been issued." CLI-81-30, at 3.

Significantly more evidence has since come to light which establishes that PGandE's QA/QC program for Diablo Canyon was simply a "mirage," a fact undisclosed by PGandE for years and undiscovered by the Staff prior to issuance of the license. As the Joint Intervenors argued in their July 7, 1982 and May 10, 1983 motions, much of that evidence has generic significance for both design and construction activities; other aspects of it relate specifically to CQA/QC. Given this cumulative body of evidence, the PGandE and Staff contention that this significant new evidence would not change the result cannot be reconciled with the contrary conclusions of NRR Director Denton and the Commission.

5. The Staff's assertion that valid statistical techniques are unnecessary and unjustified ignores the uncertainties which inevitably accompany reliance upon subjective judgment, uncertainties which reliable statistical methodology would eliminate. The IDVP CQA/QC audit is directed only to limited aspects of two construction contractors. As such, it provides no basis for conclusions about other contractors the activities of which were not reviewed, nor does it provide adequate assurance with respect to those unreviewed aspects of the programs of even the two selected contractors. The unique history of this proceeding warrants special measures to ensure full and adequate disclosure of the pervasive design

and construction flaws at Diablo Canyon resulting from PGandE's mismanagement and disregard for QA/QC requirements. Valid statistical sampling techniques are necessary if that assurance is to be achieved.

6. The Staff contends also that the Joint Intervenors' failure to cross-examine the Staff and PGandE witnesses at a 1977 hearing constitutes a "waiver" of their right to contest any QA/QC issues based on deficiencies which occurred prior to the time of that hearing. The Staff argues that such deficiencies would have been revealed had the Joint Intervenors elected to conduct a cross-examination.

The Staff's contention is absurd. First, prior to the 1977 hearing, the Joint Intervenors submitted a detailed QA/QC contention and sought discovery on the issue. Admission of the contention and permission to conduct discovery were both opposed by the Staff and ultimately denied by the Licensing Board. Having been precluded from raising the issue of QA/QC in a meaningful manner, the Joint Intervenors elected not to participate in what they viewed as a meaningless charade -- the right to cross-examine without any right to prepare. Second, notwithstanding their own regulatory responsibilities and supposedly extensive familiarity with the issue, the Staff witnesses testified that the applicable QA/QC regulations were satisfied at Diablo Canyon, a conclusion which has now been thoroughly discredited by the revelations of the past 18 months. To suggest that unprepared cross-examination could have disclosed what even the responsible Staff officials failed to

recognize is patently frivolous. And third, the Joint Intervenors' election not to cross-examine at the 1977 hearing was in no way a waiver of their right to litigate the issue of QA/QC at Diablo Canyon. Throughout this proceeding, they have continually raised the issue, despite repeated opposition from PGandE and the Staff.

7. Finally, PGandE and the Staff have presented essentially no evidence to refute the vast majority of the significant new information supplied in support of the pending motions, including that relating to inadequate training of welders and inspectors, the absence of written procedures for qualification of inspectors and supervisors, inadequate marking of nonconforming work, failure to document nonconformances or to implement an adequate QA/QC program at the earliest practicable time, failure to inspect work and materials, inadequate independence between quality control and production, inadequate control of activities affecting quality, inadequate design control, improper acceptance of nonconforming materials, and inadequate staffing of inspection personnel. See Joint Intervenors Motion, at 11-14. Each of these areas is governed

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by specific Appendix B criteria. Violation of those criteria by PGandE and its contractors requires that the record be reopened for hearings on the issue of CQA/QC.

DATED: June 17, 1983

Respectfully submitted,

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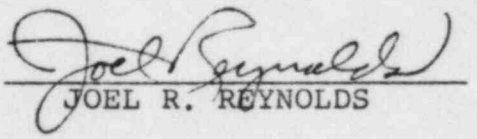
By 
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CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of June, 1983, I have served copies of the foregoing JOINT INTERVENORS' REPLY TO PACIFIC GAS AND ELECTRIC COMPANY AND NRC STAFF RESPONSES TO MOTIONS TO REOPEN ON ISSUE OF CONSTRUCTION QUALITY ASSURANCE, mailing them through the U.S. mails, first class, postage prepaid.

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