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 ANSWER OF PACIFIC GAS AND ELECTRIC COMPANY TO MOTION TO AUGMENT OR, IN THE ALTERNATIVE, TO REOPEN THE RECORD

The Joint Intervenors hereby reply to Pacific Gas and Electric Company's ("PGandE") Answer in Opposition to Joint Intervenors' February 14, 1984 Motion to Augment or, in the Alternative, to Reopen the Record ("Answer").[1/] This reply includes the attached March 14, 1984 Statement of former Diablo Canyon Project engineer Charles Stokes, prepared in response to a number of the factual assertions contained in PGandE's Answer. As appears below, PGandE's contentions in opposition to the instant motion cannot withstand scrutiny under well-established Commission standards. Accordingly, this motion should be granted.

1/ This reply does not address the NRC Staff's response due to time limitations suggested by this Board in the conference call with all counsel held on February 22, 1984. During that call, the Board indicated that its decision might be issued as early as the day after receipt of the PGandE and Staff responses. Because the NRC Staff's response is due on March 15, 1984, the Joint Intervenors are filing on that same day this reply to PGandE's answer only.

A. General Contentions

At the outset, it is important to place in perspective the principal focus and general tone of PGandE's response to the Joint Intervenors' motion. First, at page 2 of its Answer, PGandE characterizes what it perceives to be the sole reason and motivation for the motion: "to stop the licensing and operation of Diablo Canyon by obstructing and thwarting the administrative process." By thus impugning the Joint Intervenors' motives, PGandE invokes once again the refrain of "Intervenor delay" with which it has repeatedly greeted the Joint Intervenors' attempts to raise safety issues during the past eight years in this proceeding. Rather than accepting the possibility that the citizens who must live in the vicinity of Diablo Canyon might have legitimate concerns about its safety (particularly in light of the troubled history of this plant), PGandE has adopted a standard response that any new evidence is offered only as a pretext for unreasoned opposition to nuclear power.

Indeed, PGandE's characterization of this most recent motion on design quality assurance as a tactic of delay sounds strikingly similar to PGandE's characterization of the Joint Intervenors' initial motion in early 1977 seeking to raise quality assurance as an issue in this proceeding. In its May 5, 1977 Response to Intervenors' Motion to Add New Contentions, at 11, PGandE opined that "one of Intervenors' primary purposes is to delay the licensing of Diablo Canyon as long as possible and these motions are but yet another ploy to achieve that

desired delay." Not only has the record in this proceeding since established beyond question that the Joint Intervenors' concerns regarding PGandE's quality assurance program were far more than the suggested pretext for delay, the fact that the instant motion is based substantially on the testimony of PGandE's own past and present employees -- all of whom have worked for years as part of the nuclear industry -- should be sufficient to sustain the good faith nature of the Joint Intervenors' application.

Second, although PGandE has conceded that a great many of Mr. Stokes' allegations are factually correct, it contends that they have no safety significance and hence that the record should not be reopened. PGandE Answer, at 15. Again, this response has been largely discredited by its overuse, particularly during the past three years. Unable to dispute the existence of deficiencies in its design practices, PGandE has instead asserted that nothing disclosed during the design verification program is safety significant. Indeed, during the recent design hearings, PGandE witnesses testified on the record that none of the design errors disclosed during the past three years -- including, presumably, even the reversed diagram error that led to suspension of the low power license by the Commission -- was safety significant. Tr. D-345-46; see also PGandE Panel No. 1, at 14; Tr. D-452-53. Its identical assertion now, therefore, is neither surprising nor persuasive and must be scrutinized with great care.

Third, PGandE seeks also to impugn the motives of Mr. Stokes, asserting that one conclusion is inevitable: "Mr. Stokes' concerns are directed at something other than safety." PGandE Answer, at 12. Although this conclusion might carry more weight if Mr. Stokes weren't an experienced member of the nuclear engineering profession, it is clearly suspect in light of the factual accuracy of his allegations, as verified by NRC Staff and Labor Department investigations. As is apparent from the Joint Intervenors' initial motion papers, this application is based, among other things, both on the evidence provided by Mr. Stokes and on the substantiation of much of that evidence by the NRC Staff (e.g., evidence of inadequate training, calculation errors, simplification of calculations in order to pass "failing" pipe supports, quality assurance deficiencies, etc.) and by the Labor Department (e.g., finding that PGandE retaliated against Stokes for preparation of DRs). Clearly, this is far more than a "disgruntled worker" with a personal grudge against PGandE. Mr. Stokes has indicated that his concern is to ensure compliance with proper design procedures and practices. PGandE's suggestion to the contrary is a red herring, totally without foundation.[2/]

2/ PGandE's challenge to the motives both of the Joint Intervenors and Mr. Stokes is a disturbing indication that PGandE still does not take seriously the possibility that safety questions remain at Diablo Canyon. As the Case Study C Team concluded, it is precisely this mindset of overconfidence that has contributed to the continual series of design problems at Diablo Canyon.

B. Standard of Review

At pp. 3-8 of its Answer, PGandE cites "the principle of administrative finality" as a basis for denying this motion and asserts that further hearings would constitute "an absolute abomination of the administrative process." While the Joint Intervenors would not dispute that this fifteen-year proceeding has been lengthy or that at some point it must end, they strongly disagree with PGandE as to what its outcome must be given the present state of the record. Under the law, PGandE has the burden of proving that it complies with the Commission's regulations and all licensing criteria in order to obtain an operating license. 10 C.F.R. § 50.57(a). Until PGandE has met that burden, no license may issue, regardless of how long the proceeding lasts. If the applicant cannot demonstrate full compliance, the NRC can end the proceeding in only one way: denial of the application.

This basic principle is not altered by the fact that an Initial Decision was issued in this proceeding in 1981. As this Board recognized in reopening the record in April 1983, the Commission has clearly established the right to reopen the record upon the submission of significant new safety information that, if known initially, would have changed the result. Kansas Gas and Electric Co., et al. (Wolf Creek Generating Station, Unit 1), ALAB-462, 7 NRC 320, 328 (1978); Vermont Yankee Nuclear Power Corporation (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 523 (1973); id., ALAB-167, 6 AEC 1151-52

(1973). This right necessarily follows from the fact that a "definitive finding of safety" is required prior to the issuance of any license. Power Reactor Development Co. v. International Union of Electrical, Radio and Machine Workers, AFC-CIO, 367 U.S. 396, 414 (1961). Where evidence of safety problems is proffered by a party, it cannot be ignored simply because the administrative proceeding has extended for many years, particularly where, as here, the length of the proceeding is attributable solely to the applicant's recently disclosed failure to comply with its licensing commitments.3/

In a closely analogous situation, the Appeal Board has specifically rejected a utility's suggestion, in opposition to reopening, that the licensing proceeding must end before all safety issues are resolved. In Vermont Yankee, supra, ALAB-124, 6 AEC 358, 365 (1973), the Board explained that any delay associated with a motion to reopen the record is attributable not to the intervenors but solely to the "non-readiness of the facility for operation":

> We cannot accept the applicant's unstated premise that the desirability of completing the hearing process outweighs the need to

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3/ Where an agency refuses to receive significant new evidence or ignores factors relevant to the public interest, the courts will remand for further hearings. See Hudson River Fishermen's Association v. Federal Power Commission, 498 F.2d 827, 832-33 (2d Cir. 1974); Brennan v. Occupational Safety and Health Review Commission, 492 F.2d 1027, 1031-32 (2d Cir. 1974); WMOZ, Inc. v. Federal Communications Commission, 120 U.S. App.D.C. 103, 344 F.2d 197 (1965); see also Michigan Consolidated Gas Co. v. Federal Power Commission, 283 F.2d 204, 226 (D.C.Cir.) cert. denied, 364 U.S. 913, 81 S.Ct. 276 (1960).

> resolve potentially serious safety matters. This is so even though the Staff believes that the matters raised by a letter do not warrant consideration in the hearing, but instead can be handled by the Staff outside the hearing process. The intervenors have every right, in presenting contentions for consideration, to rely upon consequential safety matters brought to light by the Staff's technical experts.
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> In short, delay in the issuance of an operating license attributable to an intervenor's ability to present to a licensing board legitimate contentions based on serious safety problems uncovered by the Staff would establish not that the licensing system is being frustrated but that it is working properly. Any delay in such a situation would be fairly attributable not to the intervenors but to the non-readiness of the facility for operation. (Emphasis added.)

This decision is controlling here. None of the cases relied upon by PGandE supports its characterization of further hearings as an "abomination." In Vermont Yankee Nuclear Power v. NRDC, 435 U.S. 519, 98 S.Ct. 1197 (1978), the Court upheld a denial of further hearings where an uncooperative intervenor sought hearings on nonspecific, undefined claims, which it refused to refine. 98 S.Ct. at 1217. In stark contrast, the Joint Intervenors have submitted detailed affidavits by credible, informed sources setting forth highly specific allegations of deficient design and design quality assurance practices. Similarly, in Union Electric Company (Calloway Plant, Unit 1), ALAB 750A, 18 NRC ___ (1983), reopening was denied where the Board found only a "possibility" that new

information bearing on safety would be forthcoming. In this proceeding, such information has already been provided, information that PGandE has disputed.

This is precisely the situation in which reopened hearings are necessary -- where significant new evidence has been provided and the applicant has replied with conflicting factual assertions. In Vermont Yankee, supra, the Appeal Board recognized that discovery and hearings are the required means to resolve factual disputes on a motion to reopen. ALAB-138, 6 AEC at 523-25. Even more so here, where the record has already been reopened, the new factual evidence relates directly to existing contentions and undermines much of PGandE's testimony at the November 1983 hearings. Thus, it must be addressed on the record to determine the validity of the utility's explanations. Vermont Yankee forbids the resolution of material factual disputes by simply accepting the predictable assurances offered by the applicant.[4/]

4/ The Vermont Yankee decision establishes the standard for consideration of whether the three-part test for reopening of the record has been met:

> [T]o justify the granting of a motion to reopen the moving papers must be strong enough, in the light of my opposing filings, to avoid summary disposition.

ALAB-138, 6 AEC at 523. Similarly, in ALAB-126, at 396, the Appeal Board held that:

> If upon examination of those documents and other quality assurance submissions or arguments of the parties, the Board is

[footnote continued]

C. Relevance of NRC Investigation

Without once denying the direct relevance of this significant new information to issues in contention in the reopened design proceeding, PGandE next cites the ongoing Staff investigation of that information as a bar to its consideration in the licensing context. In so doing, PGandE in effect proposes the unprecedented and wholly unacceptable delegation by this Board to the Staff of the duty to resolve contested licensing issues in the reopened design proceeding.

PGandE's position is squarely at odds with the well established principle that the responsibilities of the licensing boards are independent of those of the NRC Staff and may not be delegated. In Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2), ALAB-298, 2 NRC 730, 737 (1975), the Appeal Board specifically rejected the notion that the licensing board's duty to make particular findings could be delegated to the Staff:

> When governing statutes or regulations require a licensing board to make particular findings before granting an

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4/ [Cont'd]

> convinced that a legitimate issue remains, it will have to reopen the record on that issue.*
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> *In other words, the Board can utilize, at this stage, a procedure similar to the summary disposition procedure usually employed prior to a hearing. (Emphasis added.)

> applicant's request, a board may not delegate its obligations to the Staff. The responsibilities of the boards are independent of those of the Staff under the Commission's system, and the board's duties cannot be fulfilled by the Staff, however conscientious its work may be. (Emphasis added.)

Similarly, in Consolidated Edison Co. of New York (Indian Point Station, Unit 2), CLI-74-23, 7 AEC 947, 951-52 (1974), the Commission emphasized that "the mechanism of post-hearing resolution must not be employed to obviate the basic findings prerequisite to an operating license . . .," even if reopened hearings are necessary. More recently, in Commonwealth Edison Co. (Byron Nuclear Power Station, Units 1 and 2), LBP-79-411-04 PE, at 5 (January 13, 1984), the licensing board rejected the NRC Staff's suggestion that the Staff be allowed to resolve post-hearing quality assurance problems at the Byron facility, holding that "prevailing Commission law prohibits such a large delegation in contested issues."[5/]

These decisions are based on the Commission's recognition that a Staff investigation is no substitute for the trial of issues in an adversary context, which includes the rights to discovery, cross-examination and confrontation of

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5/ See also Wisconsin Electric Power Co. (Point Beach Nuclear Plant, Unit 2), CLI-73-4, 6 AEC 6, 7 (1973) (holding that "whenever an agency is required to conduct an adjudicatory hearing on an operating license application, all parties have the right to an opportunity to participate in the resolution of properly contested issues").

witnesses, and the presentation of evidence.[6/] This is particularly true in this proceeding where historically the Staff has supported PGandE in opposing the Joint Intervenors' efforts to raise quality assurance issues. Regardless of whether the Staff is now conscientiously investigating the information on which this motion is based, a delegation to the Staff -- as one of the parties to the ongoing licensing proceeding -- of matters directly related to contested issues in that licensing proceeding would be plainly improper, both as a matter of law and basic fairness.[7/]

6/ In testimony before Rep. Ottinger's congressional subcommittee on October 1, 1983, Commissioner Asselstine summarized the reasons why a Staff investigation is an inadequate alternative to adjudicatory hearings:

> It is a far different matter to send in a petition to the Commission and have the NRC staff review it and have the Commission reach a final judgment on it and from time to time discuss with those people what the resolution of it is than it is to provide a direct opportunity for them to raise issues and to be able to pursue those issues in a hearing format and to be able to directly cross-examine witnesses from the opposing party and present direct evidence on their behalf and have that evidence judged by an independent trier of fact who sits there and observes the procedures.

7/ PGandE's citation of Cincinnati Gas and Electric Company (Zimmer Nuclear Power Station, Unit 1), CLI-82-20, 16 NRC 109 (1982), is inapposite. There, the Commission refused to allow new contentions where the motion to reopen the record was not timely filed. Here, the record has been reopened, the contentions have already been admitted, and this motion has been timely filed. See discussion infra at Point D.

D. Timeliness

PGandE contends next that the evidence on which this motion is based is untimely because allegedly it was "easily discoverable" prior to the November hearings. This contention is erroneous both as a matter of fact and law. First, PGandE's apparent confidence in the discovery process ignores the fact that, not only did this new information escape disclosure during discovery, it was not uncovered even by the NRC inspectors who have monitored the entire design verification program during the past three years. Thus, although perhaps obvious to PGandE (which did not choose to reveal the information), it was plainly not self-evident even to the federal agency inspectors who oversaw the redesign program on a daily basis.

Second, the information revealed by Mr. Stokes and the NRC Staff was not "easily discoverable," because in discovery and during the hearing PGandE witnesses gave no inkling of the events described in the documents on which this motion is based. For example, they testified that PGandE's corrective action program was fully governed by a formal QA program, fact disputed by Mr. Stokes in his description of "Quick Fix" practices used to circumvent the formal QA program. PGandE's suggestion that the information now provided by its own past and present employees should be disregarded because they "chose" not to come forward prior to the hearing ignores (1) their hope and repeated attempts to obtain corrective action internally and (2) their understandable reluctance to risk the hazards

associated with "going public" -- e.g., intimidation, harassment, and retaliation.[8/]

Third, when Mr. Stokes first approached the Mothers for Peace in November 1983, he was directed for assistance to the Government Accountability Project ("GAP"), which agreed to represent him with respect to his Labor Department claim of retaliation by PGandE.[9/] Not until he had prepared his affidavit in support of that claim and the accuracy and relevance of his allegations had been verified by the NRC and others did the Joint Intervenors consider it sufficiently reliable to justify further examination through hearings.[10/] Were the Joint

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8/ That this is no idle fear in the Diablo Canyon Project organization is evidenced by the Labor Department decisions finding retaliation against Mr. Stokes and Mr. Lockert, by the complaints recently filed by other workers, and by the number of workers who have submitted affidavits but insisted that their anonymity be maintained as a precaution.

9/ As this Board may be aware, GAP is an organization that represents whistleblowers both before the NRC and the Labor Department. Contrary to PGandE's suggestion, GAP did not undertake representation of the Mothers for Peace until December 1983, when it agreed to file a 2.206 petition on their behalf based on affidavits and documentation provided by past and present Diablo Canyon workers. That petition was filed on February 2, 1984.

10/ GAP served the initial Stokes affidavit on the Commission on November 30, 1983. By letter to this Board on December 9, 1983, the Joint Intervenors requested that the affidavit be circulated to the Board and all parties as a Board Notification, reserving the right for subsequent comment if the allegations contained in it related to the issues under litigation. At the January 31, 1984 meeting, the NRC Staff disclosed that it had been unable to resolve not only a number of Stokes' allegations of design discrepancies and deficient design practices but many of its own questions as well, and by letter dated February 7, 1984, the Staff notified this Board that the concerns might bear on several of the contentions being litigated in the reopened design proceeding. One week later, the Joint Intervenors filed the instant Motion to Augment or, in the Alternative, to Reopen the Record.

Intervenors to do otherwise, they would continually be faced with the obligation to seek reopening of the record whenever a worker came to them for assistance, despite the fact that no investigation or corroboration of the particular allegations had been obtained. Clearly, neither this Board nor PGandE would encourage such applications. Significantly, the NRC Staff itself did not reach even preliminary conclusions regarding the highly complex Stokes allegations until it had conducted a two-month investigation. To expect the Joint Intervenors to render an immediate assessment of an unknown workers' testimony without expert analysis, investigation, or corroboration is not only unrealistic, but wholly unfair.[11/]

11/ PGandE seems to suggest also that merely because many of the practices described by Mr. Stokes and Mr. Cooper existed during the past two years, they can no longer be considered by this Board. PGandE Answer, at 5-7. This view is not only pernicious from the standpoint of safety, but it ignores the realities of the nuclear licensing process, as well as past precedent in this case. While discovery is a beneficial and necessary element of the hearing process, it does not ensure that all deficiencies will be disclosed. Discovery is strictly limited in duration, and the complexity of the technology and issues, the obvious limitations of the NRC inspection program, and the fact that only the utility has full access to the design and construction process make inevitable the need to rely upon the utility's willingness and ability to comply fully with all applicable regulations and reveal any noncompliance. Failing that, allegations by plant workers are the only means to learn about many of the practices and procedures employed by the utility. Because the parties have no control over the timing of disclosure of such allegations, motions based upon them cannot be dismissed as untimely simply because they relate to past practices and events. Were that not so, this record could not have been reopened in April 1983 based on evidence of flawed design practices during the preceding decade.

Fourth, PGandE's charge (Answer, at 7) that the Joint Intervenors are attempting to "manipulate" the administrative process by continuing to raise safety issues relevant to contentions in the reopened design proceeding is absurd. At the time of the hearings all parties understood that allegations potentially relating to admitted contentions were being received and investigated by the Staff, and this Board explicitly declined to close the record in order to permit any significant information arising out of those allegations to be addressed and considered.[12/] For PGandE now to characterize as "manipulation" the Joint Intervenors' legitimate pursuit of a portion of those allegations shown to be accurate, significant to safety, and relevant to contentions under litigation is a blatant attempt to close the door prematurely on a hearing process that PGandE has consistently sought to accelerate to facilitate its own licensing schedule. Under the Atomic Energy Act, safety is the "first, last, and a permanent consideration in decisions to license nuclear power plants." Consumers Power Co. (Midland Nuclear Power Plant, Units 1 and 2), ALAB-315, NRCI-76-2, 103-04 (1976). That is the sole focus of the instant motion.

Finally, the decision in Cincinnati Gas and Electric Company (Zimmer Nuclear Power Station, Unit No. 1), CLI-82-20, 16 NRC 109 (1982), cited by PGandE, does nothing to advance its

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12/ See discussion in Joint Intervenors' Motion to Augment or, in the Alternative, to Reopen the Record, at 2 n.1 (February 14, 1984).

position. Quite the contrary, in fact, it stands only for the proposition that a motion to reopen is untimely if filed six to seven months late without an adequate explanation of (1) why it was not filed earlier, (2) when the underlying information was received, and (3) from whom such information was obtained. In contrast, the instant motion has been promptly filed based on information within PGandE's knowledge but only recently obtained by other parties. Under the circumstances, PGandE should not now be heard to urge its exclusion as untimely.

E. Specific Allegations

1. General Comments

PGandE devotes no more than one paragraph in the body of its Answer to the NRC Staff findings at the January 31, 1984 meeting at PGandE's offices. In so doing, PGandE leaves the impression that the Stokes allegations stand virtually alone as uncorroborated factual assertions without independent substantiation. The Staff's findings, however, plainly support his contentions regarding lack of training, calculational errors, simplification of calculations to pass "failed" pipe supports, and continuing deficiencies in PGandE's quality assurance program. As the transcript of the January 31, 1984 meeting at PGandE's offices makes clear, the issues raised by the Staff are, in its opinion, not mere failures to dot an "i" or cross a "t" but are "significant," "serious," "major" concerns -- "a significant number of questions . . . [that] quite frankly we find troubling." Meeting Transcript, at 4, 5,

7, 14, 69, 80-81 (January 31, 1984).[13/] Although its findings are preliminary and do not necessarily establish the existence of hardware problems, the evidence to date is sufficient as a matter of law to preclude issuance of an operating license. See, e.g., Commonwealth Edison Company (Byron Nuclear Power Station, Units 1 and 2), LBP 79-741-04 PE, at 7 (denying

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13/ With respect to the question of numerous inoperative snubbers installed at the plant, James Knight of the Staff summarized the concern as follows:

> I think, again, speaking for the staff as a whole, it does bring a question to mind, that if a number of -- let's call them extraneous snubbers have been found in the plant, one must ask the question: Is there reason to question design practice? Is there reason to question the overall administration of the design program? (Meeting Transcript, at 59.) (Emphasis added.)

Regarding adequacy of small bore piping supports and its review by the IDVP, Isa Yin of the Staff asked:

> [H]ow can Cloud conclude that the corrective action was acceptable based on such small sample size review, and with large amount of errors being identified. If you look at the total piping population, eight out of three thousand seven hundred and fifteen amounts to point two-two percent. If we look at the total independent verification program evaluated, which is twenty-two hundred and fifteen supports, it amounts to point three-six percent. And if you look at the independent verification program, with documentation, excluding those qualified supports, it amounts to about point four-four percent. So those are very, very small sample size, with a large number of errors identified. (Id. at 39.) (Emphasis added.)

license based on evidence of failures in quality assurance programs despite absence of established hardware or construction problems).[14/]

While, contrary to PGandE's suggestion, the Joint Intervenors do not contend that "anything less than absolute perfection is fatal," PGandE Answer, at 20, the evidence upon which this motion is based is further evidence of a systematic, non-random failure in PGandE's quality assurance program that has existed for years, a failure that precludes the reasonable assurance essential to licensing. The Stokes allegations and Staff findings confirm many of the deficiencies revealed during the November hearings but denied by PGandE. Lack of adequate training, lack of drawing control, inadequate control of manuals, failure to update the FSAR or to assure compliance with its provisions, lack of technical audits to confirm accuracy of drawings, calculations, or hardware -- each of these was indicated through evidence on the record and now has been further substantiated by Mr. Stokes and the Staff's investigation. Although PGandE seeks to denigrate the significance of many of these continuing deficiencies -- e.g., lack of training and manual control -- they are clearly not de minimus where, as here, a high percentage (50%) of OPEG

14/ The Stokes allegations are consistent also with anonymous allegations received by the NRC Staff in October 1983 from engineers in the OPEG small bore piping stress group. See Stokes' 11/83 affidavit, at 12; NRC Board Notification 83-171 and attachment.

engineers were "job shoppers." Even if experienced on other nuclear plants, these engineers have a particular need for training and guidance in the specific criteria and code provisions applicable to the Diablo Canyon facility. Because training was admittedly not provided in a timely fashion, and because manuals and procedures were not updated on a regular basis, there is a significant question whether the redesign is reliable and complies with PGandE's licensing commitments.

A common response by PGandE to a number of the allegations by Mr. Stokes and questions by the Staff regarding deficient design practices is to suggest that the existence of a related procedure or specification is sufficient to resolve a particular concern. This response ignores the need for implementation if that procedure or specification is to have any value at all. The fact that management may be aware of a document does not ensure the same degree of familiarity by the workers. In the January 31, 1984 meeting, Yin of the NRC made precisely this point in answer to PGandE's contention that the NRC inspectors had simply failed to find a required organizational chart that, according to PGandE, did in fact exist:

> MR. YIN: Well, you can show me, because when I asked the people that were performing the job they couldn't tell me that such a thing exists, and it is documented in my interview with the personnel. Management may know, but the workers do not know.

PGandE's response is troubling, because it suggests that the workers need not be aware of the procedures as long as their

supervisors are:

> MR. TRESSLER: . . . [T]hese engineers weren't used to interfacing directly with the NRC investigators or auditors, and from what I understand a number of them were interviewed individually, without the benefit of supervision, and this combination of things led them to freeze up and not think at the time they were providing responses. I think if we go back over these things with the engineers and have their supervision there so they aren't trying to answer questions that the supervisor should answer, or the developer of the criteria or procedures should be aware that we are going to come away with a better picture of just how that organization functions.
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> MR. YIN: Several levels of the small bore pipe personnel that I questioned, they did not know that that existed. If you have anything to tell me, perhaps, -- really that management knows, but the lower level of supervision did not know. (Meeting Transcript, at 73-74.) (Emphasis added.)

Obviously, the best procedure in the world has little value if the personnel doing the actual work are not familiar with it. Implementation is an essential element of an adequate quality assurance program, an element that PGandE, in its scheduling haste, has apparently overlooked at Diablo Canyon.

Similarly, PGandE's assurances regarding the adequacy of its training program for OPEG personnel is directly contrary to the NRC's own audit findings. The discussion at the December 15, 1983 meeting between PGandE and the Staff is illustrative:

> MR. YIN (NRC): In the review of five people that I have audited, for instance, the person began his work in October 1982

and he did not receive the general training in the engineering area until February 18, 1983. And he did not receive QA indoctrination training until May 5th, 1983. So there's a long time period before he received any training.

And for another guy, he started working in April 1983, he did not receive any generic engineering training until July 15, 1983, and he didn't receive any QA training until 5/4/83. . . .

Another person started working in May 1981 -- 1981, now -- and he did not receive the Engineering Manual training until 6/9/83 and he never received any QA indoctrination training. Another person started in February of 1983 and he did not receive engineering training until 4/19/83, and QA training had not been received until 5/4/83.

So consistently, there was lack of control in generic training. That's one point I want to make.

The second point is there was no training whatsoever, programmatic training, on the specific procedures that they're supposed to use. I've talked to workers at the site and asked what are the procedures that you're supposed to use. It varies from one to another. Some people think Bechtel procedures are supposed to be used. But it's not on the controlled document list. Some think if I use the procedures or a simplified formula from another nuclear plant is just as good as using it here, which you know is wrong, right?

So consistently, I would think the training was really non-existent here.

When the Diablo Canyon Project Manager noted that there are other "checks and balances" to assure technical adequacy of the

design even if some training was deficient, the NRC inspector responded that these, too, must have failed:

> I always look at the end result, too. But the calculation that I personally reviewed -- and I'll show you people, too -- the file reports I reviewed, one consists of 20 errors, one consists of 30 errors, and the other one is using telephone information which consists of wrong information. And it's all checked and approved by your own people; supposed to be experienced, supposed to know what they're doing.
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> And furthermore, where is the design verification program? It was not there at all. What do you want the checkers to check? What specific points? It was not there.
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> So if you rely on personal ability to check the calculations -- certainly, I'm not questioning personal integrity. But certainly, you will be affecting the personal motive, the personal feelings and sometimes subject to pressures from the project to get it done. That is the real world. (Meeting Transcript, at 37-41.) (Emphasis added.)

Thus, the NRC's audit indicates that PGandE's "checks and balances" to ensure proper design may have suffered a widespread generic breakdown.

Nor should the impact of intimidation and retaliation be minimized. The Appeal Board has recognized that if retaliation raises a significant possibility that serious safety problems have been overlooked, the application for an operating license must be denied. Union Electric Company (Calloway Plant, Unit 1), ALAB-740, 17 NRC __ (September 14, 1983). In this case, the Labor Department has already found retaliation against

two PGandE employees -- Mr. Stokes and Mr. Lockert -- who voiced concerns regarding quality; similar charges by other employees are now being investigated. Such conduct cannot be tolerated, because it undermines confidence in the integrity of the design process by raising the likelihood that safety problems have gone uncorrected and unreported. Once again, although PGandE has attached to its response a series of memoranda soliciting worker concerns regarding quality, the mere existence of such a paper record means little if (1) those memoranda were not implemented in practice, or (2) the workers in the field were actually subjected to intimidation and harassment notwithstanding the formal company policy.15/

Finally, much of PGandE's substantive response -- including the February 7, 1984 response to NRC questions -- is difficult to assess because the data underlying PGandE's conclusions are not provided. Thus, the parties and this Board are compelled to rely on PGandE's characterization of the facts and its assertions regarding lack of safety significance.

15/ Significantly, PGandE denies Stokes' charge of retaliation, claiming repeatedly that he was one of the lower ranked engineers in terms of performance, a fact that led to his layoff in October 1983. Mangoba Affidavit, at 4. Stokes, on the other hand, states in his November 1983 affidavit, at 19, that Mangoba assured him that his layoff was not performance-related and that, if anything, Stokes' performance had been "above and beyond [PGandE's] requirements." After conducting an investigation, the Labor Department found in favor of Mr. Stokes and ordered his reinstatement. See Joint Intervenors' Motion to Augment or, in the Alternative, to Reopen the Record, Exhibit B (February 14, 1984). For further corroboration of the adequacy of Stokes' qualifications, see Exhibit 1 to Statement of Charles Stokes, attached hereto.

Although its characterizations may in fact prove correct in some respects, PGandE's record in this proceeding requires that the parties be given an opportunity to go beyond its response to examine the basis for its conclusions. Its March 8, 1984 Answer provides no such opportunity.

2. March 14, 1984 Statement of Charles Stokes

Attached to this reply is a 26-page statement by Mr. Stokes that addresses in considerably more detail a number of PGandE's responses to the technical questions posed by the NRC Staff at the January 31, 1984 meeting. Because of the limited time available to prepare this reply after receipt of PGandE's Answer, Mr. Stokes' Statement is necessarily illustrative rather than comprehensive, but it addresses many of the factual assertions made by PGandE in the documents attached to the March 5, 1984 Affidavit of Anderson, Jacobson, Leppke, and Shipley. In essence, Mr. Stokes concludes as follows:

> On balance, even a selected review demonstrates that PGandE's analysis cannot withstand scrutiny. In some cases there simply is not enough supporting documentation, explanation, or analysis to support the conclusions offered. In other cases, the conclusions are based on false statements and inaccurate assumptions. (Statement, at 1.)

In addition, it incorporates a number of attachments, including an anonymous affidavit regarding the Diablo Canyon Project's failure to account in its engineering calculations for the effects and stresses due to torsional loads on pipe

supports. This affidavit corroborates Mr. Stokes' concerns on this issue, as explained in his January 25, 1984 meeting with the Staff. The affidavit also confirms Mr. Stokes' assertions (1) that his job layoff was not performance-related, and (2) that Diablo Canyon Project management pressed engineers for decisions before the necessary facts were available.

More specifically, Mr. Stokes challenges PGandE's general conclusions and its responses to NRC technical questions regarding gaps to reduce thermal loads, use of different stiffnesses for the same rigid support in static and dynamic pipe analysis, computation errors and modeling deficiencies, location of inoperative snubbers adjacent to rigid restraints, improper resolution of pipe interferences, calculation of load-carrying capacity of small bore piping supports, joint releases for rigid connections, U-Bolt allowables, and angle-shaped structural members. He rebuts PGandE's contention that destruction of preliminary calculations is an acceptable practice by outlining in detail general industry and Bechtel practice, and he describes PGandE's manipulation of the small bore piping sample to avoid the need to expand the sample and thereby cause a delay in start-up of Diablo Canyon.

Mr. Stokes questions PGandE's assurance that all computational errors are insignificant, both because PGandE has provided no underlying data and because, given its record of such errors, there is an obvious need for in depth review of the assumptions and method by an outside party. Focusing on hanger

100-132, he first compares the differences between the initial Katcher calculation -- support failed -- and the later and simpler Shaw calculation -- support passed -- and concludes that this is a good example of the differences between the numerous preliminary calculations destroyed by PGandE and their subsequently accepted revisions. Stokes then describes the kinds of errors commonly encountered in the Diablo Canyon Project analyses.

Stokes' Statement need not be reiterated here. These and other practices explained by him cast in doubt the adequacy of PGandE's responses to the information underlying this motion generally and to the NRC Staff's questions specifically. As discussed above, the only forum in which these issues can be adequately addressed is the licensing hearing process already reopened for litigation of contentions directly affected by this significant new information.

3. Cooper Allegations

In dismissing the information provided by John Cooper, PGandE suggests that his allegations are essentially unrelated to the issue of design quality assurance, which is the focus of this reopened proceeding. Although the line between design and design quality assurance is not always a clear one, the information provided by Mr. Cooper provides additional corroboration for the evidence submitted by others regarding destruction of documents, retaliation and intimidation, lack of adequate corrective action, violation of procedures, and failure

to update the FSAR. All of these matters are plainly in issue and bear directly on the adequacy of PGandE's quality assurance program. Notably, although PGandE defends the corrective action that it took in respone to the RHR design concerns in question, it fails to mention the severe pump damage that resulted from the most recent spurious valve closure, a consequence that could have been avoided had PGandE heeded Mr. Cooper's recommendations for corrective action. See Joint Intervenors' Motion to Augment or, in the Alternative, to Reopen the Record, Exhibit F (February 14, 1984).

Mr. Cooper's allegations are not to be viewed in a vacuum. They constitute one part of a body of significant new information, and PGandE's contrary factual assertions demonstrate only that hearings are necessary. PGandE should be permitted to present its explanation on the record and to demonstrate, if it can, that it has complied with the Commission's licensing requirements in the design of Diablo Canyon.

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F. Conclusion

For the reasons stated herein and in their initial motion papers, the Joint Intervenors respectfully request that this Motion to Augment or, in the Alternative, to Reopen the Record be granted.

Dated: March 15, 1984

Respectfully submitted,

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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)	)	

CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of March, 1984, I have served copies of the foregoing JOINT INTERVENORS' REPLY TO ANSWER OF PACIFIC GAS AND ELECTRIC COMPANY TO MOTION TO AUGMENT OR, IN THE ALTERNATIVE, TO REOPEN THE RECORD, mailing them through the U.S. mails, first class, postage prepaid, to the attached list.

Christina Concepcion

Christina Concepcion

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