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Decision 88 04 061 APR 27 1988**ORIGINAL**

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of)
 Pacific Gas and Electric Company,)
 for Authorization to Establish a)
 Rate Adjustment Procedure for its)
 Diablo Canyon Nuclear Power Plant;)
 to Increase its Electric Rates to)
 Reflect the Costs of Owning,)
 Operating, Maintaining and Eventu-)
 ally Decommissioning Unit 1 of the)
 Plant and to Reduce Electric Rates)
 Under its Energy Cost Adjustment)
 Clause Annual Energy Rate to)
 Reflect Decreased Fuel Expense.)

(Electric)

And Related Matter.

Application 84-06-014
 (Filed June-6, 1984)

Application 85-08-025
 (Filed August 12, 1985)

OPINIONIntroduction

This decision resolves the issue of the appropriate scope and effect of this Commission's official notice of certain actions taken by the Nuclear Regulatory Commission (NRC) and its subordinate, the Atomic Safety Licensing Appeals Board (ASLAB). Official notice of the NRC order of suspension (14 NRC 950, dated November 11, 1981, or "NRC I") and the subsequent ASLAB order which required Pacific Gas and Electric Company (PG&E) to undertake a seismic safety verification program (19 NRC 571, dated March 20, 1984, or "NRC II") was deemed proper in CPUC Decision

(D.) D.87-12-018.¹ We have now considered the briefs on the appropriate scope and effect of this Commission's official notice filed by the AG, PG&E, and DRA.

By this order, we intend to assist the parties and the ALJ to allocate their resources to litigate only those matters which are reasonably subject to dispute before this Commission. In the context of this reasonableness review, the NRC's assertions of which we take official notice are foundational in nature and the parties should not prolong the hearing process by relitigating these matters. Conversely, matters of which we decline to take official notice may be litigated.

The subject NRC orders describe the process by which the low-power operating license for Diablo Canyon Unit 1 was suspended (14 NRC 950, 1981), the design verification program was found to be sufficient (19 NRC 571, 1984), the low-power license for Unit 1 was partially reinstated (18 NRC 1146, 1983), the intervenors' request for a stay of fuel loading and pre-criticality testing was denied (19 NRC 1, 1984), and the low-power operating license was fully reinstated (19 NRC 953, 1984). The fact that the NRC took the regulatory action that it did and that PG&E undertook studies and performed certain tasks in response to NRC

1 In D.87-12-018, the Commission reviewed the proposed decision of the administrative law judge (ALJ) on three motions by the Attorney General of the State of California (AG). We affirmed the ALJ's decision to exclude evidence of PG&E's financial need from the reasonableness review, and reaffirmed the San Onofre Nuclear Generating Station (SONGS) standard of care. We deferred final action on the AG's motion, based on previous orders of the NRC, to find PG&E responsible for the cost of delay due to the NRC's suspension of Unit 1's low power operating license (LPOL) and ordered the major parties to the motion to brief the question of what specific matters contained in the NRC orders should be officially noticed by this Commission.

action does not need to be re-established through a lengthy hearing process before this Commission.

When a matter is judicially noticed, the trier of fact must accept the matter as stated. Judicial notice eliminates any possibility of presenting to the trier of fact any evidence disputing the fact as noticed by the court. (California Evidence Code Section 457.) Rule 73 of this Commission's Rules of Practice and Procedure provides that the Commission may take official notice of such matters as may be judicially noticed by the courts of the State of California. We have already determined to take official notice of NRC I and NRC II; we intend to take official notice of all five NRC orders listed above. These orders establish that the NRC suspended the low power operating license for Unit 1, that PG&E did undertake a design verification program to the satisfaction of the NRC, and that subsequently, the NRC reinstated the low power operating license. In this decision, we specify the facts which underlie this chain of events and of which we take official notice.

Response by the AG

The AG requested the Commission to take official notice of four NRC orders and one NRC decision involving Diablo Canyon and the suspension of its LPOL. Certain facts, which "relate to PG&E's compliance with the requirements of 10 CFR Part 50, Appendix B ("Appendix B") and the need to satisfactorily perform a design verification program before the NRC would authorize operation of the power plant," are the specific subject of the AG's request for official notice. Those assertions are set forth in Attachments A, B, and C to the AG's response and are attached to and incorporated in this order as Appendix 1 for ease of reference. (It should be noted that two entries are labeled "18". The last item in Attachment B and the first item in Attachment C are both numbered "18". We have not altered the paragraph numbers.) In short, the AG wishes this Commission to accept the NRC's findings and conclusions as true.

According to the AG, in addition to barring the introduction of evidence for the purpose of proving or disproving facts previously found by the NRC, official notice would also focus attention on whether it was reasonable for PG&E to have a design quality program which triggered the suspension and subsequent requirement of an independent design verification program (IDVP). The AG recommends that evidence of the reasonableness of the NRC's suspension and imposition of the verification program should be barred, while evidence concerning the reasonableness of PG&E's conduct leading to the suspension and the reasonableness of PG&E's performance of the IDVP should be admitted. Evidence of the following would be impermissible:

1. Whether the NRC's finding that PG&E violated Appendix B was correct or not;
2. Whether the NRC's decision to suspend the LPOL was supported by substantial evidence or not;
3. The NRC's reasons for suspension of the LPOL and imposition of the IDVP requirement;
4. Whether the NRC was justified in requiring the IDVP or not;
5. Whether the NRC was justified in conditioning reissuance the LPOL on the satisfactory outcome of PG&E's IDVP or not;
6. Whether the NRC was justified in making the IDVP a precondition to Diablo Canyon Unit 2 exercising a previously granted authorization to operate;
7. Whether the IDVP was necessary before either unit would be authorized to operate at low power and whether the IDVP was necessary to provide the statutorily required assurance that the safety systems would perform satisfactorily in service.

On the other hand the following would specifically be admissible:

1. "Whether PG&E failed to meet the SONGS high standard of care by having a design quality assurance program which failed so completely to comply with Appendix B that, after Diablo Canyon's completion, the NRC could lawfully find there was substantial uncertainty whether any particular safety feature in the plant was designed in accord with the licensing criteria established for it";
2. What specific activities were required to carry out the IDVP and their cost;
3. What delay in the commercial operation date (COD) of each unit resulted from the need to perform the IDVP;
4. What was the cost of the delay of the COD as a result of the need to perform the IDVP.

Response by PG&E

PG&E claims that the issue is whether it is fair to apply the doctrines of official notice and collateral estoppel to prevent PG&E from presenting evidence on issues that it has never litigated previously in any forum.

It characterizes the AG's motion as one to establish PG&E's violation of Appendix B and to establish the companies and general scope of work involved in the IDVP, and through the use of official notice and collateral estoppel, to seek summary adjudication of issues that should result in disallowances of \$2.5 billion without PG&E ever presenting any evidence on the issues.

Although the utility approves of the Commission's decision to take official notice of NRC I and NRC II, it asserts that taking official notice of the fact that the orders exist and that "the order and decision say what they say" is the limit of the Commission's discretion to use the NRC actions to circumscribe PG&E's litigation of any issues in the present case.

PG&E questions whether NRC I should be given estoppel effect at all. It claims that there are no findings that it violated Appendix B. According to PG&E, the Commission may take official notice of the fact of NRC I and NRC II, but not of the truth of any of the statements contained in them. ✓

Response by the DRA

In response to the issues framed by the Commission, the DRA asserts that the effect of judicial notice is that the matter is deemed established as a matter of law. The practical effect is to collaterally estop PG&E from relitigating the findings underlying the NRC orders, as evidence disputing the facts as noticed by the CPUC would be barred. ✓

It also claims that the findings of the NRC and ASLAB should be given collateral estoppel effect since the five-part test for collateral estoppel, set out in U.S. v Utah Construction and Mining Co. (1965) 384 US 394, 421 and in People v Sims (1982) 32 Cal. 3d 468, 479 has been met. The DRA then lists a number of factual propositions that the AG has argued should be deemed established by the two NRC orders, apparently as an endorsement of the AG's position. In addition, the DRA filed comments concerning PG&E's response to the December order.

Discussion

Generally, orders of administrative agencies acting in a judicial capacity are a proper subject of judicial notice. Clearly, the existence of the NRC orders cannot be controverted, nor can their content be denied. Beyond this point, each matter proposed by the AG for official notice must be separately analyzed.

This Commission has the discretion, under Rule 73 of our Rules of Practice and Procedure, to take "official notice of such matters as may be judicially noticed by the courts of the State of California." In order that the parties have a reasonable basis on which to act as a result of our taking official notice, we will

apply the rules concerning judicial notice under the Evidence Code to determine the scope and effect of our official notice. ✓

Official notice is not appropriate for every statement contained within an order. Only declarations which have the requisite degree of reliability should be noticed, as "the fundamental theory of judicial notice is that the matter that is officially noticed is one which cannot be disputed." (Jefferson, California Evidence Benchbook, 2d Ed. 1982, p.1748.)

The earlier opportunity to challenge the evidentiary basis for findings, conclusions, and orders in the NRC forum tends to ensure the reliability of such statements when they appear in orders or decisions. However, in this instance, the NRC staff's declarations were adopted by the NRC without a hearing. Although they may be relied upon by the NRC in the exercise of its jurisdiction, judicial notice of these statements is not appropriate. Thus, this Commission should not take official notice of those statements if their introduction in the reasonableness review is intended to be conclusive on the existence of weaknesses in PG&E's quality assurance program. However, the fact that the NRC may have relied on hearsay for its decision does not undermine the existence or validity of the NRC order for this Commission's purpose. Our task is to evaluate the reasonableness of PG&E's activities, not those of the NRC.

Attachment A

Items 1 through 5 constitute a restatement of the NRC's recital of events which, in its judgment, justified the suspension of PG&E's license to load fuel. These events were apparently documented by the NRC staff and are described in paragraph 2 of the 1981 order.

We will take official notice in the manner proposed by the AG of Items 1 through 3 but not of Items 4 and 5. The latter two items recite that the NRC staff identified certain "serious weaknesses" in PG&E's quality assurance program. These are

characterizations of PG&E's conduct made by the NRC staff outside of the CPUC reasonableness review proceeding. To take official notice of the NRC staff statements would require acceptance of the declarations for their truth and render them hearsay. We should not take official notice of hearsay statements.²

In Item 6, the AG sets forth the doubts held by the NRC about the structural integrity of Unit 1 and the NRC's conclusions that serious violations of Appendix B had occurred. As with the declarations discussed above, these recitations by the decision-maker did not follow a contested hearing. Accordingly, we will not take official notice of these statements as proposed by the AG.

Item 7 lists the actions required of PG&E in order to lift the suspension of its LPOL ordered in NRC I. It is an accurate breakdown of the contents of Attachment 1 to NRC I and represents matters of which we take official notice.

Attachment B

These items were the subject of NRC II, a decision by the ASLAB. Unlike most appellate bodies, in this case the ASLAB presided over evidentiary hearings on the adequacy of PG&E's efforts to verify the design of the Diablo Canyon plant. Thus, we do not necessarily encounter the same hearsay problems presented by requests for judicial notice of statements by an appellate court.

Items labeled 8 through 13 paraphrase that portion of the ASLAB's decision which provides the background and describes the parties' preparation for the proceeding before the ASLAB. They were not litigated before the ASLAB and are not findings of fact; but on the other hand, they are of such preliminary nature that we

² Although Items 4 and 5 are the out-of-court statements of the NRC staff, they are not absolutely excluded from the record because of the hearsay rule. (We have discussed the use of hearsay in prior orders in this case and so will not elaborate further on that theme.)

cannot envision any serious objection to taking official notice of these matters.

Items 14 through 16 characterize the ASLAB's decision to address the issues before it in words other than the decisional language itself. This Commission should not draw conclusions about the ASLAB's rationale for focusing on one method of design verification rather than another, but should let the decision speak for itself on this matter.

Item 17 and all of Item 18 set forth matters appropriate for official notice.

Attachment C

Matters contained in Item 18 are officially noticed. Item 19 is not, because it represents a rationale gratuitously provided by the NRC for denying relief that was not sought by the applicant. So long as it is placed in context, Item 20 is officially noticed. It represents a statement by the NRC of the reasons for its own actions. Item 21 is officially noticed.

The AG states that the parties should be barred from submitting testimony or documentary evidence on issues (a) through (h) listed on pages 5 and 6 of its response. We agree, not primarily because of the official notice provided for in this order, but because the Diablo Canyon reasonableness review is not the proper forum for the litigation of these matters. As stated before, we will not second-guess the NRC's exercise of its jurisdiction to issue operating licenses to nuclear powered generating stations. The litigants had the opportunity to contest the propriety of the NRC's actions in an appellate forum. Since the interests of the parties would be served by eliminating these matters from the list of contestable issues in this proceeding, we will concur in the AG's suggestion.

The matters which remain to be litigated after official notice is taken must include, at least, those issues (a) through (d) listed on pages 9 and 10 of the AG's response.

In sum, we affirm that official notice is taken of NRC I and NRC II. Notice of the existence and the contents of subsequent NRC orders, specifically, 19 NRC 953 (1984); 18 NRC 1146 (1983); and 19 NRC 1 (1984) is also taken. This does not equate with official notice of each and every assertion contained within those orders; rather, only specific matters contained in those NRC orders are officially noticed as set forth in the preceding text of this CPUC decision. This notice should allow the parties to abbreviate their presentation of the regulatory framework to which PG&E was required to respond. In keeping with this purpose, the matters of which we take official notice are deemed to be conclusively established, and evidence to the contrary will not be admitted. Obviously, this notice does not estop PG&E from litigating the reasonableness of its actions leading up to and subsequent to the NRC staff's investigation of its seismic safety program described in NRC I since the facts established by official notice do not of themselves compel a finding of unreasonableness. We decline to apply the principles of collateral estoppel as originally urged by the AG.

Findings of Fact

1. The issues of official notice and collateral estoppel were raised by the AG in its Motion for Summary Adjudication of PG&E's Responsibility for the Direct and Indirect Costs of its Actions and Omissions Leading to the NRC's Suspension of the Low Power Operating License for Diablo Canyon Unit 1, filed July 22, 1987.

2. In D.87-12-018, the Commission determined to take official notice of two of the five NRC decisions discussed by the AG but requested further briefing on the specific facts which were conclusively determined as a result of such notice.

3. On January 13, 1988, the AG, PG&E, and DRA filed briefs addressing the effect under the California Evidence Code of granting judicial notice of the two NRC orders. The AG, as moving

party, briefed the particular facts which it believed should be established by the Commission's official notice and reiterated its request for official notice of the other three NRC orders.

4. The AG did not renew its request for a finding of collateral estoppel in its brief filed pursuant to D.87-12-018.

5. California Evidence Code Section 457 provides that when a matter is judicially noticed, the trier of fact must accept the matter as stated. Judicial notice eliminates any possibility of presenting to the trier of fact any evidence disputing the fact as noticed by the court.

6. Rule 73 of this Commission's Rules of Practice and Procedure provides that the Commission may take official notice of such matters as may be judicially noticed by the courts of the State of California.

Conclusions of Law

1. Official notice of a matter by this Commission has the same evidentiary effect as if the matter were accorded judicial notice pursuant to Evidence Code Section 457.

2. The standards used to determine whether a matter is properly subject to judicial notice under Section 450 et seq. of the Evidence Code are appropriate to use for evaluating a request for official notice by this Commission.

3. It is appropriate to take official notice of the NRC decisions of which the AG has requested the Commission to take official notice. These are, in addition to 14 NRC 950 (1981) and 19 NRC 571 (1984) which were noticed in D.87-12-018, three other decisions: 18 NRC 1146 (1983), 19 NRC 1 (1984), and 19 NRC 953 (1984).

4. Only certain declarations within the NRC orders of which we take official notice are "not reasonably subject to dispute" and thus properly subject to official notice. The following declarations, listed as they appear in the AG's brief and

reproduced as Appendix 1 to this decision, are officially noticed by this Commission:

Attachment A - Items 1, 2, 3, and 7.

Attachment B - Items 8, 9, 10, 11, 12, 13, 17, and 18.

Attachment C - Items 18, 20, and 21.

ORDER

Now, therefore, IT IS ORDERED that:

1. The motion of the Attorney General that the Commission take official notice of certain decisions and orders of the Nuclear Regulatory Commission (NRC) and its subordinate, the Atomic Safety Licensing Appeals Board, to wit:

14 NRC 950 (1981)

18 NRC 1146 (1983)

19 NRC 1 (1984)

19 NRC 571 (1984)

19 NRC 953 (1984)

is granted.

2. Official notice is taken of the following matters, which are contained within the above-listed orders of the NRC and were restated by the Attorney General in the Attachments to the Attorney General's Response to D.87-12-018 (the Attachments are reproduced as Appendix 1 of this Opinion and incorporated herein by reference):

Attachment A - Items 1, 2, 3, and 7.

Attachment B - Items 8, 9, 10, 11, 12, 13, 17, and 18.

Attachment C - Items 18, 20, and 21.

3. The following editorial changes should be made to conform the items noticed with the fact that official notice is not being taken of all the items:

Appendix 1, p.2; in paragraph 7 strike "Accordingly," and capitalize "The".

Appendix 1, p.5; in paragraph 17 strike "In this regard," and capitalize "The".

Appendix 1, p.10; in paragraph 20 strike "In this regard," and capitalize "The".

4. The motion of the Attorney General is denied except with respect to matters of which we specifically take official notice in ordering paragraphs 1. and 2.

This order is effective today.

Dated APR 27 1988, at San Francisco, California.

STANLEY W. HULETT
President
DONALD VIAL
FREDERICK R. DUDA
G. MITCHELL WILK
JOHN B. OHANIAN
Commissioners

I CERTIFY THAT THIS DECISION
WAS APPROVED BY THE ABOVE
COMMISSIONERS TODAY.


Victor Weiss, Executive Director
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ATTACHMENT A

A.84-06-014, A.85-08-025 /ALJ/RAB/jt

1. In late September 1981, in the course of responding to a special NRC request for information, an error in the seismic design of equipment and piping in the containment annulus of Diablo Canyon Unit 1 was detected by PG&E and reported to the NRC. (NRC I, p. 951.)
2. PG&E committed to postpone loading of fuel until the matter was resolved satisfactorily and initiated a reanalysis of portions of the seismic design of the facility. (Ibid.)
3. As a result, of this reanalysis a number of different additional errors were found. (Ibid.)
4. Based upon information supplied by PG&E and NRC staff inspections conducted at the offices of PG&E and URS/John A. Blume and Associates ("Blume"), the NRC staff identified serious weaknesses in PG&E's quality assurance program. (Ibid.)
5. The serious weaknesses in PG&E's quality assurance program identified by the NRC staff were the following:
 - a. the PG&E quality assurance program did not appear to effectively exercise control over the review and approval of design information passed to and received from Blume;
 - b. the PG&E quality assurance program did not appear to adequately control the distribution of design information from Blume within affected internal PG&E design groups; and
 - c. the PG&E quality assurance program did not appear to define and implement adequate quality assurance procedures and controls over other service-related contracts. (Ibid.)
6. This information indicated (indicates) four things:
 - a. certain structures, systems, and components important to safety at Diablo Canyon Unit 1 may not have been (be) properly designed to withstand the effects of earthquakes; (Ibid.)
 - b. it was (is) uncertain as to the extent to which structures, systems, and components important to safety of fuel loading and testing at up to 5% of rated power would (will) in fact withstand the effects of earthquakes; (Id., at pp. 951-952.)

- c. violations of NRC regulations in 10 C.F.R. Part 50, Appendix B had (have) occurred; (Id., at p. 951.); and
 - d. these violations of Appendix B were serious (seriousness). (Id., at p. 952.)
7. Accordingly, the NRC immediately suspended (suspends) PG&E's license to load fuel and conduct tests at up to 5% of rated power pending satisfactory completion of the following actions:
- a. An independent design verification program (addressing the topics and including the program elements set forth in Attachment 1 § 1(a)-1(a)(5) to NRC I at pp. 955-956) on all safety-related activities performed prior to June 1, 1978, under all seismic-related service contracts utilized in the design process for safety-related structures, systems and components. (Id., at p. 955.)
 - b. A technical report fully assessing (assesses) the basic cause of all design errors identified by the program, the significance of design errors found, and their impact on facility design. (Id., at p. 956.)
 - c. A report of PG&E's conclusions on the effectiveness of the design verification program in assuring the adequacy of facility design. (Ibid.)
 - d. A schedule for completing any modifications to the facility required as a result of the program. (Ibid.)
 - e. A description and discussion of the corporate qualifications of the company or companies PG&E proposed (would propose) to carry out the independent design verification program, including information demonstrating (that demonstrates) the independence of these companies. (Id., at p. 957.)
 - f. A detailed program plan for conducting the design verification programs discussed above. (Ibid.)

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- g. Starting on Friday, November 27, 1981, and continuing throughout the suspension, a semi-monthly status report on the second and fourth Friday of each month, on all of the ongoing reanalyses efforts and design verification programs being conducted by and for PG&E. (Ibid.)
- h. Any additional requirements prior to fuel loading which the NRC deemed necessary to protect health and safety based upon its review of the design verification program, including (may include) some or all of the requirements specified in the letter to Malcolm Furbush of PG&E from Harold Denton of the NRC, dated November 19, 1981. (Ibid., at pp. 957-958.)

8. In addition to the NRC's enforcement action, the NRC staff instructed PG&E to provide it with the results of a further independent verification program for Unit 1 to enable the staff to authorize operation above low power levels. This verification was to be aimed at the pre-June 1978 service-related contractors used by PG&E in the nonseismic design of safety-related structures, systems and components, PG&E's internal design activities, and the post-1977 service-related contractors utilized by PG&E for both seismic and nonseismic design of structures, systems and components. (NRC II, p. 574.)
9. In order to secure reinstatement of its license and eventual authorization for full power operation, PG&E initiated a verification program to meet the NRC's order and the staff's directive. (*Ibid.*)
10. These verification efforts expanded far beyond those originally envisioned and took more than two years to complete. (*Ibid.*)
11. While the verification was ongoing, the joint intervenors in the Diablo Canyon licensing proceeding filed a motion to reopen the record on the issue of the adequacy of PG&E's quality assurance program. That motion was based essentially upon the same information that prompted the NRC's enforcement action and the various deficiencies identified by the verification program up to that time. (*Id.*, at pp. 574-575.)
12. A similar motion to reopen the record on design quality assurance was filed by the Governor of California. (*Id.*, at p. 575.)
13. After hearing argument on the motions, the Atomic Safety and Licensing Appeal Board ("ASLAB") concurred with PG&E's concession that the motions to reopen the record on design quality assurance should be granted. (*Ibid.*)
14. Although the motions to reopen were predicated on deficiencies in PG&E's design quality assurance program and the company's failure to comply with Appendix B, the real issue in the proceeding quickly moved beyond that point. (*Id.*, at p. 576.)
15. Instead of determining whether PG&E's quality assurance program met the requirements of Appendix B and thus, that reasonable assurance existed the plant was properly designed, the ASLAB decided to let PG&E's various design verification efforts substitute for and supplement its design quality assurance program in order to demonstrate

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that the Diablo Canyon plant was (is) correctly designed.
(Ibid.)

16. The ASLAC chose this path because of the existence of significant evidence the design quality assurance program for Diablo Canyon was faulty (it failed to comply with Appendix B). Normally, an effectively functioning design quality assurance program ensures that the design of a nuclear power plant is in conformance with the design criteria and commitments set forth in an applicant's PSAR (Preliminary Safety Analysis Report) and FSAR (Final Safety Analysis Report). However, the deficiencies identified in Diablo Canyon's design quality assurance program raised substantial uncertainty whether any particular structure, system or component was designed in accordance with stated criteria and commitments. Hence, the real issue in the proceeding moved beyond the question of what deficiencies existed in PG&E's design quality assurance program to the question of whether PG&E could (can) demonstrate its verification efforts verified (verify) the correctness of the Diablo Canyon design. (Ibid.)
17. In this regard, the standard PG&E's verification efforts had to meet was the same standard set forth in Appendix B: provide adequate confidence that a safety-related structure, system, or component will perform satisfactorily in service. (Ibid, p. 578.)
18. The development and content of PG&E's verification efforts was as follows:
 - a. Immediately after the discovery of the seismic design errors at Diablo Canyon, PG&E retained Robert L. Cloud and Associates, Inc. (Cloud Associates) to develop and implement an internal verification program to assess the adequacy of the plant's seismic design. (Id., at p. 578.)
 - b. The initial Cloud Associates' review indicated that the design problems were more pervasive than at first thought. (Ibid.)
 - c. Subsequent to the issuance of NRC I calling for the establishment of an extensive and structured verification effort, PG&E, on December 4, 1981, proposed a program managed by "Cloud Associates that would include the services of R.F. Reedy, Inc. (Reedy Inc.) for quality assurance verification and Teledyne

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Engineering Services (Teledyne) for overall review of the program and its implementation. This effort was to be directed at the seismic design work performed for PG&E under pre-June 1978 service-related contracts and was labeled the Phase I program. (*Ibid.*)

- d. Thereafter, in response to the broader matters raised in the staff letter, PG&E submitted a Phase II program. This program included an examination of the nonseismic work performed for PG&E under pre-June 1978 service-related contracts, PG&E's own internal design activities, and all the nonseismic and seismic work performed for PG&E under post-1977 service-related contracts. The Phase II program also added the Stone and Webster Engineering Corporation (Stone and Webster) to the other organizations already proposed to conduct this review. (*Ibid.*, at pp. 578-579.)
- e. NRC I required that the companies conducting the verification program possess the necessary technical competence and that they be independent of PG&E. On March 4, 1982, the NRC approved the Phase I program but required that Teledyne be the program manager because Cloud Associates had previously done substantial work for PG&E. (*Id.*, at p. 579.)
- f. In accordance with the NRC action, Teledyne prepared an Independent Design Verification Program (IDVP) Phase I Program Management Plan which integrated the earlier Cloud Associates' plan and included requirements for Teledyne's acceptance of work done prior to its takeover as program manager on March 25, 1982. (*Ibid.*)
- g. Under Teledyne's direction, Cloud Associates would perform the review of seismic, structural and mechanical design and Reedy Inc. would review quality assurance. The Phase II Plan included only the safety-related (Diablo Canyon Design Class I) buildings, equipment, piping and components that had been requalified in consideration of the Hosgri 7.5M earthquake. The plan described the initial sampling and the requirements for any additional verification and sampling. (*Ibid.*)

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- h. In a letter dated April 27, 1982, the NRC staff approved the IDVP Phase I plan. (Id., at p. 580.)
- i. Several months later, Teledyne developed an IDVP Phase II Management Plan and submitted it to the NRC. This plan encompassed nonseismic, service-related contracts performed prior to June 1978, PG&E's internal design activities, and all service-related contracts after January 1978. The participants and their general responsibilities were the same as those in the Phase I plan but Stone and Webster was added to perform the review of nonseismic safety systems and analyses. (Ibid.)
- j. On December 9, 1982, the NRC approved the Phase II Plan. (Ibid.)
- k. Shortly after receiving approval of the Phase I program, PG&E retained Bechtel Power Corporation to work with it and act as Completion Manager of the Diablo Canyon facility. To align the verification activities with this development, PG&E developed an Overall Management Plan that inter alia, adopted the IDVP Phase I Program Management Plan. Under the Overall Management Plan, the joint Bechtel-PG&E team was referred to as the Diablo Canyon Project (DCP) and it was responsible for executing the Internal Technical Program (ITP). (Ibid.)
- l. The purpose of the ITP was to (a) provide an additional design verification effort for the assurance of the overall adequacy of the design of the plant; (b) develop data and information in support of the IDVP; (c) respond to IDVP open items and findings; and (d) implement design modifications or other corrective actions arising from the verification program. (Ibid.)
- m. Under the Phase I program, the seismic verification effort was initially based upon a sampling process. The early findings of the sampling program led PG&E to review the entire scope of certain engineering activities. In order to save time and best assure final NRC

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approval of the verification effort, PG&E decided in the summer of 1982 to expand the seismic program to evaluate the total seismic design of safety-related structures, systems, and components. This broad review enveloped the findings of the previous IDVP and ITP seismic reviews and made it unnecessary to review older analyses and calculations that were to be redone by the ITP. (Id., at pp. 580-581.)

- n. In view of the enlarged ITP seismic review, the IDVP program was changed from one of sampling original designs to one of verifying the ITP's seismic work. (Id., at p. 581.)
- o. The IDVP examined the scope, criteria and methodology of the ITP work for consistency with the license application and then verified samples of that work. In addition, the staff reviewed the seismic verification efforts of the ITP and the IDVP on a continuing basis. (Ibid.)
- p. The IDVP also selected samples of the original engineering design work for the Phase II nonseismic verification. The samples were reviewed and analyzed by the IDVP against verification criteria from the program management plan. If the criteria were not satisfied, the initial samples were reanalyzed or additional samples were identified for verification. (Ibid.)
- q. When the IDVP identified a potentially generic concern, the ITP was required to perform a review for that concern for all PG&E-designed, safety-related systems. The IDVP then evaluated these ITP reviews and documented their findings in Interim Technical Reports (ITRs) for the staff to review. (Ibid.)
- r. In addition to the nonseismic reviews performed by the ITP at the direction of the IDVP, the ITP independently conducted a functional design review that covered a portion of each of the PG&E-designed, safety-related nonseismic systems. Unlike the

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seismic review, the entire design of PG&E-designed, safety-related systems was not reviewed. (Id., at pp. 581-582.)

- s. PG&E's verification efforts for Unit 2 differed from those for Unit 1. (Id., at p. 582.)
- t. The IDVP had no direct involvement in the Unit 2 verification program. Rather, PG&E established an internal review organization for Unit 2 to evaluate deficiencies identified for Unit 1 and, if appropriate, to correct these deficiencies as they appeared (appear) in Unit 2. (Ibid.)
- u. The Unit 2 verification was (is) still ongoing and had not been reviewed by the NRC staff at the time the ASLAB rendered its decision. (Ibid.)
- v. Until it made its findings with respect to the Unit 2 verification, the ASLAB held the license authorization which had previously been granted to Unit 2 was (is) not effective. (Id., at p. 619.)

18. Prior to the opening of the ASLAB hearings on PG&E's design verification efforts, the company requested a partial lifting of the license suspension for the purpose of loading fuel and conducting pre-criticality testing. (NRC III, pp. 1146-1147.) On November 8, 1983, the NRC granted that request. (*Id.*, at p. 1149.) On January 16, 1984, the NRC refused to stay the effectiveness of its decision to partially reinstate PG&E's low power license. (NRC IV, p. 1.)
19. However, in lifting the license suspension to permit fuel loading and pre-criticality testing, the NRC stated that the equities in the case favored continued suspension of that part of the license involving criticality and low power operation and that it would revisit the issue of continued suspension pending completion of the reopened ASLAB hearing and after PG&E submitted the required remaining documentation in support of criticality and low-power operation and NRC staff had had an opportunity to review that submission. (NRC III, p. 1150.)
20. In this regard, the NRC stated that the concern which supported the original license suspension was not purely procedural or a matter of clarifying some uncertain part of the record. Serious and substantive safety concerns relating to design quality assurance led to the license suspension. (*Ibid.*)
21. On April 13, 1984, the NRC determined that the concerns which led it to suspend PG&E's low-power license had been resolved to the point where that license could be reinstated in its entirety. (NRC V, p. 964.)