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Before The Atomic Safety And Licensing Appeal Board

Docket Nos. 50-275 O.L.  
50-323 O.L.  
(Construction Quality Assurance)

PACIFIC GAS AND ELECTRIC COMPANY'S  
ANSWER TO JOINT INTERVENORS'  
SUPPLEMENT TO MOTION TO REOPEN THE  
RECORD ON THE ISSUE OF CONSTRUCTION  
QUALITY ASSURANCE

On September 9, 1983, Joint Intervenors filed a document styled a supplement to their motion to reopen the record on construction quality assurance which included copies of (1) a proposal by Nuclear Services Corporation (NSC) for an independent audit of one of the Diablo Canyon construction contractors, Pullman Power Products Corp. ("Pullman"), and (2) a report of the audit conducted by NSC of Pullman, dated October 24, 1977.

On September 14, 1983, PGandE notified the Board that it would respond to this supplement within the time

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1 prescribed by the rules. In accordance with that letter the  
2 following response is submitted.

3 BACKGROUND

4 On June 8, 1982, Joint Intervenors filed a motion  
5 to reopen the Diablo Canyon record alleging deficiencies in  
6 the quality program. After hearing argument on this and  
7 other matters on April 14, 1983, the Board issued an order  
8 on April 21, 1983 requiring Joint Intervenors to promptly  
9 refile their motion to reopen on construction quality  
10 assurance and further required that all evidence that they  
11 claimed supported reopening should accompany that motion. 1/  
12 Notwithstanding that the Board had ordered the motion filed  
13 promptly, Joint Intervenors did not file their motion until  
14 May 10, 1983. PGandE filed its response to that motion (and  
15 Governor Deukmejian's) on May 31, 1983. On June 28, 1983,  
16 the Board issued an order setting an evidentiary hearing on  
17 the motions to reopen for July 19, 1983. A mini-hearing was  
18 then conducted on July 19-22, 1983 on the question of  
19 construction quality assurance. At the close of the hearing  
20 the parties were allowed to file closing briefs by August 4,  
21 1983 on certain issues limited to the standards for

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23 \_\_\_\_\_  
24 1/ The Board noted that on the eve of the argument the  
25 Joint Intervenors had filed certain documents with the  
26 Board in an improper manner without seeking leave of  
the Board. (Appeal Board, Memo and Order, April 21,  
1983, p. 2-4).

1 reopening a closed record. A decision on the motion has not  
2 been issued by the Board.

3 THE SEPTEMBER 9, 1983 SUPPLEMENT

4 As they have many times in the past, Joint Inter-  
5 venors have completely ignored the established rules of  
6 practice by dropping documents out of thin air on the Board  
7 without requesting leave to file. Indeed, as noted above,  
8 the Board admonished Joint Intervenor as recently as  
9 April 21, 1983 to follow the established rules of practice  
10 in filing documents with the Board. Suffice to say, the  
11 instant filing falls into the same category and for that  
12 reason alone should be ignored.

13 However, there is another and more fundamental  
14 reason why the Board should refuse to entertain this sub-  
15 mittal. With any administrative proceeding there must be a  
16 time when the evidentiary record is closed. The practical  
17 principle of administrative finality must be applied in a  
18 reasoned manner if an administrative matter is to be brought  
19 to a logical and timely conclusion. See, ICC v. Jersey  
20 City, 322 U.S. 503, 514 (1944).

21 In the instant case, Joint Intervenor have  
22 practiced a fine art of delay by continually filing  
23 documents out of time or otherwise ignoring the rules of  
24 practice. No cogent explanation or affidavit accompanies  
25 this "filing" to explain its lateness (the documents are  
26 more than five years old) or otherwise explain or sponsor

1 the conclusions contained in this filing. Obviously, this  
2 is not "new evidence" which has recently been generated and  
3 which might arguably justify this eleventh-hour filing. Cf.  
4 In The Matter of Metropolitan Edison Company (Three Mile  
5 Island Nuclear Station, Unit No. 1) LBP-82-34A, 15 NRC 914  
6 (1982)). Indeed it was a similar filing in April of this  
7 year which prompted this Board to require the filing of new  
8 motions and a subsequent "mini-hearing" on the construction  
9 quality assurance issue. Manifestly this process takes time  
10 to accomplish and the delay which results serves the stated  
11 purpose of the Joint Intervenor to delay or stop the  
12 operation of Diablo Canyon. If this information had been  
13 produced at the July hearing PGandE could have responded to  
14 it as appropriate. Therefore, to allow Joint Intervenor to  
15 proffer it at this time would be rewarding such conduct.  
16 Accordingly, we urge the Board to refuse to consider the  
17 Supplement in its deliberations on the motion.

18         Notwithstanding our foregoing arguments in  
19 opposition to the receipt and consideration of these  
20 materials at this late date, PGandE, in accord with its  
21 September 14 letter, conducted an in depth review of the  
22 events and subsequent actions surrounding the NSC audit.

23         If the Board decides to consider the Supplement  
24 filed by Joint Intervenor, PGandE requests leave to file  
25 the affidavit of Russell P. Wischow in explanation of, and  
26 ///

1 in rebuttal to, the Joint Intervenors' filing. 2/ As  
2 explained in our September 14, 1983 letter, this additional  
3 information places the NSC audit in perspective and confirms  
4 that both Pullman and PGandE had acceptable programs in  
5 effect for construction quality assurance at Diablo Canyon  
6 during the time in question.

7 In reviewing this information we believe that it  
8 must be kept in mind that audits are by nature documents  
9 that portray a negative picture. Their purpose is to point  
10 out any possible deficiencies that must be addressed. Over  
11 the years, hundreds of audits have been conducted. Many of  
12 these audits have generated findings. These findings have  
13 then been reviewed and appropriate corrective action taken.  
14 Where indicated, program improvements have been  
15 incorporated. Obviously it would be totally unreasonable to  
16 expect error-free construction at a nuclear plant. Such a  
17 result is not mandated by the Atomic Energy Act or the  
18 Commission's regulations. Rather you look to see that

19  
20 2/ Attached to the Wischow affidavit are the following  
21 documents: (1) Statement of Qualifications of  
22 Russell P. Wischow; (2) ASME Certificates - M. W.  
23 Kellogg Co., Div. of Pullman, Inc. Diablo Canyon Work,  
24 dated December 18, 1972 and October 14, 1977; (3) NSC  
25 Audit, dated October 24, 1977; (4) Pullman Review,  
26 dated April 11, 1978; (5) PGandE Audit No. 80422 dated  
June 12, 1978; (6) PGandE Review of Nuclear Services  
Corporation Audit Findings, dated June 16, 1978;  
(7) PGandE Non-Conformance Reports DCO-78-RM-004 and  
005; Minor Variance Reports M-3723, M-3724, M-3725, and  
M-3726; and (8) NRC Inspection Report 50-275/78-10,  
50-323/78-10, dated July 26, 1978.



1 identified construction errors have been cured in order to  
2 give reasonable assurance that the plant can be operated  
3 without endangering the public health and safety. In the  
4 Matter of Union Electric Company (Callaway Plant, Unit 1)  
5 ALAB-740, Slip. Opinion pp. 1-3, (Sep. 14, 1983.) Thus, one  
6 audit in isolation cannot give an accurate picture of an  
7 overall quality program. Rather, it must be looked at as a  
8 part of an overall program and a tool for management to use  
9 along with others to assure high quality performance.

10 1971-1977 PULLMAN POWER PRODUCTS SCOPE  
11 OF WORK AND QUALITY ASSURANCE PROGRAM

12 During the 1971-1977 time period encompassed by  
13 the NSC audit, Pullman was the principal piping contractor  
14 for Diablo Canyon Power Plant Units 1 and 2. 3/ The prime  
15 piping contract was written to include power plant piping  
16 and associated supports with the exception of the main  
17 reactor coolant loops (which were done by Wismer and  
18 Becker), the majority of the fire protection system, and the  
19 plant embedded piping. The erection of all rupture

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21 \_\_\_\_\_  
22 3/ Much of the following information has been obtained  
23 from PGandE records and is attested to in the attached  
24 affidavit of Russell P. Wischow who was PGandE's Direc-  
25 tor of Quality Assurance at the time of the NSC audit.  
26 As Mr. Wischow states, the results of the NSC audit  
were not communicated to him until early 1978. Accord-  
ingly, he could not have testified as to its results in  
the October 1977 hearings. (Wischow Affidavit,  
para. 3.)

1 restraints was also included. The contract with Pullman  
2 included the inspection and documentation necessary to  
3 demonstrate compliance with quality requirements.

4 The Quality Assurance Program associated with this  
5 contract was originally written to accommodate the  
6 requirements of the 1968 edition of applicable parts of the  
7 ASME Nuclear Pressure Vessel Code (USA B-31.7). This  
8 compliance was reviewed by the State of California who  
9 requested that it be modified to incorporate the Quality  
10 Assurance requirements of the ASME Boiler and Pressure  
11 Vessel Code, (ASME Section III) 1971 Edition. These  
12 commitments are consistent with the requirements of 10 CFR  
13 50, Appendix B and became part of the program manual.

14 The Pullman program was subjected to the review  
15 and extensive onsite survey by the ASME who granted Pullman  
16 NA and NPT-stamps in 1972. These NA and NPT stamps specific  
17 to Diablo Canyon were recertified by ASME in 1977 following  
18 an updating audit. (Wischow Affidavit, Attachment 2) 4/ For  
19 ASME code certified work, the NRC Regulatory Guides provide  
20 that this Quality Assurance Program is a recognized means of  
21 meeting the intent of 10 CFR 50, Appendix B. Appropriate  
22 quality procedures were provided for all non-code work  
23 performed by Pullman. The Quality Assurance Program was  
24

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25 4/ Interestingly, this audit survey by ASME was conducted  
26 from August 29-31, 1977 during the audit conducted by  
NSC (August 22 through September 20, 1977).

1 then submitted to PGandE and approved, after review and  
2 comment, to control Pullman's work in accordance with the  
3 requirements of PGandE's specifications.

4 NSC AUDIT OF PULLMAN POWER PRODUCT  
5 QUALITY ASSURANCE PROGRAM

6 At the request of PGandE to further confirm the  
7 quality of the installed materials at Diablo Canyon NSC was  
8 contracted by Pullman to perform an independent audit of the  
9 installed piping components and supports in August 1977.

10 The actual audit was conducted from August 22 to  
11 September 20, 1977. Thereafter, a report of the findings  
12 was submitted to Pullman on October 24, 1977. This report  
13 contained a number of very sweeping and generalized  
14 assertions and conclusions. (Wischow Affidavit,  
15 Attachment 3.)

16 In areas requiring evaluation and interpretation,  
17 the auditors measured the quality of the work effort against  
18 then current (August 1977) ANSI Standards, Nuclear  
19 Regulatory Commission Regulations, and Regulatory Guides.  
20 This approach did not comport with the stated purpose of the  
21 audit to evaluate the work effort against the codes,  
22 regulations, and standards in effect at the particular time

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25 ///

26



1 the work was being performed. 5/ The problem apparently  
2 arose from the auditors' erroneous interpretation that  
3 organizations must "backfit" work done to previous codes and  
4 standards to meet current standards. This erroneous  
5 interpretation and approach to the audit had the practical  
6 effect of invalidating much of the entire NSC effort.

7 PULLMAN POWER PRODUCTS RESPONSE TO THE  
8 NSC AUDIT

9 After receipt of the NSC audit report, Pullman  
10 determined to conduct their own an in-depth review of the  
11 findings (Wischow Affidavit, Attachment 4). This review  
12 consisted of a point-by-point evaluation and rebuttal of  
13 each of the NSC Report findings. In its response, Pullman  
14

15  
16 5/ The NSC proposal defined the scope of the audit as  
17 including a review of (1) the overall adequacy of the  
18 existing quality assurance program against current NRC  
19 requirements, (2) the implementation of the quality  
20 assurance program, and (3) the workmanship of  
21 field-fabricated and installed items. (NSC Proposal,  
22 p. 2.) Where the auditors went astray was in applying  
23 current NRC requirements to the installed work rather  
24 than to the existing program. The audit report itself  
25 provided that the audit scope and purpose was to  
26 evaluate the work effort against the codes and  
standards in effect at the particular time that the  
work was being performed. However, the Report goes on  
to state that "in areas requiring interpretation, the  
quality of the work effort at Diablo Canyon was  
measured against the current [1977] ANSI Standards and  
Regulatory Guides, accepted today as valid interpreta-  
tions of regulatory requirements. Moreover, they also  
cautioned that the long time span and the specific time  
interval of the work effort had to be considered when  
reading the report. (Wischow Affidavit, Attachment 3,  
p. 2.)

1 drew attention to the fact that the audited work took place  
2 over a time period spanning 1971 to 1977. Pullman noted  
3 that the audit team did not adhere to their definition of  
4 the scope and purpose of the audit which was to evaluate  
5 work against those codes and standards in effect at the time  
6 the work was performed. (Wischow Affidavit, Attachment 4,  
7 p. 2.) Instead, NSC inappropriately applied 1977  
8 requirements retrospectively to the prior work, thus  
9 producing invalid findings.

10 The Pullman review and analysis, following the  
11 format of the NSC report, was organized into the 18 criteria  
12 matching 10 CFR 50 Appendix B. Within this framework the  
13 NSC report contained 137 findings of which 58 were  
14 favorable. With those 58 favorable findings the Pullman  
15 review agreed. As for each of the remaining 79 findings the  
16 Pullman responses were formulated in three categories:  
17 disagreement with the finding (25); providing additional  
18 explanation to clarify program compliance (29); and  
19 corrective actions taken as a result of the findings (25).  
20 The twenty-five (25) findings with corrective action to be  
21 taken were software specific, i.e. paperwork improvements.  
22 None required correcting hardware deficiencies.  
23 Subsequently, these actions were all documented and  
24 dispositioned in accordance with Pullman and PGandE quality  
25 requirements.

26 ///

1           The NSC Audit Report and Pullman's Response were  
2 then formally forwarded to PGandE on April 11, 1978.  
3 (Wischow Affidavit, para. 3.)

4           PGandE'S REVIEW OF THE NSC AUDIT AND  
5           PULLMAN'S RESPONSES

6           As the licensee responsible for the overall  
7 quality of the plant, PGandE performed a detailed,  
8 finding-by-finding review of the NSC audit findings and  
9 Pullman's responses. (Wischow Affidavit, Attachment 6). A  
10 PGandE Quality Assurance audit team retraced the steps of  
11 the NSC auditors to verify the validity of alleged  
12 deficiencies. The following conclusions were reached by the  
13 PGandE QA auditors:

- 14           ° Many of NSC's findings resulted from an incorrect  
15 NSC interpretation of requirements. NSC audited  
16 to codes and standards that did not apply and to  
17 NSC guidelines (opinions).
- 18           ° Many NSC findings were simply incorrect or could  
19 not be supported by objective evidence. They  
20 apparently were not adequately researched before  
21 conclusions were reached.
- 22           ° Pullman's responses to NSC findings were in  
23 general correct. Pullman could have strengthened  
24 their responses to many of the findings by  
25 addressing the applicable codes, standards, or  
26 guidelines involved.

1           °     As a result of this review, PGandE concluded that  
2                     the NSC audit did not give an accurate measure of  
3                     the overall Pullman quality program.

4  
5                     PGandE AUDIT OF THE PULLMAN POWER PRO-  
6                     DUCTS QUALITY ASSURANCE PROGRAM

7                     In order to confirm that no deficiencies had  
8                     inadvertently occurred in the physical work, PGandE  
9                     conducted a thorough audit of the Pullman Quality Assurance  
10                    Program during April and May 1978. (Wischow Affidavit,  
11                    Attachment 5). The audit consisted of an in-depth  
12                    assessment of Pullman's quality program and a detailed  
13                    inspection of selected installed hardware. The PGandE audit  
14                    plan was formulated by utilizing codes and standards that  
15                    were thoroughly researched and verified to be applicable to  
16                    the time the work was performed.

17                    The PGandE audit concluded that Pullman's program  
18                    essentially fulfilled contract requirements and complied  
19                    with requirements of the ASME Boiler and Pressure Vessel  
20                    Code, 1971 edition and, hence, the requirements of Appendix  
21                    B. Where deficiencies were identified, they were documented  
22                    in accordance with Quality Assurance procedures and  
23                    subsequently corrected. (Wischow Affidavit, Attachment 5.)  
24                    In this connection, PGandE initiated two Nonconformance  
25                    Reports (DCO-78-RM-004 and -005) and four Minor Variation  
26                    Reports (MVR-M-3723, -3724, -3725, and -3726). These

1 problem reports, which were initiated in mid-June 1978, were  
2 all closed by early 1979. All problems which had been  
3 identified were promptly corrected and the disposition  
4 appropriately documented. (Wischow Affidavit, Attachment 7)

#### 5 NRC INSPECTION EFFORTS

6 Another aspect not to be overlooked with regard to  
7 the Pullman work covered by the NSC audit was the ongoing  
8 NRC inspection effort.

9 During this period of construction NRC Region V  
10 Inspection and Enforcement (I&E) Inspectors were conducting  
11 unannounced site inspections on roughly a monthly basis.  
12 NRC Inspection Report 50-275/78-10, 50-323/78-10 documents  
13 the inspection performed on July 10-13, 1978. (Wischow  
14 Affidavit, Attachment 8.) Paragraphs 10 and 11 of the  
15 details portion of the NRC Inspection report describe the  
16 reviews that NRC inspectors made on a routine basis of  
17 Quality Assurance audits and nonconformance reporting.  
18 Paragraph 10 describes an examination of the nine Quality  
19 Assurance audits performed during the period from May 25,  
20 1978, through July 6, 1978. The NRC Inspection report  
21 concludes that fourteen findings were identified and that  
22 corrective actions had been initiated.

23 Paragraph 11 describes the review of PGandE Non-  
24 conformance and Minor Variation Reports generated since  
25 June 3, 1978. PGandE Nonconformance and Minor Variation  
26 Reports dealing with Quality Assurance Audit No. 80422 were



1 generated from June 12 to June 15, 1978. The report goes on  
2 to say all deficiencies appeared to be properly classified  
3 as either an NCR or MVR and no items of non-compliance with  
4 NRC requirements were identified by the inspectors during  
5 the review.

6 This process reflects that NRC I&E monitored site  
7 auditing and problem-solving actions on a routine basis to  
8 assure that PGandE and its contractors adhered to quality  
9 requirements.

#### 10 CONCLUSION

11 As the foregoing information reflects, the NSC  
12 audit was neither an accurate nor a total assessment of the  
13 Pullman Quality Assurance Program.

14 Indeed the NSC audit precipitated other audits,  
15 which disclosed that the Pullman quality program was an  
16 overall acceptable program needing only minor improvements  
17 in some areas. Any identified deficiencies were documented  
18 in accordance with approved Quality Assurance procedures and  
19 promptly corrected.

20 Contrary to Joint Intervenor's assertions, the NSC  
21 audit findings were thoroughly analyzed and appropriate  
22 action taken. More importantly, the response to the NSC  
23 audit by PGandE and Pullman demonstrates a fully functioning

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1 and effective quality program. Therefore, we urge that the  
2 Board deny the Motion to Reopen.  
3

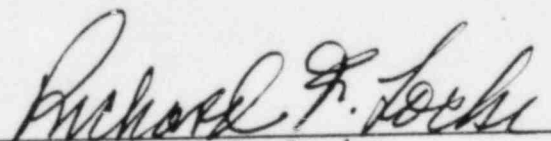
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20 DATED: September 21, 1983.  
21  
22  
23  
24  
25  
26

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )

PACIFIC GAS AND ELECTRIC COMPANY )

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

Docket No. 50-275

Docket No. 50-323

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CERTIFICATE OF SERVICE

The foregoing document(s) of Pacific Gas and Electric Company has (have) been served today on the following by deposit in the United States mail, properly stamped and addressed:

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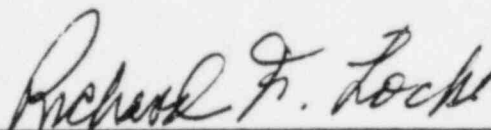
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