UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUN 26 1984

H. Denton
R. Vollmer
D. Eisenhut
J. Knight
M. Hartzman
R. Bosnak

Change Date of

Docket No. 50-275

MEMORANDUM FOR: G. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

FROM: H. Schierling, Project Manager
Licensing Branch No. 3
Division of Licensing

J. Taylor
R. Heishman
D. Allison
F. Ingram
L. Chandler
T. Sullivan
I. Yin
J. Lee

SUBJECT: Diablo Canyon Meeting with Licensee

DATE & TIME: ~~June 29, 1984~~ July 2, 1984
8:30 am

LOCATION: Room P-118
Phillips Building
Bethesda, Maryland

PURPOSE: Discussion of PG&E submittal on Piping and Supports

Note: This meeting will be transcribed.

PARTICIPANTS: NRC

R. Vollmer, J. P. Knight, R. Bosnak, T. Sullivan, M. Hartzman, I. Yin, H. Schierling, NRC Consultants

Licensee

J. Hoch et al

Hans Schierling

Hans Schierling, Project Manager
Licensing Branch No. 3
Division of Licensing

cc: See next page

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NRC / PGE Meeting
7/2/84 Bethesda, Md.

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Name	Organization
H. Schierling	NRC - Licensing
D. Eisenhut (part time)	" "
R. Vollmer	NRC - Engineering
J. Knight	"
R. Bosnak	"
E. J. SULLIVAN, JR	NRC / DE
R. L. CLOUD	RLCA - IDVP
W. E. COOPER	TES - IDVP
SM SKIDMORE	PG&E - QA
M. J. Jacobson	Bechtel, DCP
R. G. OMAN	Bechtel DCP
L. E. SHIPLEY	Bechtel DCP
HOWARD FRIEND	Diablo Canyon Project
George A. Maneatis	PG and E
Charles C. Stokes	P.S. Ass. and "whistle blower"
R. F. HEISHMAN	NRC IE Constr. Insp.

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[illegible] (part time) [illegible]

J. Fouchard (part time) NRC/OPA

P DOCHERTY WESTINGHOUSE

AGENDA
July 2, 1984 NRC Meeting

I. Opening NRC Remarks - NRC

II. Opening PGandE Remarks - G. A. Maneatis

III. PGandE Presentations

A) Status of Piping/Supports License Condition (including Item 1 of 6/20 NRC Letter) - L. E. Shipley

B) Assessment of IDVP Reviews for Piping/Supports (Item 2 of 6/20 NRC Letter) - IDVP

C) Review of Onsite/HQ Engineering Activities (Item 3 of 6/20 NRC Letter) - H. B. Friend/R. Oman

D) Review of Onsite/HQ QA Activities (Item 3 of 6/20 NRC Letter) - M. J. Jacobson (Project QA) and S. M. Skidmore (PGandE QA)

IV. Closing Comments - NRC

PGandE

OPENING REMARKS

G. A. Maneatis

Good morning, I'm George Maneatis, Executive Vice President of Facilities and Electric Resources Development for Pacific Gas and Electric Company. With me this morning are Howard Friend of Bechtel, the Diablo Canyon Project Completion Manager, Bruce Norton, our licensing attorney, other members of the Diablo Canyon Project, and representatives from the IDVP.

We are pleased today to respond to any questions you may have regarding information we have recently submitted to the Staff on matters relating to the issuance of a full power license for Diablo Canyon.

As you are aware, we provided you with our initial responses to the low power license condition regarding piping and piping supports earlier this month. Subsequently, we also responded to your June 20th request for additional information on piping and supports.

To facilitate our discussion today, we have prepared a brief presentation on recent Project activities related to piping and piping support issues. Larry Shipley of the Diablo Canyon Project will review the status of our efforts to achieve full compliance with the low power license condition related to piping. Dr. Cloud of the Independent Design Verification Program will discuss the programmatic aspects and conclusions of the IDVP piping and piping support reviews. Howard Friend will describe the recent changes in the design authority and responsibilities of the Onsite Project Engineering Group. He will be followed by Bob Oman, Assistant Project Engineer for Systems, who will describe how onsite and home office engineering activities will be conducted as a result of the recent changes. Finally, Mike Jacobson, Project Quality Assurance Engineer and Steve Skidmore, PGandE's Manager of Quality Assurance, will review the quality programs applicable to this work.

We are also prepared to address any questions you may have regarding our previous submittals or our presentations today.

We hope the discussions today will provide the Staff the information they will require to issue their Safety Evaluation Reports in early July.

With that, I'll turn the meeting over the Larry Shipley.

STATUS OF PIPING/SUPPORTS LICENSE CONDITION
(Including Item 1 of 6/20 NRC Letter)
L. E. Shipley

Thank you, George.

My discussion today will focus on the 7 items in the License Condition with particular attention given to items 2 and 3. I will be glad to answer any questions related to areas that are not covered in sufficient detail.

We have prepared and submitted during early June responses to License Condition Items 1 through 7. We belive that the Staff's concerns have been fully addressed on: Item 1, small bore Strudl Review; Item 4, thermal gaps, Item 5, hot piping walkdowns, Item 6; DP/TC program; and Item 7, technical issues. A final report that will close the minor open items that were contained in the previous submittals for Items 1 and 6 is currently under preparation and will be transmitted to the Staff tomorrow, July 3, 1984.

Licensing Condition items 2 and 3 have been the subject of considerable discussion with the Staff and the NRC's Audit Team over the past 2 weeks. The criteria for selection of proximity restraints was resolved with the Staff during an NRC audit in San Francisco on June 21, 1984.

SLIDE

This slide depicts that proximity criteria as it applies to large and small bore piping. DISCUSS SLIDE.

Review of small bore rigids/snubbers adjacent to anchors will exclude decoupled branch connections for piping qualified by span rules (simplified analysis). The review and identification of all snubbers/rigids for all piping associated with this revised criteria has now been completed. The necessary analysis to demonstrate piping qualifications has likewise been completed. A walkdown to measure the

gaps at all rigids identified by the IOD proximity review is well underway. Any additional shimming required as a result of these reviews will be completed on or about July 13, 1984, but certainly before ascension above 5% power.

In our June 11, 1984 submittal concerning License Conditions Item 1, we identified 15 of the more complex small bore Strudl analyses that had not yet been completed. Review of these last 15 are now complete and they all have been shown to meet the licensing requirements. Thus, in total, we have completed the review of <u>all</u> computer analyzed small bore pipe supports, as required by License Condition Item 1, and <u>no</u> physical modifications have resulted from these additional reviews.

In our submittal of June 1, 1984, concerning License Condition Item 6, we identified an in-process review of piping analysis and several pipe supports. This review is now complete and piping and supports have shown to be qualified in the as-built condition. This information will be provided in the final report we will submit tomorrow.

TABLE 1

PROXIMITY CRITERIA FOR SUPPORT REVIEW

Support Pair	LARGE BORE		SMALL BORE
	8" ≤ D	8" > D > 2"	D ≤ 2"
Rigid-Rigid	5D	5D	N/A
Rigid-Anchor	10D	10D	10D
Snubber-Rigid	5D	5D	N/A
Snubber-Anchor	10D	10D	10D

REVIEW OF ONSITE/HQ ENGINEERING ACTIVITIES

R. Oman

The purpose of my presentation is to discuss the new responsibilities and authorities of onsite engineering and home office engineering in the future, and to describe the present engineering activities at OPEG and the design control measures in effect during the current transition period.

In order to clearly define the new role of onsite engineering for the future, a revision to Project Engineer's Instruction (PEI) 9, which defines the scope and responsibilities of the OPEG organization has been developed. In developing this revised instruction, the basic philosophy has been that support engineering activities which must of necessity be done at the jobsite will continue to be done there by OPEG. Design Engineering activities which do not have to be done at the jobsite will be done by home office engineering.

1) The project recognizes the benefit and need for a continuing engineering <u>presence</u> onsite to be involved with tasks such as: (a) field walkdowns to confirm the installed configuration of particular aspects of the plant, (b) assessment of the feasibility of construction of specific new design items, (c) interfacing with the construction and startup organizations to clarify engineering's understanding of their problems and the formulation of responsive and acceptable solutions to them.

   These types of tasks are being defined as <u>"Support</u> Engineering Activities."

2) In contrast, <u>"Design</u> Engineering Activities" are being defined as "a technical activity which modifies or issues design documents. Design documents are engineering calculations, design change notices, specifications, and

drawings. Engineering approval of a Field Change Request is also considered a design engineering actvity.

3) Furthermore, in the revision to the procedure the distinction is being made between engineering activities which affect safety-related systems, structures and components, and those which are involved with the non safety-related items.

4) The revised scope of OPEG authority is then defined in the following terms:

   (a) OPEG is not authorized to perform "design engineering activities" for "safety-related" systems, structures and components. OPEG may perform "support engineering activities" for "safety-related" systems, structures and components. For example this would authorize field verification and feasibility studies, but would not include the issuance of design documents such as calculations or DCN's.

   (b) OPEG may perform both "design engineering activities" and "support engineering activities" for "non safety-related" systems, structures and components.

In order to avoid confusion and to more clearly detail the specific implementation of this revised scope of authority in the procedure itself, a 5-page matrix has been prepared as an attachment to PEI-9. The matrix identifies all safety-related engineering activities previously within the OPEG scope of work and defines them in terms of the revised OPEG scope as:

1) continue within OPEG scope of responsibility.

2) Design engineering responsibily transferred to SFHO.

3) OPEG support of design engineering activities to continue but final review and approval by SFHO.

The work items are organized in the matrix for both Unit 1 and Unit 2 by engineering discipline. The following are some examples of the details of this matrix:

- o In the piping discipline OPEG will continue to do:
  - heatup and power ascension piping walkdowns
  - feasibility studies for new pipe supports

  SFHO will do:
  - small bore stress analysis and pipe support design calculations
  - snubber reduction program
  - resolution/approval of FCRs

It is expected that the revised Project Engineer's Instruction will be issued formally this week and it will have the concurrence of the Project Completion Manager.

I would like now to discuss OPEG engineering activities during the current transition period.

As a result of the Project Completion Manager memorandum dated June 14, 1984 rescinding OPEG's design engineering authority, steps were immediately taken to implement the directive.

1. Instructions by the Engineering Manager were given to the Onsite Project Engineer to discontinue all design engineering activities.

2. A meeting of all Unit 1 engineering group supervisors was held in SFHO to announce the change in OPEG design engineering authority, and each EGS was directed to contact their respective discipline representative in OPEG to assure SFHO engineering personnel were henceforth approving all design engineering activities.

3. Since June 14, many engineering activities previously accomplished by individual discipline engineers within OPEG have continued.

These include field walkdowns, construction feasibility checks, clarification of construction and startup problems, formulation of solutions to such problems, initiating appropriate DCRs, and initiating engineering calculations for proposed design changes. However, since June 14 no engineering design documents have been formally approved by an OPEG lead discipline engineer or issued by the OPE or AOPE's. This applies to design calculations, design change notices, specifications, drawings, and engineering acceptance of as-built drawings. Approval and issuance of such engineering documents has occurred under the direct review and authority of SFHO design engineering since June 14.

Therefore, during the period since June 14, in fact an additional level of review has been achieved for engineering activities initiated by OPEG.

4. As a further action, on June 22, the Unit 1 Project Engineer instructed the Onsite Project Engineer to transmit all Unit 1 small bore stress and pipe support calculations to SFHO by the 29th of June. This has now been accomplished and no further Unit 1 small bore stress or pipe support calculations will be initiated onsite.

In summary, the project has acted promptly to implement the Project Completion Manager's directive to rescind OPEG design engineering authority. A revised project instruction will be issued this week which defines the new scope of responsibilities and authorities of onsite engineering and home office engineering. During the interim transition period, steps have been taken to assure that approval and issuance of all engineering documents did occur under the direct review and authority of SFHO engineering.

A separate but related topic to this discussion concerns the Pipe Support Design Tolerance Clarification Program. As previously reported, the PSDTC program as defined in Project Engineer's Instruction 12 was discontinued effective June 8, 1984. All Unit 1 pipe support design changes made subsequent to that date have been accomplished by the Design Change Notice process of Engineering Manual Procedure 3.60N.

In order to facilitate field resolution of pipe support related construction problems on Unit 2 in the future, a new Field Change Request (FCR) procedure has been instituted under Project Engineer's Instruction 19. This FCR program is essentially the same as that successfully used on a number of other Bechtel projects and will apply to all deviations proposed by Construction from pipe support designs issued by Engineering where the proposed deviations are beyond approved installation tolerances. Construction will initiate requests for such deviation on an FCR form and submit them to Engineering for review and approval. The engineering approval of the FCR will include justification for acceptance. Where a calculation is required to verify the adequacy of the proposed change, the calculation will be completed in accordance with Engineering Manual Procedure 3.3 prior to approval of the FCR. The engineering approval of an FCR will be indicated by the signature of the responsible engineer, the group supervisor, and the Project Engineer.

In the case of deviations proposed by Construction which do not alter the functional design characteristics of the pipe support or which are minor design drawing clarifications, General Construction Lead Discipline Engineers can authorize in-process work to continue on an "at-risk" basis for up to five days

while Engineering approval of the FCR is being obtained. The authorization will be in writing and will be included in the pipe support work package before the work can proceed. This in-process change authority will expire and work so authorized will cease if Engineering approval is not received in five days.

For all pipe support modifications for Unit 1 or Unit 2, the pipe support as-built drawings will continue to include any modifications authorized by a previous PSDTC or an FCR such that no deviations will exist between the as-built drawing and any modifications authorized in the field. The final engineering acceptance of the installed condition will continue to be the final engineering review, checking, and approval of the as-built pipe support drawing.

REVIEW OF ONSITE/HQ ENGINEERING ACTIVITIES

H. B. Friend

Thank you

This morning I would like to spend a few minutes providing the background on our recent action regarding the engineering design authority that had been delegated to the On Site Project Engineering Group.

You will recall that the modification work on Unit 1 was done under the provisions of the Operating License for the unit. Even though the License was suspended in 1981, PGandE felt that it was important to retain in place all the requirements of the license; in particular those aspects that involved Operating Department knowledge and control of changes to the facility. In order to maintain control during the modification program, close coordination between the Operating Group and the Engineering Group was required. Therefore it was important that an engineering presence be involved at the jobsite to coordinate with the Operating Group.

The type of work that was being done on Unit 1 also called for an engineering design presence at the jobsite. The need to modify several thousand supports in an already constructed facility with the attendent major physical coordination activities mandated that some engineering design authority be vested at the jobsite.

It has also been demonstrated historically that small piping and supports are most effectively designed when the engineering group is physically located at the jobsite.

For these several reasons, OPEG had been established and had been delegated certain engineering design authority.

By the spring of this year, we had effectively completed the work on Unit 1, we achieved Criticality on April 29 and completed Low Power Testing on May 23. Also our work on Unit 2 was well advanced with all Class I piping supports and modifications issued by May 11. The important coordination activities of the OPEG were essentially complete.

In this same time frame, we had also been concerned that, during several audits both by our Quality Groups and the NRC, programmatic and technical concerns about the work of OPEG had been noted.

While the observed deficiencies posed no safety problems, it was decided on June 14 that it would be appropriate to revoke the Design Engineering authority of the On Site Project Engineering Group and return the authority to the Home Office Engineering Group.

This action was taken for the following reasons:

- to render most any continuing perception that work being performed by OPEG was not in full compliance with Project and Corporate QA Programs. Although extensive corrective actions had already been taken and the adequacy of the hardware had been demonstrated, we wanted to erase any lingering concerns that might exist.

- to begin to convert the role of engineering from designing for construction and modification to one of supporting an operating facility.

- to centralize the engineering activities supporting the operating facility in the Home Office for more effective management.

Our objective is to provide a smooth transition from our onsite project engineering design activities to Home Office engineering activities in support of an operating unit.

One of the most important considerations in making this change was that the transition proceed smoothly and that no item "fall through the cracks".

To tell you in detail how we are accomplishing this change without incident I would like to turn this meeting over to Bob Oman. Bob is one of our APE's and is very knowledgeable of the subject. Earlier on the project, Bob was in charge of the OPEG and has a unique perspective of both ends of this change.

REVIEW OF ONSITE/HQ QA ACTIVITIES

M. J. Jacobson

Introduction

My discussion will focus on Item 3 of the NRC letter which deals with Quality Assurance matters. I will be addressing the Project QA Program in place at the Home Office and at OPEG, specifically, I will address the elements of that Program that provide us assurance that work formerly performed at OPEG will be carried out in conformance with quality assurance requirements. The elements I wish to discuss are the programmatic adequacy of the DCP QA Program and actions that have been taken to strengthen implementation where appropriate both in the Home Office and at OPEG. We believe that the DCP QA Program is effective and we are strongly committed to implementing that Program, as well as pursuing beneficial improvements.

Program

The DCP QA Program is programmatically sound. It is based on the standard Bechtel QA Program as described in the NRC - approved Bechtel Topical Report BQ-TOP-1 Rev. 3A. Organizational differences were defined in a QA Program Description for the Diablo Canyon Project which in turn was submitted to and approved by the NRC Staff. The commitments of the QA Program Description and the policies of the DCP Nuclear Quality Assurance Manual that carry out these commitments remain the basis for an effective QA Program. The procedural changes we have made have been predominantly at the second and third level of implementing procedures, where each level deals with increasingly detailed aspects of implementation.

The DCP QA Program was developed and written for the design activities at the Home Office and, by extension, to OPEG which was delegated a portion of the design work.

The DCP QA Program is therefore fully compatible with new design work assigned to the Home Office. In addition, other factors give us confidence that the portion of OPEG work transferred to the Home Office will be properly controlled.

- Work performed at the Home Office is closer to Project Management and is a necessary focal point for management attention.
- Communication and coordination between Engineering and the Quality Groups is easier and more direct.
- Piping Group procedures used by OPEG were originally prepared for the engineering work at Project Headquarters, and are well suited to the work flow there.

I would now like to address the specific areas listed under Item 3 of the NRC letter, identifying actions taken or programs in place which assure that: (1) work retained within OPEG and (2) work transferred to the Home Office will be performed, in accordance with QA requirements. The improvements included in these programs apply equally to the Home office and OPEG.

Item (a): Indoctrination and Training

We made several changes to procedures to clarify and strengthen controls in this area:

1) More restrictions were introduced such that engineers must have received training in engineering design control procedures prior to their originating, checking or approving any design documents pertaining to safety-related systems, structures or comonents. A previous reference to a 30 day maximum period for receiving training was dropped in factor of this more restrictive approach.

2) The method for identifying newly assigned personnel that would require training was strengthened. Quality Engineering is notified of all newly assigned personnel. Quality Engineering then immediately holds training sessions for these new personnel, only after these sessions are they allowed to initiate or check design documents.

Actions to assure implementation of training include the following:

1) A complete review of training records was performed to assure that all Engineers had received training. For accountability, an improved data base was developed showing all Engineers currently or formerly assigned to the Project, along with the dates they actually received training.

2) Quality Assurance and Quality Engineering personnel have been assigned to assure that training records are kept current and that new arrivals are trained.

3) A recent PGandE QA audit and a monitoring activity by Project QA both confirmed that implementation of training in the Engineering Manual procedures was adequate.

Item (b): Document Control

Improvements have been made to avoid use of unauthorized documents to perform piping design work as addressed in our letter of June 26, 1984. In summary, we focused attention on the importance of complying with document control procedures and on the responsibility of each individual to update manuals correctly and return acknowledgement forms. We changed our procedures to require supervisors to periodically review the manuals in their group, and to require supervisors to discuss and document the content of procedure changes with engineers in their group to be sure everyone is aware of changes and how they are to be implemented.

1) A complete review of all Piping manuals was performed by Engineering to assure they were up-to-date.

2) The distribution of Piping manuals is being reassessed to minimize "partial distribution" manuals that are more difficult to control. At present we have a large number of controlled manuals assigned at the Home Office, assuring that procedures are available in the work area. At OPEG the distribution of Piping manuals has been revised to ensure adequate availability to design personnel in each work area.

3) An additional program is being placed into effect on a trial basis to provide a frequent and periodic verification of the content of all controlled manuals. Manuals will be recalled, checked, and then returned to the manual holder.

4) Audits and monitoring activities of manual control have been increased.

Item (c) - Preliminary Design Data and Design Interfaces

Our program for controlling the use of preliminary design data was described in our June 26, 1984 letter. Preliminary design data used in calculations must be specifically identified and specifically resolved through a revision to the calculation package. Calculation logs provide a tracking mechanism to assure preliminary data used has been closed. Design information provided verbally (including by telephone) must be confirmed in writing.

Project QA Audits of the preparation of calculations specifically include reviewing the resolution of preliminary data. Recent audits of OPEG, Unit 1 Home Office, and Unit 2 Home Office found implementation in this area to be acceptable.

Design interfaces between OPEG and the Home Office are being redefined in PEI-9 as previously discussed by Mr. Oman.

Item (d) - Timeliness of Project Responses

The DCP QA Program requirements relating to timeliness of response to safety concerns and audit findings described in our June 26, 1984 letter are equally applicable to work at the Home Office. Procedures require prompt resolution of Discrepancy Reports and Nonconformance Reports. Timely progress of resolution of Discrepancy Reports is monitored by both Quality Engineering and Project Quality Assurance.

Timely response to audit findings is also being stressed. For each Project Audit finding, recommended actions and a completion schedule are reviewed with the audited organization and agreed to prior to conclusion of the audit. This practice allows corrective measures to begin immediately. At OPEG, an additional report entitled "QA Open Items Summary" is issued on a weekly basis to provide a visible status of each open Quality Audit Finding, including the scheduled dates for response, approval and closure.

Responses to open Project audit findings are current. Any exceptions that may occur are identified on the Delinquent Open Items Report which is provided to Management as a vehicle to focus management attention on obtaining response.

The Quality Hotline, which is a method for employees to freely express concerns, has been implemented in the Home Office as well as at OPEG. Timely feedback on resolution of any matters identified is being emphasized.

Item (e) - QA Program Audits

DCP Project audits are planned in advance to ensure that all aspects of design control are implemented. A Master Audit Plan is prepared to identify all required audit areas. A schedule is developed identifying those audit areas which are to be audited during each quarter, including the schedule for at least a year in advance. This planning is used to provide full coverage of Project Activities on a schedule that is consistent with the Project schedule for the activities being audited. Project Audits are supplemented by Project QA monitoring activities (documented quality reviews similar to audits) and by Management Audits performed by Bechtel San Francisco Power Division Quality Assurance.

Responses to Project Audit findings are evaluated for acceptability prior to closure. Project QA reviews the response to assure that the recommended remedial, investigative, and corrective actions (or acceptable alternates) have been performed. Satisfactory implementation of these actions is verified by Project QA, and justification for closure is documented on the Quality Audit Finding form.

The Project Quality Assurance Engineer reviews the closure actions taken and reissues the Audit Report when he is in agreement that all findings have been satisfactorily closed. As indicated in our letter of April 4, 1984, DCP audit findings related to OPEG were not closed prior to corrective action taking place.

Item (h) concerning the Tolerance Clarification Program was previously addressed by Mr. Oman.

In summary, we believe that the DCP QA Program and the actions I have described, provide effective QA control in these areas.

PACIFIC GAS AND ELECTRIC COMPANY'S QUALITY ASSURANCE
COMMENTS FOR THE NRC MEETING

S. Skidmore

JULY 2, 1984

Introduction

Thank you, George.

Like Mr. Jacobsen, my comments will also address the specific areas listed under Item 3 of the NRC letter and focus on the Corporate QA Program in place to assure that work retained within OPEG or transferred to Project Headquarters will be carried out in conformance with applicable quality assurance requirements.

While Mr. Jacobson spoke of some of the projects actions, I'll be describing some of the broader policy actions the PGandE QA department is taking in response to these same issues.

Item 3a: With Regards to Personnel Indoctrination and Training:

In mid-1983, the training group in the PGandE Quality Assurance Department embarked on a training enhancement project to develop and implement a Company Quality Assurance orientation program for all nuclear work related to the design, construction, and operation of Diablo Canyon Power Plant. The first phase of the project included developing a Quality Assurance orientation film titled, "Doing It Right the First Time." This film is introduced by George Maneatis, Executive Vice President, FERO, and was completed in December 1983.

Beginning in early February 1984 and continuing through April 1984, more than 6,500 workers associated with the Diablo Canyon Project saw the film during scheduled orientation sessions. These sessions included experienced training to discuss the film and its contents, which includes the quality hotline program.

In mid-June 1984, the Quality Assurance orientation film was presented to PGandE's officers. Our plans include a program to make certain all new workers will receive this orientation. Several members of the NRC staff have seen the film, and comments have been positive.

We have a Quality Assurance Training Program Development Project. This project includes elements of quality training for General Office and site personnel.

Examples of indoctrination include:

- o Auditor training
- o Quality Assurance Program
- o Documents containing Quality Assurance commitments
- o Computer systems for statistics and analysis
- o Procurement principles and supplier qualification

We are evaluating the feasibility of INPO certification for the training program. This effort is presently scheduled for full implementation by April 1985 and will include methods for maintaining skills.

Item 3b and Item 3c: With regards to document control and design control:

In furtherance of Corporate goals and as an enhancement to the existing PGandE Quality Assurance Program, PGandE submitted a complete revision to Chapter 17 of the Diablo Canyon FSAR in June 1983. After an extensive review of this revision by Region V against the Standard Review Plan, the revised Chapter 17 was approved on December 20, 1983.

In anticipation of this approval, work was started by an intradepartmental Quality Task Force to develop a charter governing task force activities and work instructions to control the progress of the Quality Assurance enhancement program. The involved departments include Quality Assurance, Engineering, Nuclear Power Generation, Station Construction, Engineering Computer

Applications, Planning and Research, Materials, and Law. This enhancement program will assure that a current and effective quality program is in place which is consistent with federal regulations, industry standards, and meets Corporate Quality Assurance commitments, as defined in our revised Chapter 17. Furthermore, at the completion of its primary task, the Quality Task Force will remain as a standing committee to assist in the timely incorporation of new or revised federal regulations and commitments into the Quality Assurance Program. The Quality Assurance Department will review departmental program and programmatic procedure changes prior to implementation.

As a parallel effort to the Quality Assurance enhancement project, the Quality Assurance Department has been reviewing the major Diablo Canyon contractors' quality programs for consistency and compliance with the revised Chapter 17. The results of these reviews are being incorporated into revisions to their quality programs.

In addition, two procedures in particular have been revised to improve the control of information contained in 29 controlled quality manuals. Quality Assurance Manual Procedure 4.2, "Control of Quality Manuals for Instructions and Procedures", was issued recently to all departments, including Engineering. This procedure provides a uniform and consistent approach to the control of quality manuals. In addition, Quality Assurance Manual procedure 11.1, "Quality Assurance Audits," has been revised to provide clearer procedural control of the details of corrective actions to identify the handling of generic implications of audit findings.

Item 3d: With Regard to Timely Closure of QA Audit Findings:

In August 1983, a quality problem report (QPR) tracking system was developed in the Quality Assurance Department to address timely closure of Quality Assurance audit findings and departmental and contractor quality problem reports. This system, developed to demonstrate compliance with commitments made to the NRC, prioritizes outstanding quality problem reports and establishes estimated completion dates. The objective is to assure that corrective action on

QPRs, identified as being necessary to close prior to mode changes at Diablo Canyon's Unit 1, would be accompiished. This system provides senior management with a central point of information so that timely closure is readily apparent. Results are issued weekly or, in some cases, daily assuring timely flow of QPR information to management. Initially, this program required some 3,200 QPRs to be prioritized and completion dates established. In all cases, QPRs prioritized to be closed before operational mode changes were closed. This computerized reporting system has been effective and will continue in use for both Units 1 and 2 at Diablo Canyon.

The 1983 trend analysis report for Diablo Canyon developed by the PGandE Quality Assurance Department identified that the time required to resolve quality problems and verify the results and corrective actions decreased in 1983 as compared with previous experience. In addition, the average time required by all departments to close nonconformance reports and open item reports decreased in 1983 compared to 1982. The average time required by PGandE Quality Assurance to verify corrective action of NCRs decreased in 1983 over 1982.

Item 3e: With Regards to the Conduct of QA Audits:

A computerized quality commitments management data base is being developed to allow PGandE to promptly demonstrate conformance to NRC requirements and to provide Quality Assurance audits with a computer generated list of quality commitments to be covered in programmatic audits.

A systemmatic audit plan is being developed to assure that all Technical Specifications (TS) requirements, including all individual TS line items, are addressed at least once every three years. This program will involve a comprehensive series of detailed audits covering all portions of the TS and is being established in accordance with guidelines recommended by the NRC. (These guidelines have been recommended by the NRC's Division of Quality Assurance, Safeguards, and Inspection Programs and endorsed in their correspondence with the NRC's Region III).

Conclusions:

As the Manager of Corporate Quality Assurance, I am confident that the quality programs in place and the quality enhancement projects underway comply with our quality commitments to the NRC.

I. Yin's Comments on
PG&E Ltr. 4/27/84

License Condition 2.C.(11) Item No. and PG&E Ltr. DCL-84 -164 Enclosure No.	Comments
1. Completion Review of all S/B Piping	None
2. Rigid/Rigid & Rigid/Anchor in close proximities.	1. Provide justification that piping 2-inch and less should be excluded from review. 2. Address measures taken to evaluate the 9 supports w/limited accessibility. 3. Is the 5 D criteria including Z configuration?
3. Snubber and rigid restraint interaction.	1. Provide bases for 5 D and 3 D criteria. 2. DCP should use specific manufacturer's test data for dead band + load actuation displacement as snubber functionability acceptance criteria. 3. Define snubber functionability conditions. 4. Provide justification that piping 2" and less should be excluded from review. 5. Are the 5 D and 3 D criteria including Z configuration?
4. Thermal gap within rigid restraints.	None
5. Main Steam hot walkdown inspection.	1. License Condition should include FW. 2. Provide piping system isometric drawings to NRC. Circle all locations where verification is planned. 3. How the program is going to be able to address the staff's piping and structure interference concerns?

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6. DPs & Quick Fixes (PSDTC)	1. The 8/10/82 cutoff date is unacceptable. Effective implementation of DP procedures should be evaluated.
	2. Staff will not comment on DCP's "Quick Fix" evaluation at this time. Additional allegations on the issue will be factored into the staff's review to determine the adequacy of the DCP presentation.