UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the matter of:

DIABLO CANYON

Docket No. 50-275

DISCUSSION OF IDVP AUDIT OF
DCNPP-1 CONSTRUCTION QUALITY
ASSURANCE

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

DISCUSSION OF IDVP AUDIT OF DCNPP-1

CONSTRUCTION QUALITY ASSURANCE

Conference Room 321
Logan Hilton Hotel
Logan Airport
Boston, Massachusetts

Saturday, May 21, 1983

The NRC-IDVP meeting convened, pursuant to notice, at 9:30 a.m.

NRC Staff Present:

H. SCHIERLING, Presiding
J. SPRAUL
L. CHANDLER
T. BISHOP

Teledyne Staff Present:

J. CRAGIN
J. FLAHERTY
W. COOPER
L. NORIEGA

Stone and Webster Staff Present:

F. SESTAK
C. LUNDIN
S. BARANOW
C. RICHARDSON
E. ERLANDSON
D. IVES
F. BEARHAM

PG&E Staff Present:

B. NORTON
S. SKIDMORE
J. MANNING
R. ETZLER
R/ TWIDDY

Bechtel Staff Present:

C. DICK
H. FRIEND
P. MASON

Westinghouse Staff Present:

W. GAUGLOFF
D. ALEXANDER

On Behalf of the State of California:

R. HUBBARD

P R O C E E D I N G S

MR. SCHIERLING: Good morning.

My name is Hans Schierling. I am with the NRC. We meet here together today for a meeting to discuss construction quality assurance.

In attendance are representatives from Teledyne, from Stone and Webster and PG&E. Represented also is the State of California.

Before we begin with our introduction of the members here, I would you to be aware we are taking a transcript of this meeting and for that purpose we should limit ourselves to have only one person talk at a time and please speak clearly so we have a good transcript available.

Why don't we start with the introduction.

Jack, why don't you go ahead.

MR. SPRAUL: My name is Jack Spraul. I am with the NRC Office of Inspection and Enforcement, Quality Assurance Branch.

MR. CHANDLER: I am Lawrence Chandler. I am with the Office of Executive Legal Director and I am counsel to the staff on the Diablo Canyon.

MR. BISHOP: My name is Tom Bishop. I am Chief of the Reactor Projects Branch in Region V of the NRC.

MR. HUBBARD: My name is Richard Hubbard. I am

representing the State of California.

MR. FLAHERTY: Jim Flaherty, Teledyne Engineering Services.

MR. ERLANDSON: Ed Erlandson, Deputy Director of Construction, Stone and Webster.

MR. RICHARDSON: Carl Richardson, Engineering Manager, Stone and Webster.

MR. BARANOW: Stan Baranow, Assistant Deputy Senior Manager, Stone and Webster.

MR. LUNDIN: Craig Lundin, Chief Engineer, Quality Assistance Division, Stone and Webster.

MR. SISTAK: Frank Sistak, Project Manager, Stone and Webster, IDVP.

MR. IVES: Richard Ives, SDQA Engineering, Stone and Webster.

MR. COOPER: Philip Cooper, TES Program Manager.

MR. NORIEGA: Leandro Noriega, Senior Engineer, TES.

MR. MASON: I am Peter Mason, the Diablo Canyon Project, Bechtel.

MR. CRAGIN: John Cragin, Teledyne Engineering Services.

MR. TWIDDY: Dick Twiddy, PG&G Quality Assurance Supervisor, Diablo Canyon.

MR. ETZLER: Rick Etzler, Project

Superintendent, Diablo Canyon.

MR. MANNING: Jim Manning, Construction Superintendent, Diablo Canyon Project.

MR. BEARHAM: Fred Bearham, Quality Assurance Engineer, Stone and Webster.

MR. FRIEND: Howard Friend, Project Manager, Diablo Canyon, the Diablo Canyon Project.

MR. NORTON: Bruce Norton, Attorney for PG&E.

MR. SKIDMORE: Steve Skidmore, Manager of Quality Assurance, PG&E.

MR. DICK: Charles Dick, Diablo Canyon Project Managment.

MR. SCHIERLING: Pete, do we have you in there?

MR. MASON: Yes, sir.

MR. SCHIERLING: Okay.

The purpose of the meeting, as I mentioned earlier, is to discuss certain aspects of construction quality assurance.

As you are aware, the Diablo Canyon project has through Teledyne and Stone and Webster conducted an audit or construction quality assurance efforts that were in place prior during the construction of the Diablo Canyon plan.

That effort has been completed. It was primarily conducted by Stone and Webster. The effort has

been completed. Two interim technical reports have been issued, ITR-36 and ITR-38, which exist in Revision 0 and Revision 1. The staff has reviewed both of those reports. We recently have requested the IDVP to provide some additional information regarding the activities.

In general we are interested in two aspects. One is we would like to obtain some more information regarding the close-out of specific EOIs identified in both reports and, secondly, we would like the IDVP to address the bases for the general statements in the report regarding the adequacy of the quality assurance that was applied and that existed and was implemented for the two companies that were audited.

We might have some additional specific questions as we go along, but I understand that you have prepared a presentation and I think it might be best to get everybody up to speed and on the common denominator to go through that presentation hopefully without any interruption.

Bill, I turn it over to you.

MR. COOPER: Thank you, Hans, and good morning, gentlemen and the lady who is present, and welcome to Boston.

(Laughter.)

MR. COOPER: My role this morning is a brief

introduction of the status of the construction QA effort.

In a quick summary of the background, the first introduction of this into the system was on September 1st at a meeting between staff and the Diablo Canyon project where Mr. Maneatis of PG&E announced that they were volunteering to have such a program. This was confirmed by the PG&E letter of September 7th.

During the next few weeks Mr. Maneatis and Mr. Friend came and visited with me and talked about their expectations from this program, their plans for it, the interest in having the IDVP operate the program in the same manner that we had the rest of it from the viewpoint of independence and our procedures.

The three of us and others met with the senior Stone and Webster personnel in engineering, construction and quality assurance and I may have missed one area, and if I did, I am sorry, but to indicate the level of interest and the level of effort which the utility wanted us to operate in in this manner.

Based upon those discussions, the IDVP defined an adjunct program for evaluation of CQA and we submitted this program, or Revision 1 of this program on October 5th of 1982.

Very briefly, that program established that two organizations would be audited and established four tasks,

one on QA program, another on construction verification, a third on processing of the findings and a fourth on reporting.

The reporting system used the normal ITR system of the independent program and a modified EOI system, and I think it is very important to understand that the EOI system used was different here than elsewhere. Our definitions were different.

We defined the Class A error as being a finding, something which was accurate in potential for significant impact on adequacy.

We defined in the EOI system a Class C error as something that in the QA world would be termed an observation, that the potential finding was accurate but it did not have a potential for significant impact on adequacy.

The third category was that the potential finding was invalid.

We reported these results in ITR-36 and 38. 36 applied to Wismer-Becker. There was one finding, 19 observations and five were invalid.

ITR-38 reported on Guy F. Atkinson. There there were four observations. Mr. Novak of staff in his letter to me of May 2nd raised the issues which Hans has summarized very well as to their concerns about the ITRs.

First, that the information in the ITR they did not consider was sufficient to justify closing out the EOIs and, second, the review results did not appear to be entirely consistent with specific EOI findings.

In response to that letter, the IDVP had prepared revisions to both ITRs in what we thought was responsive to both of these issues.

A staff phone call of the 17th of this month indicated very clearly that we had not fully understood their concern in this second area, and it is as a result of that phone call that we are having this meeting here this morning in an attempt to provide further discussion on these matters.

The Stone and Webster folks have prepared a very appropriate presentation which will introduce the issues in a time of approximately a half an hour. Following that we are prepared to go into whatever detail you wish, but I would suggest that since certain aspects of the intent and the procedures of this program have not been fully understood, that it would be desirable to let them go through that point.

Let me ask first if there are any questions and, if not, I will turn it over to Frank Sestak from Stone and Webster.

Frank, why don't you go ahead.

MR. SESTAK: Thank you. I am Frank Sestak.

The construction QA review and audit was intended to assess whether the construction of Diablo Canyon Nuclear Power Plant, Unit 1, was performed in accordance with the quality requirements appropriate for the time of plant construction.

The program was accomplished by the development of check lists of attributes for two contractors based on requirements from various documents such as PG&E specifications, contractor or subcontractor QA programs, PG&E drawings and contractor and subcontractor drawings.

A Finding and Review Committee was established to review each potential finding developed by field auditors and inspectors for determination and accuracy and assess its impact on the adequacy of the plant.

The FRC was made up of five senior experienced personnel as follows:

Ed Erlandson, Deputy Director of Construction, with greater than 35 years experience in construction and construction manager and superintendent at a number of nuclear plants;

Carl Richardson, Engineering Manager with greater than 20 years experience in power projects, project manager and project engineer on nuclear plants;

Craig Lundin, Stone and Webster, Chief

Engineer, Quality Assistance Division with greater than 15 years experience in QA and site QC manager at a number of nuclear plants;

Jim Flaherty, Teledyne, Manager of Engineering, Design and Testing with 15 years experience in the nuclear field; and

Frank Sustak, that is me, Chief Engineer of the Power Division with greater than 28 years experience in power projects, project engineer on various nuclear projects, Project Manager of the Stone and Webster IDVP effort and Chairman of the FRC.

Each potential finding report forwarded to the FRC was reviewed and classified per IDVP program requirements. As Bill alluded to before, they were categorized as findings, observations and invalid.

Upon completion of all FRC reviews, 29 in total, the FRC conducted a site visit on November 16th and 17th. During this site inspection each PFR was visually reviewed by one or more members of the FRC.

Upon receipt of the PG&E response to the PFRs, 29 EOIs were classified and categorized as follows: One was a finding, five were invalid and 23 were observations. The observations were further broken down into 10 programmatic and 13 other.

During the course of our program today we hope

to answer many of the questions raised in various and recent documents such as the NRC letter to TES, Novak/Cooper of 5/2/83, and a recent joint intervenor petition of 5/10 and 5/17.

At the conclusion of our program, we will be open to questions and comments.

If there are no questions, we will proceed with our presentation.

MR. CHANDLER: Frank, let me just make one comment on something you just said, and that is I guess the staff's principal concern at this meeting is with respect to the matters outlined in Mr. Novak's letter of May 2.

MR. SESTAK: We hope to touch on those.

MR. CHANDLER: Okay.

MR. SESTAK: Frank Lundin, the gentleman sitting next to me, will begin with a review of the various check lists developed for each contractor by the site QA team and where approprite identify areas related to criteria in 10 CFR 50, Appendix B.

He will also review in detail the documents related to EOI 90-26, which was a finding, and two other EOIs which were classified as observations.

I hope we answer many of your questions relating to the various documents.

If there are no questions, we will proceed with Craig.

MR. FRIEND: Excuse me, I do have a question. I think I would like to direct it to yourself and to Bill Cooper, and I guess the question is the following.

Was it the intent to have the ITRs as a general category be self-standing and answer all the possible questions and allow the reader to reach a total resolution in accordance with the IDVP's resolution as part of the ITR?

MR. COOPER: No, sir, it was not, and our procedures permit requests for clarification from all parties and we had received none up to the May 2nd letter.

MR. FRIEND: Thank you.

MR. SESTAK: Craig.

MR. LUNDIN: I am Craig Lundin. As Frank mentioned, we were to review the two contractors to assure that the elements of the quality assurance program were present for construction at that period of time, as well as to verify as much as could be done the implementation of that quality assurance program.

In doing that we developed check lists to work to. Four check lists were developed and utilized by the team at the site. Two were verification check lists for actual inspection performed and two were assessment plans

to determine if the practices were in compliance with the specifications and that they had a quality assurance program in existence.

In development of these check lists, the specifications we used, the quality assurance programs we used and other documents that would be appropriate to make this verification, the attributes developed can be associated with the elements of a quality assurance program as delineated in 10 CFR 50, Appendix B in that they were appropriate for the scope of the contractor and asked the appropriate questions to assure those functions such as inspection, training, material control and other appropriate criteria that should have been applied.

They were not cross-referenced specifically to those. However, they do relate in that we did assure that the elements of that QA program were in existence for that contractor scope of work.

In processing the findings, these check lists, if I may digress, these check lists have been available for audit and they have been completed by the team. Subsequently they wrote potential finding reports and submitted them to the committee. They were processed and they are still available.

In processing the findings, the other aspect that I wanted to touch upon in File No. 9026 was to use it

as an example of how the committee processed the findings.

I brought three as examples that I could talk from, but 9026 being the finding, the only Class A, it would probably be most appropriate.

The initial report which came from the field reported that further specifications, an LP examination of the lug removal areas on the loop piping, that there was no record of it having been performed.

MR. SCHIERLING: Craig, could you put in maybe what time frame we are talking about, when was the work done, the actual construction work?

MR. LUNDIN: Approximately 1973 in this particular scope of work. Someone can correct me on that, but in that time frame.

MR. SCHIERLING: The records you looked at were also appropriate for that time frame?

MR. LUNDIN: That is correct. The records were available and complete and we found no evidence of this particular inspection having been performed as required. We processed our open item report in that evaluated that there was no documentation available and we issued it as that.

We did receive a response in which we were told that PG&E had contracted with Pullman to perform this work because their review had not turned up the records that it

had been performed. So that package for Pullman's work was completely done prior to it being presented to Stone and Webster for review.

That package was sent to us and it showed where all the lug removal areas had been performed by Pullman. It included information to show that Pullman had been approved by PG&E and they were utilizing their QA program.

We reviewed the documentation and with one exception Pullman had documented the acceptability of the lug removal areas. In that particular case, Pullman in working to their procedures had rejected an indication. They turned it over to PG&E who had performed another examination under their own procedures and accepted that liquid penetrant exam.

The Findings Review Committee determined that for our independence that we required that this liquid penetrant test be performed by a third party which would be Stone and Webster and witnessed by a member of the Findings Review Committee to assure the compliance with all the information that we had in the package.

That was done and that information in that review and the required inspection was brought back to the committee and the committee acted on the fact that, on that one particular instance, that the liquid penetrant exam that had been performed by PG&E was accurate and

acceptable. In fact, the indication was within the requirements that could be accepted per the Code as well as the in-service inspection requirements of PG&E.

MR. SPRAUL: Craig, pardon me, when was this Pullman work done?

MR. SESTAK: Late '82.

MR. LUNDIN: I think most of it was performed actually in January of '82.

MR. SPRAUL: Fine, thank you.

MR. LUNDIN: That particular review that Pullman did, which I did not go into, included sketches of all the loops and the surge line I believe as well and the pump casings and showed all areas of lugs per the drawings and LP reports, thickness reports where required for all those areas. This is in addition, of course, to our review which had performed a visual inspection on all four loops in the surge line piping.

The Findings Review Committee in closing this item, this file, or recommending closure, viewed the information supplied by Pullman and the other information we independently reviewed to assure that the specification requirements were met in determining that the file was adequate for closure. This particular example was classified as an eight.

We utilized this type of process on all the

potential findings which were presented to the committee where we determined its accuracy, got any information we needed from the team to make that determination and we presented it to the Program Manager. We reviewed any information that was returned to us by PG&E to clarify or add to what we might know at that point in time.

We utilized any consulting information we needed for our own engineering departments as independent to review any of the technical information that was provided and made our judgments based on all that information. The review of each one of these is part of the project filed report.

I will clarify a point that I mentioned earlier in that why the review was performed by PG&E on one of the indications found by Pullman.

Pullman was hired to do this work from the documents that we were shown, the purchase order, to work to their own procedure. Their own procedure had a maximum indication size that they could accept. In working to their procedures, the indication was unacceptable to their procedure. Although it was found to be acceptable to the actual code, their procedure would not allow acceptance of that. That is why that one item was different than the other indications found and resolved by Pullman. As a result of that information we performed a third party, if

you will, to assure that that process was complete.

Are there any questions?

MR. SCHIERLING: Yes. Somehow I do not quite understand. We are talking about work that was performed in the early '70s and QA activities that are now being conducted in the early '80s or as late as half a year ago.

Could you somewhat clarify that for me? I mean what was the QA that was applied when the work was originally done?

MR. LUNDIN: It was done to Wismer-Becker's program at that time and the inspections and tests that were required to be performed, we verified had been performed. We could not find evidence that this one inspection that was required had been performed.

MR. SCHIERLING: By Wismer-Becker.

MR. LUNDIN: By Wismer-Becker. It was within their responsibility to perform that and we could not find the evidence that it had been performed.

We did look at all the inspection requirements. We verified both by actual inspection on our own of what was available to be seen, a visual inspection of all four loops, as well as verification by the documents required by their program that they had performed all the required inspections.

The goal was to assure that the implementation

of their program in that what they required to be done to assure that the piping was satisfactory was in fact done. This was an exception that we found.

MR. SPRAUL: So there were radiographs available of code welds?

MR. LUNDIN: That is correct.

MR. SPRAUL: And indications that visual examinations had been completed acceptably and everything was okay with this one exception of some lug removal areas did not have a penetrant examination record; is that right?

MR. LUNDIN: That is correct.

MR. SESTAK: Single, not plural. One indication was found and there was an inspection performed on all four loops.

MR. SPRAUL: Now you are talking the '83 time frame. I am looking back at the '73 time frame records. Everything was there except for this one non-destructive examination of lug removal areas?

MR. FRIEND: The record of a non-destructive examination.

MR. SPRAUL: Was not available from the '73 time frame..

MR. FRIEND: That is correct.

MR. SPRAUL: The work was done in '83 with one

reject area by Pullman which was subsequently found to be acceptable to the code.

MR. NORTON: Yes.

MR. FRIEND: That is correct.

MR. LUNDIN: In the total review of Wismer-Becker there were in other file numbers cases where we did not have documentation for specific inspections. However, we found there was evidence the inspection had been performed and documentation that it was successful by other documents. This particular case is the only case where we found that we could not find any evidence of that inspection.

MR. CHANDLER: Now your close-out on that then is based on the corrective action that was done rather than on some revelation concerning the initial finding that was made

MR. LUNDIN: That is correct.

MR. CHANDLER: It is an otherwise valid finding then that there was a deficiency of some size in documentation with respect to that single item.

MR. LUNDIN: That is correct.

MR. DICK: Craig, I wonder if it wouldn't be helpful to put your overall effort in some sort of perspective. Obviously it went beyond a simple audit, and

I wonder if it wouldn't help the frame of reference here of the meeting if you or Frank would discuss the number of hours you spent and the number of things you looked at and that sort of thing.

MR. LUNDIN: The overall effort, as you mentioned, was not an audit. It was an evaluation, and as such was performed in a manner such as to look at as much as was necessary by our people in the field to determine that an area or a process or a piece of the program or some hardware was acceptable.

To that end, for example, all the loop piping was visually examined. We performed visual inspection on all the available that wasn't in concrete or couldn't be seen of piping and structural work within the two contractors that we could get to. We recreated as much of the actual inspection as possibly could be done.

In looking at the program and the documentation to assure that the appropriate inspections and so forth were performed, we looked at a significant volume of the records and when problems were seen or things we didn't understand, those threads were followed throughout the documentation to assure that it was not a common problem.

We have some numbers, actual numbers of items inspected and the physical installation of 2,298 items and

we probably have numbers of pieces of paper, but I think it is more appropriate to say that we just virtually looked at everything that we could.

We had several people there in the neighborhood of eight weeks I believe on site full time doing a full evaluation.

MR. SCHIERLING: How many people did you say?

MR. LUNDIN: How many people did we have on it?

MR. BARANOW: We had 10 people I believe.

MR. LUNDIN: Ten people full time reviewing both the documentation required by the program and by the codes as well as the actual hardware within the scope of these two contractors.

MR. NORTON: How many things, and I use that term "things," did you look at that could have resulted in a finding or an observation, and I know you can't give us a precise number, but are we talking about a couple of dozen, are we talking about a hundred, or what are we talking about?

MR. LUNDIN: Tens of thousands I think as an order of magnitude.

MR. NORTON: So you looked at tens of thousands and had 29?

MR. SESTAK: Nine physical findings for Wismer-Becker in the piping area.

MR. COOPER: Nine physical potential findings which were resolved into one finding.

MR. NORTON: But you looked at potentially tens of thousands. In other words, if nothing had been done right you could have had tens of thousands of potential findings?

MR. LUNDIN: Correct. The degree of magnification was as great as we could make it on the physical verification at this point in time. We did not reperform anything and there are some things that just can't be seen.

MR. SCHIERLING: Bill, let me ask you another question in a broader sense. Do you intend at this meeting to go through each one of the EOIs?

MR. COOPER: We could, but we did not intend to do it. What we intended to do, by the way, in the revisions if these ITRs was to present roughly a one-page summary of each of the EOI files giving more detail as to what the nature of the response was from PG&E, what the evaluation result was based upon, that is was it simply based upon the resolution sheets we got from PG&E or was there additional field work done and so forth, and a little more about what the nature of the resolution was.

The present ITR has a fault which we hadn't recognized would be considered such. We essentially say

that each of these observations was looked at, evaluated by the Findings Review Committee and found not to be of safety significance, not to significantly impact the plant. That is the reason for the term "observation."

What does not come out clearly in those present drafts, and this is what we are trying to do in response to your first concern was to give a little more detail as to why that is so.

If you have got a favorite, I suspect the fellows could go into that for you today, or they could give you an illustration about one or two of the observations that were more significant to indicate that the trail was not dissimilar to what was done on 90-26, recognizing of course that they were of much less significance. So not every one of these steps was followed.

MR. SCHIERLING: Let me check with staff for just a moment.

(Brief pause by NRC staff confer.)

MR. SCHIERLING: Let me ask you, when do you think you will come out with the revised ITRs?

MR. COOPER: We were expecting to next week if there is not some new development from this meeting. I had said earlier that perhaps we had not understood your second point fully and our response to that was perhaps

too little as we had intended it and, depending upon how the conversations go today, it may be decided that it is advisable for us to expand on why we came to the conclusion that there is no real problem here and why we came to the conclusion that there is not a generic issue to be faced based on the work that we have performed.

Now to the extent that we need to do that in the ITR, it may slow us up a few days, but we need to have more discussion in that area to see if it is necessary to do that.

MR. SCHIERLING: Okay. Let me propose this then, that maybe we take a few examples of the specific EOIs and I think it will suffice if within a week or so we will get a revised ITR and maybe even an advance copy of it in a draft form or whatever it might be.

I think indeed we should concentrate more on the second aspect which is the general conclusion that the QA program that was used and implemented is acceptable.

I would like you to maybe address on what basis you determined, and hopefully you can do that for all five EOIs together, the five EOIs that you determined to be invalid.

MR. COOPER: Well, let me respond to that one directly and first because we can get those out of the way pretty fast.

That was a procedural matter and there is correspondence on this that has been made available to all parties. There was a misunderstanding at the site on the part of the review team as to the extent to which these concerns could be expressed to the PG&E people and resolved on site. As a result of that misunderstanding, there were five items that the site team resolved themselves and had no intention of even issuing a potential finding on.

I felt that we had to play this thing extra carefully as far as the independence aspects were concerned and I instructed Frank Sestak to issue those as potential findings to make sure that everybody knew what the potential concern have been.

So those five were issued in that manner. The Findings Review Committee did then consider those and agree with the site team that they were truly invalid. I believe I am correct and, if I am not, one of you guys correct me, but I believe that all five of those that were determined to be invalid were determined on that basis.

So that all 24 of the potential findings submitted by the field team to the Findings Review Committee were considered to be valid and were evaluated as to their potential impact on the adequacy of the plant.

MR. SCHIERLING: Could you go through just one

of the five then and express what the concern was and get down to the nitty-gritty of what the invalidity is.

(Brief pause - discussions off the record.)

MR. SCHIERLING: Shall we take a quick five-minute break and everybody can get a cup of coffee.

(Whereupon, a short recess was taken.)

MR. SCHIERLING: Are we ready to start again?

Let's get back on the record a few general statements before we return to the subject itself.

I really would appreciate it if you could move along on a very rapid pace because I personally have a flight at 10 after 1 and I had better make that flight because otherwise you are going to have another Project Manager.

(Laughter.)

MR. SCHIERLING: You all are welcome for my funeral, too.

(Laughter.)

MR. SCHIERLING: I also would like to recognize Mr. Hubbard being here and we will ask you, Dick, at the end of the meeting or maybe during the meeting to provide us with any comments or statements that you feel are appropriate to the subject today.

Back to the detailed discussion. With respect to the forthcoming revision for both ITRs, can we expect

to have at least the amount of detail that you provided us with, for example, on 9026 in that revision, and hopefully maybe even more as you deem necessary, but this is about the minimum information that we would like to see in the revision.

MR. COOPER: It is equivalent I believe.

MR. SCHIERLING: That would be fine.

We want to make sure that we address the second question in our letter to you and let me quite specific there. I am looking at, for example, ITR 38 where, and we can take either one of those two, you frequently make statements that something was found wrong with respect to a specific PG&E specification. Is it specification or what is the proper word?

MR. COOPER: That is as good as any.

MR. SCHIERLING: We want to know what we are talking about for the record.

MR. COOPER: We will interpret it generically.

MR. SCHIERLING: Many of the EOIs have that statement in there and yet there is the overall general conclusion that well, we look at all this, but the program is acceptable.

As we discussed over the phone and as you know, Bill, this is our concern, how can we come up with that general conclusion based on granted maybe only less than

30 EOIs issued on an enormous amount of information that you looked at, and I hope you will address that later on.

MR. COOPER: I would suggest that the best thing to do is to get the questions out of the way on this first item and then turn to the second, because it is really on the basis of having done everything we did with respect to these, well, the field investigations resulting in potential findings and resolutions of those, that we felt we were in a position to make a judgment as to the overall significance.

Just to get ahead though for just a moment, when I reread and others reread that last paragraph that you are referring to in our ITRs where it said it met the specification, in a few regards it clearly did not to the letter of the law meet the specification in the sense of meeting a regulation perhaps, but it clearly ended up with an equivalent end product for the service requirement.

It is that kind of rewording that we had attempted to put in these revisions and which I am concerned now hasn't gone far enough which we can benefit from on the discussion.

To the letter of a detailed lawyer reading of the specification and what was done, it may not have precisely met that detailed work, but it was clearly an eqivalent kind of thing in those few instances where it

didn't meet the detailed work. I think to get into that area at all we do have to resolve any concerns you have about the way in which we resolved those specific EOIs.

The question that was on the floor just before the break was give us an example of one of the five we ruled invalid, which we are now prepared to do and then we suggest we look at some of the observations.

MR. SCHIERLING: Very good.

MR. COOPER: Craig.

MR. LUNDIN: Just after we reconvened, I sat and just flipped to see the first ones that we had. As an example, a potential finding report was issued and subsequently cancelled. However, due to the procedural problem we had that Dr. Cooper mentioned, we issued it, but in this particular case there was a specification requirement that PG&E review and approve the weld procedures used by Wismer-Becker.

We found weld procedures that had not been reviewed and approved. There was no evidence of that approval and subsequent checking found out that those were not weld procedures that had been used on that work. So they were part of Wismer-Becker's weld procedure book, but were not used for Diablo Canyon, Unit 1 and there is no reference to them in the records. That was subsequently cancelled.

We have two that were written specifically ---

MR. SCHIERLING: In other words, that finding was not applicable.

MR. LUNDIN: That is right.

MR. COOPER: It is invalid, is the program working.

MR. LUNDIN: We have two that were exactly that way. We had one which was a potential finding on the radiographic report did not denote the status of its review. In this particular case in fact it was not that the radiograph did not exist and it was not that it was not well documented. The review had been performed.

It was a case of, and I don't remember the exact way the form was designed, but it was that he did not check the accept block and subsequently the team assured that in fact the radiograph was in fact acceptable. It was obvious that it had been reviewed, but the block for accept had not been checked.

When it was verified that in fact the radiograph was acceptable, and there was other documentation to show that that individual had accepted that radiograph, the potential finding report was developed.

Once again, it was issued as an open item report because it had been sent to the Findings Review

Committee.

Let me find another quick one here.That in general is the type.

We had a potential finding on a piece of paper that was not in the file on the certification of some penetrant material. Subsequently the document was available and that would not have been a finding if that had been available at that time.

That characterizes I think the type of invalid findings that we had.

MR. BISHOP: Could we return then to the one example you talked about earlier on how the IDVP used that example. It followed up on the particular issue of the pipe lug removal.

We are interested, and this is central to our concerns in both our question 1 and 2 in the letter to you, we are interested in knowing the process you used in determining whether this was symptomatic of larger problems.

You determined I guess that records were not available and that non-destructive examinations were made of areas where the lugs were removed.

Our question would be did you conclude that the conctractor in fact did not have a program to check that type of effort? And if he didn't have a program, should he

have had a program? Does that mean that there may be other ASME pipe out there that wasn't within your limited sample that has had lugs removed off of it that hasn't been examined? Those were the types of questions we were interested in.

Tied to that we notice in your program plan, which was submitted to the NRC, that you indicate that the Findings Review Committee will define criteria for determining the degree of impact of the potential findings on plant adequacy.

Could you indicate how that criteria was applied in this case to tell us something about the overall adequacy of the programs?

MR. LUNDIN: I would like to go back to the first part of your question.

As far as determining the symptomatic, No. 9026 is a good example. We did not have a limited scope of our check. We looked at all the required inspections that should have been done on that pipe and verified that they had been done.

Wismer-Becker did have a process or a program, if you will, to assure that those things were done. If in fact this LP had never been performed, then they may have not followed their program or someone had made an error in implementing the program.

We did assure that not only did they have a program utilizing their operation process sheet, and they had a manual which would be of course in accordance with ASME 3, but that the process sheet did not pick up this required inspection. That is where it would normally be and that is where it was for other inspections.

So as far as the ASME piping is concerned that Wismer-Becker installed, we did ensure that all the inspections had been done and this was in fact an exception that we could not find the documentation that their program had in the process.

The program existed to make sure that all the requirements of the specifications got through the process, documented and processed through the loop.

The Findings Review Committee, as you mentioned, developed the criteria. We made the check list for ourselves, a question and answer type of check list to process the type of findings. In doing so we wanted to evaluate whether we had a problem that was symptomatic, whether we felt we should be asking the site team to look at something else to show us something.

We looked at whether we were talking about someone making an error or an actual program problem that we could expect to see repetitive, like something never being done because the program had a fault in it.

Those are the types of questions we used. We also considered whether the feature or the specification requirement was an implementation of an essential design feature of the plant or was for the overall requirement added to the specification to complete the overall installation, such as we had open items on some of the surface finish requirements in concrete which is in the specification.

It was a specification requirement and the minor deviations we did see our inspector wrote up in that he took the letter of the law for what the requirements of the spec were for the surface finish of the concrete. But in fact, in an overall review it was strictly within the confines of a cosmetic surface finish of the concrete.

So we did make those determinations, the Findings Review Committee, and considered all those aspects in our review utilizing a check list for ourselves.

MR. BISHOP: Could you clarify for me on the example we were talking about, the piping issue and the lug removal, did you in fact determine that that contractor did have a program or had a program that should have checked areas where lugs were removed?

MR. LUNDIN: His program should have picked it up.

MR. BISHOP: So you would say in this case the fact that you found an error was what might be called an isolated case as opposed to a deficiency in the program?

MR. LUNDIN: It was an isolated case. In fact, all other features that that program was supposed to pick up it picked up and we verified that.

MR. CHANDLER: So if you looked at the next lug down, you had documentation of LP testing?

MR. LUNDIN: No, we are not talking a lug. We are talking a feature. That is some of the lug removal areas we couldn't find.

MR. BISHOP: That is what I am getting back to.

MR. LUNDIN: These pieces of pipe, and I believe they are cast pipe, are delivered with lifting lugs.

MR. RICHARDSON: Erection.

MR. LUNDIN: Erection lugs which may or may not be removed. They do not have to be removed. However, in the normal construction process with restraints, supports, hangers, if you will, and insulation, it becomes more expedient to the construction forces to remove them. Now that is allowed.

If the lug is completely removed, the code requires it to be LP inspected. If it is left on in some part, that is not required because the original weld was controlled at the manufacturer as required, which we did

verify.

MR. BISHOP: I still have the question, as Larry would say. You concluded then that the contractor did not have a program to check the surface of where lugs were removed?

MR. LUNDIN: If I may clarify. I think we are hung up on what the term "program" is. There was a program to assure that the specification requirements were implemented on process sheets and subsequently through the whole chain.

MR. BISHOP: That is very general. I am getting down to the narrow specifics.

MR. LUNDIN: Okay. We could not find evidence that the program did implement this specification requirement. It wasn't on that process sheet and therefore we can't find evidence that it was performed.

MR. BISHOP: Okay. Then what does that tell us about other piping that may have had lugs attached to it?

MR. FRIEND: I think, Tom, I would like to clarify at this point. It is my understanding that the only piping on the project that had lugs was the primary coolant loop. That is a matter of interest.

MR. BISHOP: Okay. Then could it be stated that in fact the entire population subject to that problem has been addressed?

MR. LUNDIN: Yes. I thought I had said that.

MR. BISHOP: I didn't gather that.

MR. CHANDLER: It is not an isolated incidence in the sense of one specific lug removal which had not been LP tested. It is just that LP testing had not been done across the board in lug removal areas.

MR. LUNDIN: We could not find evidence that that had been done.

MR. BISHOP: That is the type of information we were looking for to get an understanding of whether you looked at the root causes.

MR. COOPER: I would think it is important to note, although there was no documented evidence that this examination had been performed, that when the examination was subsequently performed that everything successfully met the requirements.

Now obviously that can be one of two things. It can be dumb luck or it can be the fact that it had been done correctly in the first place and that the documents are missing.

MR. FRIEND: I think it is also of interest that the senior members of the construction group on the site believed to the best of their recollection that the tests were performed. We cannot find the documentation, but it is their memory that these tests were correctly performed.

Is that correct?

MR. NORTON: Yes.

MR. LUNDIN: By the way, we did find in one of the other findings that there was occasion where a test was left off a process sheet but in fact did get performed and we had the record. I think that is in one of the findings as well. That is why it was written up that we just didn't have the record that it was performed.

MR. BISHOP: I cut you off when you were about to describe the criteria the Findings Review Committee was using.

MR. LUNDIN: Well, I think I mentioned most of them earlier, but the things we wanted to evaluate was, first, is the problem sufficiently defined to evaluate it, and that would be an internal process where do we have enough information to make some sort of evaluation to pass on to the Program Manager. That would be where we would ask the site team to do something else or get something else for us or submit more information.

We look at the impact on the adequacy of the plant in that can we determine whether it is a hardware or a plant adequacy problem or do we have an error in the implementation of a program. Someone doesn't sign a document, for instance, or there is a piece of paper missing from a file that we have every evidence was there

before. It is not necessarily hardware related. Does it appear to be an isolated case? That is the first thing. Do we need more information to judge that?

Do we have a potential judgment error or an individual failure to follow procedures? For instance, an individual judgment error would be a case where the original inspector accepted something and our inspector felt it was rejectable. It is very possible that that person made a judgmental error.

Does it appear to be the symptom of a problem? Is there evidence of a system breakdown? Did this come because the system broke down and this fell out the bottom? Were the procedures inadequate? Does it demonstrate a lack of personnel awareness? Does it deviate from a code or a standard? Those are the type of questions we asked and discussed. What may reasonably be considered the effect on the plant if left undetected was one of the things we discussed about each one. Is there a potential for end product deviations or deficiencies? Is there a potential to affect operability or maintainability? Was there a subsequent check test or inspection to confirm the adequacy of the item?

When we consider that some things are subjected to multiple tests, one of the considerations we looked at was well, was it checked later on for some other reason

and therefore we don't need to look at the adequacy of that.

Then are the possible adverse effects of the potential finding likely to affect the operability or safety of the plant?

So these are the words we used to jog our thought process as we discussed each and every item. We used this as a check list to assure we had discussed each question and that is the type of criteria we used.

MR. BISHOP: Okay. Thank you.

MR. CHANDLER: While we are still on the criteria for a moment, you mentioned earlier that you did not specifically use Appendix B as a check list. A lot of the words you say smack of Appendix B and you indicated that there is a relationship between what you did look at and Appendix B.

Was a conscious decision made not to use Appendix B or why was Appendix B not used as applicable at any given point in time?

MR. LUNDIN: I think you are probably get a different opinion from each of us on that in that I think each person had their own ideas.

Appendix B was considered and really utilized in that our people in writing the check list used the attributes that we would use to assure Appendix B.

Because it was after the fact, significantly after the fact in that the amount of people and the processes were not in place and operating for us to look at, we felt we had to assure that the elements of any quality assurance program, which happened to be delineated in Appendix B, were in effect to assure that the plant was built right and in fact it was implemented.

We felt if took an approach like that we would assure that in our evaluation we would be able to make a determination as to whether there were controls in place and they were effective. That was our main goal.

By assuring the elements of a QA program were there that would preclude any question of whether 10 CFR 50 applied. I know I have seen some documentation which I believe because of the early license of this plant that there was some consideration as to whether 10 CFR 50 applied to Unit 1, and I know that PG&E committed to apply their program as much as possible to that.

So it was considered that a quality assurance program, and this is in my participation, the elements of that program as they applied to these two vendors, would be considered.

Obviously if we had applied Appendix B from the start, some criteria just would be not applicable to these things.

MR. CHANDLER: You are talking about Appendix B as it existed in various points in time. There is no real change. I understand.

MR. LUNDIN: I do not believe that that was considered.

MR. CHANDLER: Are there different opinions of it?

MR. LUNDIN: I don't know. Are there?

MR. SESTAK: No, I don't have any vast difference of opinion from Craig. We tried to and we recognized that the so-called PG&E agreed to utilize these accepted components of 10 CFR 50 on Unit 2 which goes back into this as much as possible on Unit 1 that is in the FSAR.

MR. BISHOP: Along that same line of thought looking at the program again that you submitted to the NRC, one of the overall objectives is stated that you will deterine whether the construction of Diablo Canyon was performed in accordance with the quality requirements appropriate at the time and meets applicable regulatory standards.

In another area, paragraph 3.2.1, it indicates that you will evaluate the quality programs to determine if controls were consistent with applicable NRC requirements.

I presume you did this in the development of your check list, is that correct?

MR. LUNDIN: Correct, the implementation being the implementation of the specifications and the program requirements and all the documents that we used in developing our check list.

MR. BISHOP: In the check list subtask it indicates that you will evaluate each contractor's quality program and procedures. Could you discuss the extent to which you looked at procedures?

MR. LUNDIN: Well, I didn't do the evaluation. Maybe somebody on the site team, maybe Fred or Stan could address how far we actually looked at the actual procedures.

MR. BEARHAM: I am Fred Bearham. I was on the site team. We looked in great depth at the procedures and we deterined the adequacy as we went along. Most all of the people on the team were experienced people. So they were used to looking for the adequacy of programs.

MR. SPRAUL: Was there a manual back at that time that met code requirements that they developed the procedures from?

MR. BEARHAM: Yes, there were manuals there both for Wismer and Atkinson and there were programs developed from manuals like weld procedures and such like. There

were programs for the qualification of personnel, et cetera.

MR. COOPER: The Wismer-Becker report, for example, states that a total of 3,528 documents was reviewed.

MR. DICK: I think, and Craig, you may wish to comment on this, but I think it was clear that there was an approved quality program that Wismer-Becker was following.

MR. LUNDIN: That is correct.

MR. BISHOP: What we expected the IDVP to do, and I refer to your plan, was to tell us whether that quality program was effective in meeting regulatory requirements at the time.

MR. COOPER: I think that the key to our process in conducting this work was to assemble a team of experienced people both in the field team and in the Findings Review Committee that were familiar with construction and the application of construction QA at that time and go out and see if the job was done right.

Clearly that experience reflects the growth of the more formal QA procedures during that time period, but we did not want to get into a situation where we are arguing, for example the pros and cons of the FSAR statement that says for Unit 1 the PG&E program would be

used to the extent possible.

We didn't want to get into this what is the extent possible. We wanted to get into the question of whether there was a valid QA program which was implemented and led to a construction which was acceptable.

I think that our emphasis has been on do we have the right end product more than on is every "i" dotted and "t" crossed that might appear in some interpretation of the various documents.

It is true that we don't have a formal comparison in our reports with each of the applicable 18 elements because we thought it was more important to find out if things were done in a manner which was good practice at that time in these areas.

The emphasis was not on a paper comparison of programs with other documents. We knew that they were working through approved procedures and so forth and we wanted to see how did it work and how well was it done.

MR. NORTON: I don't mean to take the NRC to task, but I am a little bit puzzled by Mr. Bishop's questions, particularly his last one. The letter of October 5th, '82 from Teledyne addresed to Maneatis, Denton and Engleker, page 4, 3.2.2 subtask, spells out basically what Mr. Cooper just said is what they were going to do, and that letter is dated October 5th of '82

as to what they were going to do in that respect.

As I read page 6-1 of ITR 38 Revision 1, they tell you what they did. If you look at the wording of what they said they were going to do in October and what he just said, all three seem very consistent.

So I am a little puzzled when you say you expected something else.

MR. BISHOP: Well, I expected to know how they got there which I didn't see in the ITR.

MR. NORTON: Okay. That is a different question than what you just verbalized. All right.

MR. BISHOP: I would like to proceed with exploring that particular aspect, and it ties in with our second question in our letter to you.

Considering that you explained rather well to me and I have a much better understanding and a better feeling of how you analyzed the individual ITRs, and if your depth of investigation was as thorough for the other ones as it was for this finding in checking the broader implications of that, I think our concerns would evaporate in that area.

We have a similar concern in how you took into account all these many relatively small items and drew your conclusions about the overall program adequacy.

Specifically let's take an example on material

control, for example. I believe you had a number of individual items talking about mill certs and things such as that. How did the Findings Review Committee handle these many small items, recognizing that each one individually didn't create a problem, but was it symptomatic of perhaps a broader problem within that contract?

MR. COOPER: I would suggest that we go through a couple of the observations in more specific detail.

MR. LUNDIN: Well, I am not so sure one would help, but we shall. For example, we did have some that were on material control. With one exception, they were determined to be programmatic as far as information that wasn't available to us at the time. When those threads were followed, we found out that in fact somewhere the information existed and the material was proper even though the piece of paper was missing.

We checked the material from the reactor coolant system from the hardware back to the paper. In one case we found that at the receipt inspection the identification of two items on the same shipment were reversed in the records tracing. So that one number traced back to the other piece of tubing. There were two different thicknesses. The material was properly installed. The right material went in the right place. The

right size material went where it belonged.

Since this was the only case of all the material that Wismer-Becker installed that did not trace back to the appropriate number, we had no reason to believe that this was a common occurrence except isolated, and we did not tie that item because it was under material control under everything that had something to do with material because they were separate and distinct and the others all happened to go away in that we found that in documentation from Westinghouse and so forth where we went beyond the scope of our review to assure that the material was correct.

In the case of going to Southwest Fab and to Westinghouse for documents we assured in fact the material was the correct material, although the Wismer-Becker documentation was unclear to assure that.

So any particular one that you want to discuss, we can pull out, but I wanted to talk about material because they may all fit under the same criteria, but they don't necessarily relate to each other and, as I said, most of them went away as with the types of observations were done.

MR. BISHOP: That is useful information. Perhaps if you could just inform us in general terms how you drew your overall conclusions considering the findings, the

individual findings you had.

MR. COOPER: First, we had only one finding. I have got to keep saying that because ---

MR. BISHOP: Oh, let me correct my phraseology there. I didn't mean to indicate that you had more than one finding. I meant considering the results of your investigation.

MR. COOPER: The reason I want to go on on that and starting out in the manner in which I did was not to chastise you for your counting ability, but rather to point out that the 23 so-called observations, that they were termed an observation because the potential finding was considered to be valid.

There wasn't a piece of paper in the file that it really should have been in perhaps, but then the additional work that was done confirmed that although that piece of paper might be missing, things are as they were intended to be.

So when you ask the question about how did we reach a broader conclusion about the work, you have got to recognize that the number 29 was really much smaller in entering into that question of judgment on that point, and I don't know the exact number right offhand, but clearly the 29 went down to 24 and clearly the right number is some place between 1 and 24 of these were things that

really were of the nature that you might be concerned that they could lead to this kind of a generic situation.

It is a judgment call at that point to me on a recommendation from the Findings Review Committee and we are going to have to turn to them for the basis on which they felt this was the proper judgment in some detail.

Having said all this though, I do want to make it very clear that we are talking about conclusions based upon the program we conducted. We believe we properly conducted the program that we were asked to conduct.

The question, for example, were two subcontractors the right number, that is outside of our scope. We did the program we were asked to conduct and we believe that our conclusions based on the work we did are proper, but we can't argue outside of that scope and we don't intend to in any of this presentation.

If we can keep it within then what we could possibly learn from the scope of the work we undertook to do, then I think it would be appropriate to turn to the Findings Review Committee and say, hey, you know, of this number that is like someplace between 1 and 24, how many did you really think were potential indicators of generic concerns and how did you feel about it?

I think this is the only way to answer your question, Tom.

MR. BISHOP: That is right, and what did they consider in exercising their technical judgment to draw this overall conclusion?

MR. LUNDIN: We did determine and the information that was presented to us gave evidence to the fact that, No. 1, there were in the case of these two contractors quality assurance programs in effect, No. 2, they were being implemented because the evidence showed in the great majority of everything we looked at that in fact these programs were complied with and, thirdly, the result of the application of these programs resulted in our review of not finding anything in the plant that was not in accordance with the intent of the specifications.

Those, I think, are the three key points which could probably be expanded upon, but the program was in place and it was implemented, that is evidenced, and we feel in the magnification that we used in looking at the plant itself that in fact it essentially worked.

MR. CHANDLER: Let me ask something if you will indulge the simple mind of a lawyer on this for a moment.

(Laughter.)

MR. CHANDLER: Bill offered earlier to pick your favorite EOI and we could talk about it. If you look at EOI 9001, the fact that you found something, and then it continues "This file was reviewed and analyzed with the

additional information provided by PG&E. The Findings Review Committee recommended and the IDVP concluded and it was finally resolved as an Error Class C observation in accordance with the program plan."

The fact that you found something, what does that say? Let me ask you, what does that say about the program that was in place with respect to this item? The fact that you found perhaps a piece of paper elsewhere that supported the adequacy of the end product or that you found documentation elsewhere that perhaps justified that appropriate tests were done, does that say anything about the lack of documentation or evidence regarding the particular thing you were focusing on?

MR. LUNDIN: The program which was implemented was not, as can be seen from the findings, at all times fully implemented. There were cases where we found that the program was not fully complied with.

We don't consider, since we looked at all the features of the program that were supposed to be applied, that with the level of magnification that we applied to the program that findings of that nature would not be in existence under any scrutiny. For instance, in the normal NRC visit to a power plant, there are things found where the program was not fully complied with, but one has to make the evaluation as to whether it is a generic problem

or whether that means the program is ineffective or whether there is a lapse in the application.

Our view with the magnification, the full magnification of the implementation of the program is that what we found was not significant to show the program was not in effect at all. It was normally in effect.

In a very small percentage of cases we did find there were lapses in the implementation of the program, but not as would be expected in the auditing program. Particularly at the time this plant was built, you have got a level of scrutiny that was not as great as we apply right now.

MR. COOPER: Is it clear that that decision or that conclusion as based not on the Findings Review Committee looking at paper, but the Findings Review Committee members actually going out to the site and looking at it to see what was there?

I think that is a very important thing here that we really hadn't expected to do when we planned the program. That wasn't a necessary step in the program, but it is something they felt they had to do in order to exercise this judgment.

MR. SESTAK: I just want to mention that many of the findingins, EOIs, just to highlight some of the magnification that Craig mentioned, were in areas of the

bottom mounted instrumentation support system which if anyone has ever been down there, it is a latticed type of support where many tubing arrangements are being supported where the system has to be constructed almost in place because of accessibility.

What we are talking about is strapping material, carbon steel one inch wide by three-eighths of an inch thick, strapped across in a lattice. Some of the welding that was performed on there, that is why you have to see this thing to obtain the value of some of these EOIs.

Also, the Wismer-Becker specification of the program, the procedures related to reactor coolant piping, and sometimes the scope of the specifications or the contractord standard to support systems, and they were trying to implement pressure retaining requirements onto structural requirements and that is what we had to differentiate when we saw these things.

MR. CHANDLER: Is that of any significance?

MR. SESTAK: No, because this is a normal occurrence. You have a specification or a contract and it expands for one reason or another and sometimes you don't follow up on it immediately.

I would like to point out that all of these findings that we have -- well, not findings, because there

was only one finding ---

(Laughter.)

MR. SESTAK: These observations that we have uncovered I think could have been resolved in the same manner then as they have been now. I think that is quite important.

MR. CHANDLER: Before Tom goes on, let me stick with that EOI I asked about a moment ago, 9001. When I read that, and perhaps even 9002 and so on, and then I read Conclusions, Section 7, page 7-1, "Further, to the extent reviewed the as constructed physical installation conforms to the requirements of design drawings and specifications and the required inspections are performed and appropriately documented," do I perhaps detect in say 9001 that we had not a welding problem but a design problem?

MR. LUNDIN: No, that was not. The BMI tubing in this lattice work of support structure, the design requirements were put onto drawings. What our potential findings were was that in fact all the drawing requirements have not been met to the letter.

What we did in our investigation was to find that the design requirements had been met and that in the scope of this work, which was a significant amount of welding and bolting, there were deviations from the

drawing that were reasonable, but we identified them as not being in accordance specifically with the drawing.

For instance, there was some angle iron which was required to be bolted and in fact it was welded. We did go through the process of assuring that it was adequate. To an experienced person it was intuitively acceptable, but the drawing didn't show and welded spices but only bolting. We identified it.

To the level of magnification that we saw the welds which was requiured to be a certain length and it was only 80 percent of that length, even though we knew it essentially was a tack weld, there was a drawing requirement and it was in fact not met.

Our investigation found that only a fraction of that welding was even required to hold it together. Although we may have intuitively thought so looking at the structure, we did verify it in fact.

We went through the process of, for instance, on that particular EOI on the BMI tubing, we did receive the design criteria and some of the design considerations that were used by PG&E. They referenced their calculations which were available to us and we had all this information and had our engineering division review to concur in the concept in those considerations that we used before we made our determination that those in fact were reasonable

assumptions in the design itself.

MR. CHANDLER: It wasn't clear to me when I read this, for example, in 9001 where it talks about short weld length, and then the conclusion that I read earlier that the justification for resolution of this item wasn't that the welding was proper but it was the design that was off.

MR. LUNDIN: The design was satisfied.

MR. DICK: I wonder if I couldn't help this discussion a little bit because I think I sense what is troubling some of your gentlemen. We had a little discussion on closing that gap between not strictly meeting the drawing and accepting the product at the time the work was accepted.

In the documentation from getting from one point to the other, for example, I think we did provide you some additional documentation along the line that helps with that.

MR. LUNDIN: Well, there are two important points really come out of that.

First of all, as far as the volume of information we looked at, we got down to looking at people's pocket notes when it comes right down to it. We looked at everything that was available. We had some guy track down who had retired a couple of years ago I think and get some stuff off of him to just try to put in

perspective what actually happened back then if there wasn't a record. That in fact was done.

Secondly, the consideration by the team and the Review Committee goes back to the purpose of the makeup of those organizations in that some experience with what was being done at that period of time ahd to be exercised when we made those determinations.

For instance, in 1973 and '74 the sensitivity to as-built drawings of situations like the BMI tubing supports was not as great as it is today. So the possibility that these drawing deviations, although they were not design deviations, may very well, since the decisions made by the people doing the work apparently were good decisions, might very well have been judgments made by the field engineering people at that time and not all of these were translated. That is a possibility and that is something we had to consider.

That process which was the state of the art and was acceptable is what had to be considered in making some of those evalautions.

MR. BISHOP: EOI 9013 talks about that specific issue about discrepancies between the installation and the drawing requirements. Is this the type of thing you are saying where the sensitivity was different?

MR. LUNDIN: Right, in that there were

differences between the installation and the specific drawings requirements, but did not violate the design requirements. They were apparently, and I emphasize apparently, judgments made by the engineering people in constructing because of interferences, and they made minor deviations that did not get documented on the drawing at a later date as as-built, which some of those have been done at this point in time.

MR. BISHOP: The question that occurred to us when we saw this was was this an indication of lack of procedure compliance on behalf of the crafts and the quality control people?

MR. LUNDIN: Yes.

MR. BISHOP: You are saying that was the case?

MR. LUNDIN: To us it was apparent that all the requirements of the procedures may not have been followed in that case. I cannot identify the specific violations, but that is a possibility that there were procedural failures, as I mentioned earlier, that the program did not work one hundred percent of the time, but in fact it worked acceptably as one would expect a program to work.This was isolated to this one area.

MR. BISHOP: How did you get from one point to the other there? If you saying it didn't work, yet it worked acceptably, I would like to explore, like we did on

the one finding, the process you went through to conclude there were no generic implications on this one where you have procedure compliance concerns. How do you again conclude that there is no broader issue here that deserves investigation?

MR. LUNDIN: That is two questions. First, I got from one point to the other in that, as I mentioned earlier, any program that is implemented when audited can be found to not be, if somebody failed to follow it at one point in time and that is identified, and they look to see if it is a generic problem and resolve it.

Since we looked at all of their procedure compliance as far as it related to whether the paper was there and the job got done, but since we looked at all of it and felt that this was a failure in an area which would not necessarily mean that the Wismer-Becker people didn't follow procedures. It was, on the contrary, apparent that they normally did.

MR. BISHOP: Could you perhaps quantify some things for me. I have looked at the tubing supports myself and agree with you that it looked like a guy would have to hang by his heels or have a very difficult time assembling that. Could you give us a rough approximation in numbers of the other types of supports, the numbers of other supports you looked at and whether they obviously came out

satisfactory and there were no potential findings on them?

MR. LUNDIN: How many supports in the cooling system, would you say?

MR. BEARHAM: There were about four or five major supports on each coolant loop and we looked at those thoroughly. I don't think we reported any discrepancies in those.

In the BMI tubing very quickly I will say there are probably 100 or so supports in there. We went over the whole thing with a fine toothed comb and got three guys down there most of the time just going through the whole thing. We reported what we found and the numbers that came up are in the report, and I would imagine that ---

MR. COOPER: 2,298.

(Laughter.)

MR. BEARHAM: No, there weren't that many major supports.

MR. COOPER: Not that many major support units, I know.

MR. BEARHAM: They were large. There were about three or four major ones in each loop. In the BMI tubing there were sort of in the hundreds I would say and we looked at each component and each weld on each support, too.

MR. FRIEND: So that is an important point.

Although you looked at say four primary coolant loop supports, you looked at all the welds on those supports.

MR. BEARHAM: Yes.

MR. FRIEND: So you looked at tens or hundreds of feet of welds in that inspection.

MR. BEARHAM: Yes, certainly and hundreds of bolts. I think what you see is significant inasmuch as we looked at hundreds, and enough to sort of make you ask questions I guess, but we certainly went through the whole thing and by far the majority was good.

MR. BISHOP: I think it would be useful to indicate the comparative level of what you looked at to what you found.

MR. COOPER: Well, let me read it. "The BMI tubing records consisted of two packages which contained the documentation of all 350 welds. These records were examined for evidence of correct documentation, of correct weld identification, assignment of qualified welder, correct degree, correct electrical characteristics, visual inspections and the repair data."

MR. BISHOP: I was speaking specifically that he indicated there were hundreds of supports and here it indicates three supports had those major weld problems. That is quite a difference.

MR. BEARHAM: Well, I think it will show you how

many supports we looked at and, if not, a scrutiny of the drawings would show you very quickly.

MR. LUNDIN: Might I clarify. We are talking about numbers of supports in BMI. It depends on whether you could welds or count the little straps or just count the angle irons going across which all these straps go to. How many supports are there underneath, I would have to ask the guy who designed it what he considered to be a support. There could be hundreds or there could be ten.

MR. BISHOP: I am trying to compare the number of supports 9, 10 and 11 to what is the total population there we are talking about, because we say the majority of welds on supports 9, 10 and 11 exhibited problems.

MR. ETZLER: By that counting there were 11 total. There were 11 major locations of straps.

MR. BISHOP: Okay, that is different than hundreds.

MR. BISHOP: I don't want to belabor the point about numbers, but getting back to the issue on programs and procedures, could you quantify for us the numbers of procedures you may have looked at. You indicated that you looked at great depth of procedures. Would it be appropriate to say that for all the hardware you inspected you looked at the corresponding procedure that related to the fabrication of that hardware?

MR. BARANOW: Yes.

MR. LUNDIN: I believe that is true.

MR. BISHOP: You are getting into the realm of close to 100 percent review in that sense.

MR. LUNDIN: Right around there.

MR. BEARHAM: It was close to a hundred percent review of what was actually in the scope.

MR. SPRAUL: More installation than fabrication though, was it not?

MR. BEARHAM: Well, it depends on what you call fabrication. Of course, we didn't get into off-site fabrication.

MR. SPRAUL: Field fabrication.

MR. BEARHAM: Some fabrication would have been done in the field, yes. Most of it would have been done in the field.

MR. LUNDIN: If it was done by Wismer-Becker or Guy F. Atkinson, whether it was fabrication or insulation, we looked at it. If it was fab by someone else, we only assured that Wismer-Becker's program of receiving it and utilizing it was followed.

MR. BISHOP: We had the indication I think from our inspection program that in the performance of your review of the two contractors you did find it necessary to some limited degree to get into the work or the products

of subcontractors or vendors, and I think you just touched on that subject. Could you tell us the extent of involvement?

MR. LUNDIN: An example would be Westinghouse documentation and we did go to Southwest Fab to assure on the lugs. We needed some information as to whether an initial potential finding was written concerning whether the material actually met the specification requirement and we had to go back to Westinghouse to find out that that requirement had been revised during the process of them buying it.

That was outside the scope because it was supplied to Wismer-Becker by Westinghouse, but we did go back to assure that that material was acceptable as purchased by Westinghouse and the documentation is in the file from Westinghouse that that process was appropriate.

We did in fact go back to Southwest Fab's records to make sure that they had in fact properly documented the welds where these lugs were removed, that that was appropriately done.

We did have someone go back to get documents, for instance, the Magnaflux supply, the copy of the original document that was sent to Diablo Canyon in 1973 for that can of penetrant, the one piece of paper that wasn't in the file. Over the years an auditor kept it in

his book or something.

(Laughter.)

MR. LUNDIN: It did exist and Magnaflux still had it and we did go back to make sure it did exist.

MR. CHANDLER: What did you do? For example, you mentioned a number of major subs to GFA in ITR 36, Pacific State Steel, et cetera, et cetera. How about those?

MR. IVES: Dick Ives, Stone and Webster. If you look at our check list, when we came up with an inspection attribute or evaluation attribute, we then listed where we obtained that attribute, whether it was from a specification or Atkinson's QA program or someone that was working for Atkinson, and that is identified on the check list.

MR. BISHOP: One last question on the breadth of your sample. In your Wismer and Becker ITR you list four systems, reactor coolant system piping, pressurizer surge line piping, BMI tubing and reactor vessel leak detection line. Of these four "systems" what percentage of each of those systems did you examine?

MR. BEARHAM: A hundred pecent.

MR. LUNDIN: A hundred percent of all of them.

MR. BISHOP: My question is for PG&E on a slightly different subject, but there was a recent problem that was reported to us and it was reported that that

particular problem on the reactor coolant system piping was not one of the samples looked at by the IDVP.

MR. FRIEND: Was that reactor coolant piping or component cooling water?

MR. TWIDDY: You are talking about the thin wall?

MR. BISHOP: Right.

MR. TWIDDY: That would not have been something these gentlemen would have looked at.

MR. FRIEND: That is correct, Tom. They are talking about the wall thickness measurement which is something that the Stone and Webster team did not look at.

MR. BISHOP: I understood that.

MR. TWIDDY: You see, that was a non-required thing that PG&E was doing in order to develop a data base for the future.

MR. BISHOP: I am familiar with that. I was just wondering about the statement that was made to us that it wasn't something the IDVP looked at.

MR. TWIDDY: Right.

MR. BISHOP: What you meant was that IDVP had not considered that element, but in fact had looked at that pipe for other things.

MR. TWIDDY: Yes, for other things.

MR. LUNDIN: The only thickness measurement we

looked at was as relating to the lug removal.

MR. BISHOP: All right.

MR. CHANDLER: Weld driving also.

MR. FRIEND: That particular weld was a shock weld.

If I may, I would like to expand a little bit on some of the remarks that Mr. Lundin just made. When PG&E and the project were considering this program, we wanted to obtain exactly the kinds of things that Mr. Lundin outlined.

We wanted a firm that understood what a nuclear power plant was about and the important features that went into the construction, and that was one of the considerations of why we selected Stone and Webster, because we felt they had the experience and the judgment and the knowledge to go beyond the written record if there was a question, to go to the supplier, to go to the shop, to go to the mill cert and so forth, because we wanted an independent assurance that what our beliefs were that the plant was constructed well, we wanted that independent view from an experienced person, and the kinds of things that Mr. Lundin has outlined gave us that assurance.

MR. BISHOP: My only concluding comment was that I would encourage you to put in the ITR some of the topics you discussed today and the judgmental processes you used

to draw your overall conclusions and your individual conclusions.

MR. COOPER: We clearly can be responsive to giving more detail in each of the EOI files, what did PG&E tell us, what did we think about it and what was the basis for our classification. That is easy.

The overall conclusion to document a judgment is a rather difficult step and we felt that the basis of that judgment was perhaps spelled out by the program plan.

Perhaps what we need to do is to place in one or both of these ITRs, and I suspect both just because the reader might pick up one and not the other, but still an additional appendix which tries to summarize, for example, the page in the procedures that were read saying what the, and I forget just the way it was described, sort of the thought process stimulator list that was read here today, to put that in and build some words around that and some detail about the experience and capabilities of the Findings Review Committee people so as to give the reader some feel that that was a group who could properly implement such a list.This sort of thing we can do.

My question to you folks at the end is if you have got any other ideas of the sort of thing we could put in there that would do this job better, please let us know.

MR. NORTON: Is it inappropriate for us to request that something be in there? I don't know whether it is in there or not and first I would like to ask. Is that appropriate?

MR. CHANDLER: We will even ask Mr. Hubbard if he feels there is something inappropriate?

(Laughter.)

MR. NORTON: I am sure what he wants can't be put in there.

(Laughter.)

MR. NORTON: But my request is not so complex.

Bill, in the ITRs do you list the individuals that conducted the audit and their backgrounds and experience and the Technical Review Committee by individuals and their backgrounds and experience, because a piece of paper that comes to a conclusion doesn't weigh much. We would hope it would weigh more when you look at the people.

(Laughter.)

MR. NORTON: Do you understand? I just think that is important for a reader to ---

MR. COOPER: My suggestion is the identification of the capabilities of the team that went out actually in the field in addition to the Findings Review Committee.

MR. NORTON: I would like to see a little

bibliography perhaps.

MR. COOPER: I think we can do this perhaps in general terms. I am not sure I want to identify them by name and Frank and I will talk about that.

MR. NORTON: Fine.

MR. SESTAK: We didn't specify individuals. We specified their qualifications.

MR. NORTON: Well, this is a public record and you have identified them all by name anyway. Are all members of the Technical Review Committee here today?

MR. SESTAK: That is right.

MR. NORTON: Well, I would like to ask a couple of questions of that group.

MR. SESTAK: The Findings Review Committee is another ---

MR. NORTON: Right, the Findings Review Committee, I would like to ask a couple of questions of that group collectively and, one, you can answer and then if anybody has a different answer, then the other can.

In your review, understanding your scope, do you feel that your review indicated a failure to adequately control the activites of construction contractors by PG&E?

MR. CHANDLER: Would you repeat that.

MR. COOPER: Yes, repeat that.

MR. NORTON: Does your review indicate to you that PG&E failed to adequately control the activities of the construction contractors?

MR. RICHARDSON: No.

MR. CHANDLER: Let me make a request, if I can. The principal purpose I would say of the meeting today was to have an exchange between the staff and the IDVP, particularly Stone and Webster, with respect to their evaluations as reflected in our letter to them of May 2nd.

Principally the participants were those parties and PG&E was not listed as a participant. I appreciate the points of clarification that have come out during the meeting, but I really don't think at this point it is appropriate. If we are going to have a meeting that is open, then I suppose it is going to be a lot longer meeting and we will have to extend to Mr. Hubbard the same opportunity to pursue questions he may have, and certainly we are going to ask for his comments.

MR. NORTON: Let me tell you what the problem is, Larry. You have structured an independence here that doesn't allow me to ever ask these questions, and if I can't ask them at these meetings, I can never ask them, and they are certain germane questions.

You know, you can have the right, it is your meeting, and you can tell me to shut up and I will, but I

just want to make it clear that the NRC has structured this independence thing and we are sticking with it to the best of all of our abilities, but you know you put us in a very awkward spot when we can't ask a question.

MR. CHANDLER: I don't have a problem, Bruce, if the Project wants to have the same kind of a meeting. Let me just turn it around though and say if we are going to expand it, that is fine, but I think we have recognize that the meeting we had requested was a meeting with the IDVP, Stone and Webster, to discuss our May 2nd letter.

MR. NORTON: Don't you think that question very directly relates to your letter?

MR. CHANDLER: Oh, I have no doubt that there are a lot of questions that you may have that may relate to that, and if you want to continue the meeting, if you will, as a PG&E IDVP meeting, I am sure we can continue.

I have just one other question of these gentlemen that I would like to ask them and we can continue on.

MR. NORTON: Fine.

MR. CHANDLER: The only thing I had a question about was in both ITR 36 and 38 in Section 2.0 the statement is made that an appropriate sample for evaluation was selected, et cetera.

I know one of the questions that we had had to

do with when you say appropriate. What does that term mean and how did you come about that determination?

MR. COOPER: The term I believe, without taking the time to look at the words, the words "an appropriate sample for evaluation shall be selected" is from the program plan, and I believe when this was written it was simply stated in that language to be consistent with the program plan.

I believe the answer you received this morning is that they basically for these two contractors did everything that was physically accessible and available to do.

MR. CHANDLER: Okay.

I guess, Bruce, before sort of turning the meeting around a little bit, I think it would be appropriate to ask Mr. Hubbard if he had any comments.

MR. HUBBARD: I think most of my comments have been in the various declarations and affidavits.

There really are a couple of things that I would have some interest in.

One is that my comment would be that the final report ought to include the check lists that were used as well as as many of the filled out check lists as possible.

I think the report ought to have something that addresses the root causes relative to the QA/QC program.

By that I mean where you say "things were not fully implemented."

I think in addition to talking about safety significance, one should talk about what that means relative to the QA/QC program.

I think time should be stressed a little more. There seems to be a great emphasis on this, that the quality being achieved was consistent with the time, and we heard mention of the years all the way from '73, 74 up to some work that was done in 1982.

So if there is going to be some gradation of quality based on time, then I think more emphasis should be given to time in the reporting.

MR. LUNDIN: Excuse me. There was no consideration of differences in quality and time, but only to procedural systems and maybe the level of compliance to those specific things that were done. The level of quality was never considered to be different than it would be today.

MR. HUBBARD: Well, there seemed to be sliding scale on criteria for acceptability based on time and it would help me to understand what was the standard for good practice in the various time spans that you were looking at.

In terms of counting, if we do get into

counting, a number of the observations talked about things in plural. So if we are going to get into counting, I would request that we also count the observations in their plurality so we know exactly what they mean where you say many.

And, Larry, we will be requesting the check list, both the ones that were used by the auditees plus the Findings Committee. We would like those check lists and we would like as many of the filled out check lists as possible.

We would also like to understand how the documentation is arranged so that one could go to audit it, and I guess I understand from the various meetings that people are ready for us to come and audit that documentation.

MR. CHANDLER: Dick, in that connection, of course, as Bruce advised all the parties, the IDVP has retained counsel. That is the law firm of Lowenstein, Newman, Reis and Alexrad, and their counsel is Mr. Alexrad or Kathleen Shea of that firm I guess, and requests of that nature I think appropriately would be directed to them.

MR. HUBBARD: Well, that is very important, Larry, for the record because I think there are a couple of places where the statements were made that the records

are available and are available for audit or looking at. There was an implication at least that I am sensitive to that nobody has asked to look at some of these and we will ask.

MR. NORTON: I will address this to you, Larry. We are in a hearing mode now. We are now under a formal discovery hearing mode. We are no longer in the mode we were in prior to April 21st. We are in a different mode now and any document exchanges and stuff like that is done under formal or informal discovery requests, but at least it has got to be handled through the attorneys.

MR. HUBBARD: Well, I would like some more explanation. I didn't think we were into the hearing mode on construction QA, which this is addressing. It seemed to me we are still into the IDVP event. So that is why I thought it was appropriate to ask for those documents as we normally would.

MR. FRIEND: Well, this a little more complex than that even I believe in that this program is an adjunct program to the IDVP that was commissioned by PG&E to reach further assurance on the quality of construction.

I don't know that this part of the program needs to be necessarily treated in the same manner as the IDVP which was mandated by the commission.

MR. CHANDLER: I think though that in any event,

Dick, in a very real sense, it is a matter that is before the Board and is something before the Board for consideration. To that extent I would have to consider it a matter in litigation and the formal procedures would apply.

Though certainly if the counsel for the Governor would formally or informally contact counsel for the IDVP to discuss it, I think whatever is appropriate can be worked out.

MR. BISHOP: I would like to offer to you, and it is already available to you, the reports of our audits of that activity. We have had inspections on the construction QA plan and those reports are certainly available to you.

MR. CHANDLER: Through me.

MR. SCHIERLING: Did you have anything else, Dick?

MR. HUBBARD: No, not at this time.

MR. SCHIERLING: Okay.

MR. NORTON: I have two questions is all.

(Laughter.)

MR. SCHIERLING: Well, it is my understanding that time is pressing on, No. 1 and, No. 2, I think it might be appropriate to have a very brief recess and maybe we can meet again in ten minutes.

I think at that time parties can make statements they wish to make, including PG&E I propose. Isn't that appropriate?

MR. CHANDLER: Yes, Bruce can ask his questions.

MR. NORTON: I am just going to ask two questions. I am not going to make a statement.

MR. SCHIERLING: Do you want to ask them now or after the caucus?

MR. NORTON: I would rather ask them now.

MR. SCHIERLING: Fine, go ahead.

MR. NORTON: I think I had asked the first one, but while this was going on I wrote it out so I will ask it again, and I also heard somebody answer it, but this is to the TRC.

Did your review indicate to you that PG&E failed to adequately control activities of construction contractors?

MR. RICHARDSON: I answered no.

MR. NORTON: All right. Does anybody have a different answer?

(No response.)

MR. NORTON: All right. The Findings Review Committee, and I said Technical Review Committee. That is the Findings Review Committee.

The second question, did your review indicate

to you a lack of aggressive, corrective and preventative actions by anybody?

MR. RICHARDSON: No.

MR. SCHIERLING: Well, let me make a few statements.

No. 1, I think the information that was provided today by you goes far beyond what you reported in both ITRs, and I think if appropriately incorporated it will give far better credit to the work that you did and will address many of our questions.

I had written down specific questions and many of those were already addressed.

I think it is appropriate, and I want to emphasize that again, to include a statement similar to the one that Craig read before, the philosophy on the questions that you asked yourself, what does all this mean? I think that is very appropriate.

I do not know how voluminous the check lists are, and I do not know right offhand if there is a difference between check lists and attributes that you developed, that you were considering in your evaluation.

I think they should be summarized in the revision to the ITRs to give a better indication of the depth that you looked into the various matters.

Although some of the documentation that was

generated, information that was generated during your evaluation might not be open for audit in general at this time because of the various elements in the hearing process, I think staff still would like to, and I think we can, look at the records any time, can't we?

MR. CHANDLER: If worse comes to worse, we can always ask for discovery.

(Laughter.)

MR. NORTON: The staff clearly has the right.

MR. SCHIERLING: I think staff would like to look probably at some of the details that were generated, the check lists and the list of attributes. I think we want to do that.

MR. SESTAK: Hans, I just want to point out that when I think Region V conducted an audit on us they did review the ---

MR. SCHIERLING: Tom Bishop just informed me that we did that already. Where is most of that information located?

MR. SESTAK: In Boston.

MR. SCHIERLING: It is in Boston.

MR. SESTAK: It is in our office.

MR. SCHIERLING: Thank heaven.

(Laughter.)

MR. NORTON: Do you have in the ITRs the program

itself, the initial program that I referred to earlier, the October ---

MR. COOPER: It is not included in there, no.

MR. NORTON: Do you think that might be a good appendix to the ITRs also which sets forth what the program was?

MR. COOPER: That would be one of the easier ones to prepare.

MR. NORTON: It certainly would.

(Laughter.)

MR. NORTON: I think it would be useful.

MR. FRIEND: Somebody might want to edit it.

MR. CHANDLER: I think it would be useful as an appendix because I think it would help put some perspective on the findings when you can relate them better to the things you were looking at and the way you were looking at them.

MR. SCHIERLING: I have to come back to one of the two questions that Bruce just had. In your effort did you look or did you also evaluate the PG&E review and approval of the QA programs by the two companies, in other words, the audit that was exercised by PG&E on the two companies?

MR. LUNDIN: We had an attribute that they were approved.

MR. BEARHAM: We saw evidence of their approval. That is what we looked for, a lead sheet somewhere that showed evidence of PG&E's approval of the two subcontractors.

MR. LUNDIN: Also in the non-conformance process the approval of the disposition of non-conformances which was another process. We verify that there is an attribute on the check list to assure that that was done and that was verified.

MR. SCHIERLING: And, on the other hand, you also looked at the QA programs and their approval by subcontractors to Wismer-Becker and GFA?

MR. LUNDIN: There were non to Wismer-Becker.

MR. BEARHAM: None to Wismer, no.

MR. IVES: To Atkinson, yes.

MR. SCHIERLING: Okay, those are all the questions I had.

Unless there are other specific questions at this time, we can go and take a 10-minute break, readjourn and if there are any closing statements, let's go and do that and we will make our plane.

We will meet at five minutes after twelve.

(Whereupon, a short recess was taken.)

MR. SCHIERLING: Are we ready to go back on the record.

Let's do this. Howard, do you have any statements?

MR. FRIEND: Yes. I would like Mr. Dick to address a couple of items that follow up on this morning's presentation as a matter of clarification, if it is okay with you.

MR. SCHIERLING: That is fine.

MR. DICK: Yes, I would like to clarify just a couple of items which were covered partly but maybe not completely by Mr. Lundin.

I believe this complements what he already said, but it takes into account several elements which may not have been apparent to these gentlemen.

The first subject is that of the program evolution. The evolution of the contractor's program is not as obscure as may appear. It is a relatively straightforward thing according to our observation.

PG&E wrote a very detailed specification in making the original selection of contractors in which the quality assurance requirements were set forth in some detail.

The contractors in turn responded as part of their proposals with a quality assurance program. Now those programs were approved by PG&E and I believe the contractors' programs also included provision for

subcontractors to in turn have programs.

Those programs were during the subsequent work monitored by PG&E in accordance with the PG&G program and I believe also by the NRC inspectors in the course of their inspections. The programs were entirely consistent I believe with the applicable provisions of Appendix B.

So I think there is a rather clear and coherent trail here on the evolution of the contractor programs and it can be demonstrated.

The other point I would like to make deals with the concept of use as is where the constructed product may not be identical with the drawings with which it is being compared.

In addition to the reasons set forth by the IDVP, there are other reasons that we understand also existed. A very important reason was during the erection of the portions of the steam supply system Westinghouse Electric Corporation had its on-site inspectors present and conducted a fairly comprehensive review of the work that was ongoing.

We believe that some of their records tended to support the conclusions of the IDVP, that in those cases where there were some departures from the initial design drawings, that those were duely considered and accepted at the time the work was performed.

So this was a real time sort of a review, and it was not an after the fact type of acceptance made in 1982.

We have also attempted to provide the IDVP with other information that indicated that there was a considered acceptance of the product as constructed.

Those are the two essential points that I would like to make.

I might modify my earlier statement in one small respect, and that is with regard to the timing of the acceptance of the contractor program. I believe in most cases it was accepted at the time the contract was awarded, but there was an evolutionary process here. But in any event the contractor did perform his work under an accepted program.

MR. SCHIERLING: Thank you.

Bill or Frank, would you like to add anything at this time?

MR. COOPER: Two quick things. One is I was going to talk a little bit about use as is, as Charlie did, because I think it is very important that many times we are better off to use as is rather than try to make a repair, and clearly in that period the documentation of the acceptance of those sort of things were not of the nature as they are today.

Charlie said it all and I am not going to say any more about that.

The other thing is we will commit to do the best job we can in revising these ITRs, including some of the things that we have talked about here today. Our priority will be placed on getting those ITRs issued by the end of next week with as much as we can in as we possibly can.

We recognize the need that several parties in this room have to be responsive to certain things where time is of the essence, and we will do the best job we can to include everything. We may fall short in a couple of areas, but we will give our priority to getting these things out on the street by the end of next week.

We may shortchange some or all of you on the number of copies you receive, but clearly the normal distribution pattern will be followed as far as the people to whom it is distributed.

MR. SCHIERLING: Is there anything else?

(No response.)

MR. SCHIERLING: Dick, did you want to add something?

MR. HUBBARD: No.

MR. SCHIERLING: Then any further questions or comments the staff has?

MR. BISHOP: No.

MR. CHANDLER: No.

MR. SPRAUL: No.

MR. SCHIERLING: For the staff I want to thank all of you for coming out on a Saturday. We are looking forward to getting the information in the forthcoming revisions.

I think the information as discussed today does indeed provide the answers to the letter that we sent to you, Bill, and again as much as you can put in there, we are anxiously waiting for it.

If there are any complications that you cannot make the schedule, please let us know.

MR. COOPER: We will make the schedule. Completeness is the question.

MR. SCHIERLING: Okay.

Well, again, thank you very much for coming out on a Saturday, and we will see you again very soon on another weekend.

(Whereupon, at 12:15 p.m., the meeting adjourned.)

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CERTIFICATE OF PROCEEDINGS

This is to certify that the attached proceedings before the NRC COMMISSION

In the matter of: Diablo Canyon

Date of Proceeding: May 21, 1983

Place of Proceeding: Boston, Massachusetts

were held as herein appears, and that this is the original transcript for the file of the Commission.

Mary C. Simons
Official Reporter - Typed

Mary C. Simons
Official Reporter - Signature