ORIGINAL

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of:

DISCUSSION/POSSIBLE VOTE ON FULL POWER OPERATING LICENSE FOR DIABLO CANYON

OPEN MEETING

Location: Washington, D.C. Pages: 1 - 195

Date: Thursday, August 2, 1984

FREE STATE REPORTING INC.
Court Reporting • Depositions
D.C. Area 261-1902 • Balt. & Annap. 269-6236

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

DISCUSSION/POSSIBLE VOTE ON FULL POWER OPERATIONS

FOR DIABLO CANYON

OPEN MEETING

Nuclear Regulatory Commission
1717 H Street, N.W.
Room 1130
Washington, D.C.

August 2, 1984

The Commission met, pursuant to notice, at 10:00 a.m.

COMMISSIONERS PRESENT:

NUNZIO PALLADINO, Chairman of the Commission
THOMAS ROBERTS, Commissioner
JAMES ASSELSTINE, Commissioner
FREDERICK BERNTHAL, Commissioner
LANDO W. ZECH, JR., Commissioner

STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

S. Chilk, Secretary
H. Plaine, General Counsel
H. Denton
T. Bishop
J. Martin
D. Eisenhut
E. Sullivan
R. Vollmer
K. Manoly
W. Dircks
B. Saffell
I. Yin
B. Bosnak
F. Knight
S. Trubatch
J. Zerbe
R. Smith
G. Messenger

DISCLAIMER

This is an unofficial transcript of a meeting of the United States Nuclear Regulatory Commission held on August 2, 1984 in the Commission office at 1717 H. Street, N.W., Washington, D.C. The meeting was open to public attendance and observation. This transcript has not been reviewed, corrected, or edited, and it may contain inaccuracies.

The transcript is intended solely for general informational purposes. As provided by 10 CFR 9.103, it is not part of the formal or informal record of decision of the matters discussed. Expressions of opinion in this transcript do not necessarily reflect the final determinations or beliefs. No pleading or other paper may be filed with the Commission in any proceeding as the result of or addressed to any statement or argument contained herein, except as the Commission may authorize.*

* The Commission has authorized the use of this transcript for citations by the Parties as noted in the discussion on pages 157-158.

PROCEEDINGS

CHAIRMAN PALLADINO: Good morning, ladies and gentlemen. The purpose of this morning's meeting is to consider the question of whether or not to authorize the issuance of a full power amendment to the Diablo Canyon plant Unit 1.

I believe that the Commission has two broad issues to address today. First, does the Commission have the information it needs to make a full power decision?

If not, we need to identify what more is needed. Second, if sufficient information is at hand, should power ascension and operation up to full power be approved?

The NRC staff is prepared to provide a briefing on outstanding full power issues. Mr. Isa Yin is present to provide his comments on piping and support issues.

Also present is Mr. Jesse Ebersole, Chairman of the Advisory Committee on Reactor Safeguards, who can respond to commissioner questions about the ACRS review of those issues.

Following these items, the director of the Office of Inspector and Auditor is available to provide a summary of his report of investigation into allegations relating to the conduct of NRC personnel involved with

Diablo Canyon.

Thereafter, I propose to have the Commission raise any questions not covered as part of the briefing and related discussion.

I will then ask the Commission to address the two broad issues identified earlier and to vote on those issues.

I propose to call for a recess immediately prior to any votes so the commissioners can reflect on any material that has been presented this morning.

Do other commissioners have opening remarks at this time?

COMMISSIONER ASSELSTINE: No.

CHAIRMAN PALLADINO: All right. Then I propose to turn the meeting over to Mr. Harold Denton.

MR. DENTON: Thank you, Mr. Chairman. We propose today to cover four broad areas. It's been roughly 20 months since the Commission decided how to approach the issuance that led to the suspension of the low power license.

We provided Supplement Number 24 to the Commission that dealt with the so-called Independent Design Verification Program.

That safety evaluation report completes the review of that program as defined by the Commission.

Just to refresh your memory on that, that program led to the expenditure of about 1,500 man years by the company in reviewing the seismic design of the plant, about 150 man years of effort by the contractor that we approved, Teledyne, to review the adequacy of the company's efforts, and 15 man years by the staff in reviewing both Teledyne and the company's efforts. That's Supplement Number 24.

Supplement Number 25 deals with the issues of small bore piping that became the focus of attention during the low power licensing.

There is a difference of opinion among the technical staff members regarding certain aspects of piping.

We took that difference of opinion very seriously, appointed a very well-qualified peer panel, and we're prepared today to tell you how we attempted to resolve that issue.

I think I have to tell you also that that difference of opinion still exists, but because it did exist, I recommended that we request the ACRS to review the matter, and you did request the ACRS to provide their opinion.

They have provided you their opinion on that matter, and as you mentioned, the Chairman of the ACRS

is here today. Supplement Number 26 deals with allegations.

During this period, we've received approximately 1,400 allegations by the way we count. We have reviewed in detail all those allegations which meet the criteria that we gave in an earlier SER, that is, did they have technical safety significance where they impinge upon management matters.

Of those 1,400, we have reviewed about half of them. We've completely resolved all those that met our criteria at our satisfaction.

Lastly, in amendment number 27, we provided you a proposed full power license that in our view represents all those commitments and conditions required to issue a license for power ascension to full power.

We have today a number of staff members who participated in this extraordinary effort. We have a lot of consultants here at the same time.

We propose to summarize these SERs and respond to any questions you might have.

Let me turn first to Darrell Eisenhut, who will begin the presentation.

MR. EISENHUT: Thank you. If I could have slide number one, please. The page labeled slide number one, there is basically one new piece of information that

I'd like to highlight to the Commission.

That is the last subject relating to emergency preparedness. I believe the other information on the slide is similar to previous briefings of the Commission.

On July 11, 1984, we received a letter from FEMA. It contained the interim findings on the State of California Emergency Response Plan for Diablo Canyon.

That letter concluded that those interim findings of July 11 plus the previous FEMA findings and report on off-site emergency preparedness at Diablo Canyon, which I believe is dated sometime in April, 1984.

The concluded that the emergency preparedness situation meets the requirements in all aspects that are required prior to a full power licensing decision, and that it was consistent with the ASLB initial decision findings of August 1982, and that issue was concluded to be completely satisfied.

CHAIRMAN PALLADINO: When was the last exercise conducted on this plant?

MR. EISENHUT: The last exercise was conducted, I believe, in October 1983.

CHAIRMAN PALLADINO: '83?

MR. EISENHUT: Yes.

CHAIRMAN PALLADINO: What was it?

MR. MARTIN: It was October 19, 1983.

CHAIRMAN PALLADINO: '82.

MR. MARTIN: '83.

CHAIRMAN PALLADINO: '83. Okay. Thank you.

COMMISSIONER ASSELSTINE: Were any significant deficiencies identified in the exercise?

MR. EISENHUT: Not that I recall. The matters that were as follow-up items were all resolved in this latest finding.

CHAIRMAN PALLADINO: Were they not discussed in one of the April letters? I think they were.

MR. EISENHUT: They were discussed in the April 12, 1984 transmittal from FEMA to the NRC. And that was provided and sent down to the Commission.

CHAIRMAN PALLADINO: Yes.

MR. EISENHUT: If I could have the next slide, please?

CHAIRMAN PALLADINO: Did you have more?

COMMISSIONER ASSELSTINE: No.

MR. EISENHUT: This slide summarizes the background and chronology, at least the high points of it, over the last couple of years. I won't go through in detail what this slide does, as it highlights, as you recall, the lower power Commission briefing of September 21, 1981, and the low power license was issued September 22, 1981.

I believe this was the last plant that was reviewed under the previous approach of the Commission reviewing low power authorizations. There was an order issued in November 1981. The Commission, as Mr. Denton mentioned, adopted a three-step approach to approving the licensing process. In April of 1984, the full reinstatement of the suspended license was issued by the Commission. The plant has since gone though initial criticality, gone through low power testing. The plant, as of actually late last night, was in hot standby, which is Mode 3. The diesel generator, although not being on the turning gear, they project that they can be in Mode 2 within about eight hours.

They were correcting a minor leakage from a seal oil leakage. I don't know whether it was--I think it was a valve or something connected with the turbine generator.

The reactor is at present in Mode 3 at operating temperature and pressure.

If I could have the next slide? Since we have had numerous meetings with the Commission and since we have gone through a wide variety of subjects on this plant, we propose today to highlight those areas and touch upon those areas that the Commission has identified based on previous discussions and previous meetings.

They are listed on this slide, and I propose walking through those rather briefly in some cases.

If I could go to the next slide, which is slide four, this slide summarizes the present situation with respect to the IDVP, an internal technical program of PG&E.

As you will recall, there were four issues that were deferred past the 5% phase that had to be resolved prior to full power.

Those four full power issues have been resolved to the staff's satisfaction, and are reported and discussed in Supplemental Safety Evaluation Number 24.

We believe that those are, in fact, resolved fully to the staff's satisfaction at this time.

The next issue I'd like to address, and the next slide, relates to shift advisors. Recall that in a couple of previous Commission meetings, we discussed the approach to be taken with respect to demonstrating the qualifications of shift advisors.

We had a two-pronged attack on the issue. First, the industry sent a review group in that did a review of the shift advisor program.

And secondly, the staff went in and did a review of the program also. Those two reports, there is a report from the industry and there is a report from the staff,

was previously submitted to the Commission in SECY document 84-283, dated July 13, 1984.

The conclusions in those reports are that the Diablo Canyon shift advisors fully meet the guidelines of the industry, and we believe the program that has been laid out is an adequate program for the training and it has been accomplished. If I could now turn to the subject of allegations.

CHAIRMAN PALLADINO: Are you satisfied that the advisors are integrated into the shift activities?

MR. EISENHUT: Yes, sir, we are.

MR. DENTON: Let me ask Jack Martin if he'd like to comment on that. He's looked into that area quite a bit.

MR. MARTIN: No, I think we're satisfied with that, pursuant to some plans I had and some discussions we had at the last meeting.

During the low power testing, we had a team of eight to ten people on-site essentially around the clock for the first week or ten days of low power testing, and for several days at a time thereafter, to observe the interactions and the way things worked during that test program.

And that was reported in an inspection report that's part of the package in the black book. And the

conclusions were that they did well, and that the interactions were proper.

We did find some room for improvement in some odds and ends, but in general, it was quite good.

CHAIRMAN PALLADINO: Okay. Thank you.

MR. EISENHUT: I would like now to turn to the figures in slide six. I understand yesterday we provided to the Commission a cross-referenced correlation of the technical substance of the allegations that are listed in the left-hand column here, allegations under investigation by OI, and a cross-correlation of where those allegations are addressed in the documents that we provided, namely, the SSERs up through number 27.

With that, I'd like to turn it over to Jack Martin, who will be summarizing the status of where we stand on allegations.

MR. MARTIN: Well, the chart here is similar to charts we've struggled through at previous meetings, so I think one correction I would like to make, I think, Mr. Hayes talked about the left-hand branch Monday, where OI has been assigned 121 allegations, and they resolved 22, and of the 99 left, they've concluded they fall into the categories as shown. I believe those were discussed Monday.

If we go over to the part done by both NRR and the Region, I do have a correction.

On this chart when we made it up, we only listed as resolved those items that had not only been resolved, but written up and published.

Now I think it would be fair to say that there is another 300 or so that we've drawn our conclusions on and are in the process of documenting it since this chart was printed and in the next few days.

So we're prepared to speak to conclusions on some 900 allegations being resolved, and some 400 in the nonresolved column.

But to be rigorous, I just listed the ones that had resolved as having been written up and in public record.

MR. DENTON: As an example of that, we counted, Jack. There are about 185 that are listed in the not-resolved issue, which are really those small bore piping issues that we consider resolved but have not yet formally transmitted and have a sheet on each allegation.

MR. MARTIN: Yes.

MR. DENTON: So you'll be hearing in the presentation follow-up on small bore piping. If you agree with the issue there, it would resolve another

185 of them once it's formalized.

COMMISSIONER BERNTHAL: I think it would be good. This is one good case that you've mentioned, Harold, but I think it would be good if you could perhaps give us at least a couple more concrete examples.

To the outside observer, seeing 724 allegations as not being resolved, one would suspect that even statistically one or two might drop into the adjacent bins there of requiring resolution before full power.

Can you give us some sense of how it is you arrive at the conclusion that none of those 724 impact full power operation, perhaps with some concrete examples?

CHAIRMAN PALLADINO: That's a question I had here ready to ask, also.

MR. DENTON: They were all compared to the criteria in SER Number 22, I believe, in which the Commission seemed to agree with the criteria about which we'd sort them.

So all that met the criteria that required sorting are over in that side.

And by resolve, that means Jack has a piece of paper written down that issue, but for other examples beyond 185, I'll ask Region.

MR. MARTIN: I think that's right, that each and every one of these, of course, has been reviewed and

screened against the criteria that we discussed at the last couple of meetings.

That's where the categorization of either requiring resolution or not requiring resolution was decided.

Now whether we consider them resolved or not, as to whether we've completed all of our investigation and actually written it up and published it, now, I think it would be worthwhile categorizing--why don't we talk about, Tom, some of the items that are in the not-resolved category and give some examples, like Harold did.

MR. BISHOP: I'd be happy to. In terms of perspective, I think it's useful to understand that a lot of the allegations are duplicates.

Some allegations we received four times. We tried to sort that out so that we prevented unnecessary duplication.

However, sometimes it was stated somewhat differently, and consequently, the numbers became very large.

CHAIRMAN PALLADINO: Tom, are you saying that if an item was alleged four times, that counts four out of the number?

MR. BISHOP: In some cases. Where we could, Mr. Chairman, we tried to recognize the fact that it was an

exact duplication, and we did not put it in.

For example, there's one transcript that we received anonymously early on. We received it, then from the joint interveners, we received the same transcript, then from GAP, with a name on it.

And then we received it again just last week, the identical transcript, which contained a number of allegations.

But to answer your question on where we stand, on the open items, again, for perspective, I think it's important to look at what we know about each individual alleger's allegations.

We have a total of, I believe, it's 59 known allegation sources, and quite a number well, a number of anonymous allegation sources.

So we have something in the order of 70 to 80 sources. The bulk of the allegations, almost 75% of them, come from 10 to 14 individuals.

And of those people, we have a good deal of knowledge about their technical issues, we've looked at some percentage of each of their work.

The items that we now consider resolved that are not reflected on the chart and boost that number from 559 up to around 900, include, as Mr. Denton said, a large number of small bore and design-related

allegations, a large number of anchor bolting-related allegations, and a large number of allegations related to welding practices and specific statements of inadequate welds.

CHAIRMAN PALLADINO: How would you address the problem, or how did you address the problem of an allegation on inadequate welds?

MR. BISHOP: Where it was specific and met our criteria, we went out and inspected that weld. You may recall we discussed in a previous--or it was discussed in a previous Commission meeting, that in one case we invited the allegers to come on-site with us and specifically point to welds which in their perception were not acceptable, and we reported on those also, that we found that indeed those welds were either in accordance with design or that seemingly unsatisfactory appearance of the welds had been technically addressed by the utility in a responsible manner before we had gone out on that tour.

COMMISSIONER ASSELSTINE: Tom, are there any like that, though, in this group of 400, where you haven't finished your review yet?

MR. BISHOP: Yes. I can ...

COMMISSIONER ASSELSTINE: What's the basis for assuring yourselves that those don't impact on full

power operations?

MR. BISHOP: Well, I would say when we include the 400, it doesn't mean that we haven't done any work on them.

For example, there's, I believe, it's allegation 990 gives a particular weld in a particular line that they say is deficient.

We've gone out and taken a look at that weld, compared it to the drawing and looked at appropriate records.

After we get through looking at all the records, we would close it out. But we have enough knowledge in that particular case to know that it's not a concern.

MR. DENTON: Tom, if I could just make a point, very few of the ones which we have managed to complete out of the 800 or so, have required any changes.

So I think that's part of the background you need to keep in mind also, that the number of changes which have occurred in this plant, as a result of our pursuit of all these allegations, can be counted on one hand.

COMMISSIONER BERNTHAL: How many changes...

MR. DENTON: A very handful of actual changes in the plant.

COMMISSIONER BERNTHAL: How many of the changes that were required would you say have been significant,

on safety significant--I'll leave the adjective or noun to you--when you say you've required a few changes based on them.

Can you describe the nature of the changes, their importance to safety, in your judgment?

MR. DENTON: I think when you hear on the small bore piping there have been a few hangers which were modified as a result of reanalysis of all hangers.

If I might, I would defer to that group to describe their safety-significance, but I think throughout these allegations, there's only a few things which resulted in a physical change.

MR. MARTIN: I think I would characterize the ones in the construction area as not being very significant.

In fact, in one of the replies to an inquiry that went through the Commission, I think to one of the congressmen, a few weeks back, the question was raised, how many changes had been required to the plant as a result of all this.

And we listed four items. My recollection is that most of them were ones it's not clear that they really needed to be made, that the company elected to do it anyway.

For example, there was one where some bolts, 325

bolts, it's a material type, were welded, and there was a conflict over whether you can really weld those bolts or not.

And so the company did a qualification program that provided reasonable assurance they would have been all right, but it wasn't strictly in compliance with the code, so they took them all off.

They didn't take them off; they altered the installation to not use the bolts.

There was another case where there was a length of cable was in question as to whether we really had all the certifications for it.

There was pretty strong circumstantial evidence that it was probably all right, but they elected to replace it anyway.

It was those sorts of things. There wasn't anything yet where anybody has gone and put their finger on something that when looked at, is clearly out of line.

MR. DENTON: I think what we looked for were generic breakdowns, and they haven't been found. Another example, I remember, is additional relay involved in controlling the RHR system from the remote shutdown panel, a specific issue.

After some debate about it, the company decided to

add additional relay and made that problem go away. So that's, I think, these accurately characterize the level of changes which have occurred as a result of our pursuit of the allegations.

COMMISSIONER BERNTHAL: So how many of the allegations, then, would you characterize that you've dealt with specifically address hardware issues that you had to follow up on at some level or another, a rough number?

MR. MARTIN: Very few. Ten percent.

COMMISSIONER BERNTHAL: No, no, I don't mean the ones that you--I see. You're saying of all the allegations, whatever the total number is now, 1,400 or whatever it might be, 10% of those specifically address hardware?

MR. MARTIN: I'd say that's conservative. We've repeatedly asked people, "Look, step forward and show us. You know, put your finger on where it is."

And where that's been done, we've taken one plant tour and of all the items--we talked about that at the last meeting, the items pointed out, none of them turned out to be technical problems, nor did they turn out to be violations of anything, either.

So I would say certainly 10% or less of the allegations involve specific complaints about hardware.

Now many of the allegations, interestingly enough,

that's why I hesitate to say whether allegers are right or wrong.

In many cases, they're right, absolutely right, where a man complains this weld is on the left instead of the right.

We go look, and yes, it's on the left, but when you look at the drawing, it's supposed to be on the left, and it's a non-problem.

MR. DENTON: Another case where many of them were right was in the small bore piping area. We did conclude that the on-site engineering group had exceeded its boundaries in making the changes in small bore piping.

So we had the company go back and reanalyze all the supports which had been designed by the small bore group.

In spite of the fact that they had exceeded their procedural bounds, very few changes had to be made in their hangers.

But there were a few hangers in which they had to do so.

COMMISSIONER BERNTHAL: So out of 100, 150, whatever the number might be, that specifically were hardware issues, action was taken on what number?

You found action to be required on what number? Ten?

Twelve? Twenty?

MR. DENTON: Less than ten.

COMMISSIONER BERNTHAL: Less than ten.

MR. BISHOP: I think in most cases where action was taken, it was not as a result of a hardware allegation; it was more of a result of the staff going in and have to exclude the designer on this.

But the staff going in and looking at the broader area and in that analysis of the broader area, it might not have been the specific allegation that caused the change.

It was more a look at the broad area that caused that. I wanted to also mention, so that you're not misled, that while there weren't that many allegations that specifically identified an individual discrepent piece of hardware, there were quite a number that talked about perceived weaknesses or failures in the systems that directly affect hardware, welding procedures, weld inspection, inspector training, welder qualification, and, of course, we looked at that, and we also included a very large sampling, something that the NRC hasn't done in the percentages, in any other facility that I'm aware of, in terms of looking at hardware samples related to those issues.

And we did that really for two reasons, because

they were continuing to make modifications, plus because we had allegations in the area.

But we did look at significant hardware samples.

MR. MARTIN: Yes. I'd like to emphasize that. I've said this in previous meetings, but when we look into these allegations, we not only look into the specific is the complaint literally true or not, but also we've looked into the circumstances surrounding it, like did the company involved handle it responsibly?

And a lot of allegations turn out to be wrong, maybe through no conscious effort on the part of the company. They just lucked out.

And so we've looked at both aspects of this, and typically, like the plant tour, for example, there were a number of the seven items pointed out, many on the surface would look suspicious.

But when we looked into them, we found out that they were not violations of codes and standards, and furthermore the company had already taken some responsible action to deal with the complaint, prior to us even getting there and looking at it.

So when we've consistently found that it's not a technical problem, and also for the most part, the company has previously behaved responsibly when

confronted with the thing.

That's provided a sort of a perspective from which to judge things that are--we have yet to look into in detail.

Another significant thing is, as Tom pointed out, the bulk of the allegations, a 1,000 or so out of the 1,400 allegations, are by a dozen or so people.

So with each of these, we've looked into a substantial number of complaints by people so that you get a feeling as to how much weight to give things that are being claimed.

If, for example, a man's alleged 200 things and you've looked into 125 of them and none of them have panned out, then I get a little less anxious about the remainder.

CHAIRMAN PALLADINO: But nevertheless, you do screen the remainder?

MR. MARTIN: Oh, yes, sir. And we will go through them in due time. The other thing I think's important, as far as I know, we've never done elsewhere in the region and maybe not in any region, is sometime back, I anticipated that we would have questions where we would need to do this, so I hired Lawrence Livermore Laboratory, and over the months, they've been looking at pipe supports and raceways and structural steel.

And I handed out a chart at a meeting three or four months ago, which summarized what they'd done to date, and I have an update of that, where we've looked in detail at hundreds of pipe supports, hundreds of steel connections, raceway supports, to get an independent, independent of all these allegations and everything, of just what is the quality of the plant.

While we're looking at allegations, these people have been out checking things against the drawings. For example, they've looked at over 500 pipe supports of all sizes, 100 or so, 120 structural steel connections, 300 or 400 raceways.

And we found a very low deficiency rate. I'd say I've been struck by it's lower than we normally find.

And what I would do, Sam, is I could pass this around. It's an update of a chart I gave the Commission about two or three months ago.

I think it's an independent check, in addition to looking into the allegations that forms a bit of perspective that we've used in sorting these categories.

I don't know if that's helpful.

CHAIRMAN PALLADINO: It could be helpful. I have two questions on the same subject, if you're through on this part of it.

MR. MARTIN: Yes.

COMMISSIONER ASSELSTINE: I have a couple more on the right-hand side of the chart. Go ahead with yours.

CHAIRMAN PALLADINO: Okay. I was talking about the left and the right, both.

COMMISSIONER ASSELSTINE: Why don't you go ahead?

CHAIRMAN PALLADINO: First of all, could the staff explain with regard to not meeting resolution on allegations prior to full power, with particular reference to allegations involving intimidation and harassment?

MR. MARTIN: Yes, I think I'd like to speak to that, and I thought about this quite a bit. Recall, I think, perhaps for Commissioner Zech's benefit, maybe all of us, I'll back up a few steps and recall what we said at the last couple of meetings and what we've printed in SSER 21 and 22, that when we've looked at these allegations, the staff has tried to penetrate not only is it a technical problem but what are the broader management questions surrounding this?

Is it reflective of irresponsible action, and that just didn't turn out to be a technical problem, and personally I'm more interested in the management part of it than the technical details.

Well, when we got to the intimidation question, the

key thing that we've been struggling with and had in the front of our mind all along is not so much whether intimidation did or did not occur in the specific cases.

I think we've said before the staff can't tell. These are complicated. It's hard to tell who's intimidating whom.

We'll have to wait for OI and the Department of Labor to sort all that out. And we knew of at least eight people who felt very strongly they'd been dealt with improperly.

However, it's interesting to note that about 1,000 of these allegations out of the 1,400 are by the people claiming they've been harassed.

So we've looked into very large numbers of allegations by the technical aspects of them and the management aspects of them by those same people who allege they've been intimidated.

So I think we have a pretty strong understanding...

CHAIRMAN PALLADINO: You say you looked into that? How? Could I get a feel for what you did?

MR. MARTIN: For example, what I'm saying is that out of the 1,400 allegations, about 1,000 are by the people who claim they've been intimidated.

Of that, we've looked in and resolved maybe two-

thirds of them.

CHAIRMAN PALLADINO: And the allegations include a whole variety?

MR. MARTIN: Oh, yes, the whole variety of things, and so we've looked into, from the standpoint, is really three questions.

Is the allegation true? Does it represent irresponsible conduct on the part of the company involved?

And then thirdly, in the process, did the guy get discriminated against? And we've answered the first two questions.

And I think it's safe to say that in the vast majority of the cases we've looked into, they have not constituted technical problems.

Where the issue has been brought up to the company, and in many cases they haven't, mostly they have, where the companies had an opportunity to deal with the issue, they've acted responsibly.

Now whether the man got discriminated against in the process, I don't know. I don't hope to answer that. That's Hayes' job.

But the pattern we set at the last meeting that we do not see a pattern of purposeful intimidation, there may have been cases, we don't know, but we do not see a

pattern. And certainly looking into the details of the allegations, we do not see support for that.

Where given the opportunity, the companies seem to operate responsibly, by and large.

So I think from our perspective--oh, the other thing we did that isn't very scientific, but I like to do it because maybe it's my own standard, is that we had like 40 inspectors work on this thing.

And there in the beginning, I had each guy, during the course of his inspection, interview ten people and just try to get to the heart of the question.

Do you feel inhibited? Are you under pressure? Do you feel that you're being leaned on?

It's not a very exact science, but you can get a feel. In addition, people have been instructed, "Keep your ears open, when you're in the lunch room or..."

CHAIRMAN PALLADINO: Did that inquiry ...

MR. MARTIN: To see how things are going, and we just do not see a pattern of paranoia or people seem to be reasonably open.

So it's not a discipline type of investigation, but there are reasons why I think the staff would say, those of us that have spent a lot of time at the site, we don't see, certainly an intimidation to the point where it's corrupted the QA system.

CHAIRMAN PALLADINO: But I gather, did the inquiry turn up evidence of deep-seated feeling or harassment?

MR. MARTIN: No.

CHAIRMAN PALLADINO: Intimidation? Discrimination?

MR. MARTIN: Of course, this becomes a self-fulfilling prophesy. It's been talked about so much, and in the newspapers and claims and counterclaims, a lot of people are aware of it.

And when you have a site, and 6,000 or 7,000 people read about it in the papers and everything, many people we talked to were aware that others were complaining about this, or they'd heard that.

But out of the 250 or so people we talked to directly, and the hundreds we've interacted with in looking into these 900 or so allegations we've resolved, we do not see a pattern or a chilling or a corruption of the QA system.

Now there may well be a dozen or so people that got leaned on, I just don't know. I don't hope to answer that question.

CHAIRMAN PALLADINO: Well, the question related to whether or not some of these matters needed to be resolved before power ascension.

MR. MARTIN: Yes. I guess our bottom line is that in talking with OI and based on our looking into

several hundred allegations by the people who feel they were leaned on, we do not see an overall degradation of the systems that we depend upon to ensure plant quality.

That's, I think, the staff's conclusion, and I think that's supported by all of the staff that's looked into it.

MR. DENTON: I want to second Jack completely. There have been several instances where the Department of Labor has upheld charges of harassment.

So it has occurred in some cases. The question is, is it pervasive? It does not appear to be, based on what we have seen.

If you look behind, has this affected the quality of the product in the plant itself, these allegations do not--we've looked at so much information on this plant, it does not appear that these cases where intimidation did occur, is affecting the underlying quality of the plant.

It might still be going on. There was a recent case where it's being alleged. The company took a step some time ago to produce a video tape by Mr. Maniatis, which was shown to all employees, that deals with this issue, and says that intimidation will not be tolerated.

So I think the company has taken steps to recognize that this practice should not occur, but whether it's still going on, will have to await the results of these ongoing OI investigations.

I guess that's a policy question for the Commission, based on what we've looked at and the screening of these 99 where OI hasn't been able to complete its investigation, it does not appear to be a pervasive pattern, nor does it appear to be affecting the quality of the plant.

(Inaudible.) In this on-site engineering group that I've discussed earlier, it was a source of a number of problems where the group was not following company procedures and QA procedures.

The responsibility for those activities was transferred away from that group and back to headquarters.

So it's under a controlled manner. So there is no easy way to answer it. The facts are, DOL has found it occurred.

You know the number of cases that it's occurred in from the OI briefing. I think it's my view that it's not affected the quality of the plant.

CHAIRMAN PALLADINO: I wonder, one other question. I'd like to clear up my understanding on some numbers

you gave us.

You said not resolved was 724, and you said about 300 of these are being documented.

MR. MARTIN: Yes.

CHAIRMAN PALLADINO: So I guess it's roughly down to 400. But Harold, then you spoke of another 185, and I don't know if that's subtracted.

MR. MARTIN: What I was saying, the 300 or so that we've drawn our conclusions, we just don't have the written resolution yet.

About 250 are in Harold's area, and about 50 in mine. And that's what his 180...

MR. DENTON: The 185 is...

CHAIRMAN PALLADINO: Is part of the 300.

MR. MARTIN: Yes, sir.

MR. DENTON: It's part of the 300. There's another 50 that's part of the 300 that are related to bolting that we have resolved, and we have our consultant here on bolting today if you want to get into those allegations.

CHAIRMAN PALLADINO: I'm just trying to get a feel, is the bottom line number, at least so far as the field work or technical work is concerned, the numbers are more like 400 rather than ...

MR. DENTON: In fact, probably even less than that.

It's hardly a moving target, Mr. Chairman.

CHAIRMAN PALLADINO: I'm trying to understand the snapshot that is being given to us at this moment.

MR. MARTIN: I'm a little sensitive to this. We've had previous discussions about drawing conclusions for which we haven't written the reports yet, so...

CHAIRMAN PALLADINO: Commissioner Asselstine.

COMMISSIONER ASSELSTINE: Yes, I have a couple of questions. Let me start with the left-hand side of the chart.

Of the 250 people you talked with, apart from what you described as they were aware of possible intimidation of others, did any of the 250 tell you that they were themselves aware of intimidation or felt in any way inhibited by it?

MR. BISHOP: We discussed that in SSER 22, and I think we've said that there were eight individuals that felt that they had been intimidated and were provided direct evidence of that.

As Mr. Martin said, there were several others who said they had heard of intimidation. There were a few others that felt that there was a problem.

They weren't willing to say this was intimidation, but their position was not accepted and they were...

MR. MARTIN: I think the answer--we're getting a

little mixed up here. I think the eight people you're talking about, Tom, are the eight that had formerly made a complaint.

Now out of the 250 or so we talked to, it's my recollection that none of them claimed they were directly harassed or intimidated.

There were several who had heard about things going on, or who were concerned there was a lot of pressure to get the job done, but had not been personally threatened or harassed.

I think that's a fair characterization, isn't it?

MR. BISHOP: Yes. I'm only waffling, because I don't know if our 250 ..

MR. MARTIN: I don't believe so. Apart from those eight that we wrote a whole paragraph on, the people we interviewed, I think it would be safe to say, by and large, most of them didn't see any problem.

There were some who had heard things and read it in the paper. And there were others, when you asked the question, "Is there too much pressure to get the job done?" well, I feel that sometimes myself.

So I didn't classify that as--I was using sort of a direct threat as the threshold, and we didn't see any of that.

COMMISSIONER ASSELSTINE: You mentioned that for

900 or so allegations that you looked at, including those that involved the intimidation question, you looked at three things.

One, were they true? Two, did they constitute technical problems. Then the third thing, which OI is looking at, were they discriminated against in the case of the intimidation allegations.

You mentioned that there were a number of allegations that were true or the statements themselves were correct, but when you went out and looked at the item in the plant, that's the way the plant was supposed to be designed.

MR. MARTIN: Yes, or some other twist to it.

COMMISSIONER ASSELSTINE: Well, that's what I wanted to ask about was the other twist, which is, did you go out and find allegations that were correct, but because of safety margins in the plant or lack of safety significance of the particular item of equipment on which the allegation was made, there wasn't a technical problem?

MR. MARTIN: No, not very many. And I think that's what I found significant. I never expected this. Lots of times when you look into things, you find it's not a problem because there's so much margin in the system when they go recalculate the whole thing, it comes out

right after all.

We didn't find much of that. What we found is that the very large numbers of allegations, the alleger wasn't exactly wrong.

For example, we had lots of them that had statements like one that keeps coming up is, they welded using the ASME code rather than the AWS code which was specified.

Well, after researching all that, you find that the AWS code allows you to use the ASME code because it's more strict.

COMMISSIONER ROBERTS: Right. It's more stringent.

MR. MARTIN: And so that has repeatedly come up as an issue.

And, of course, everybody's right. But it's a happy conclusion and there was a lot of that. Or we find problems that, for example, the weld's on the right hand instead of the left hand, well, it's true, but it's supposed to be that way.

Or when you go look at the details of how things were disposed of or handled by engineering, the complaint was handled following all the procedures and in many cases the alleger just wasn't aware that the thing had gone through that whole process.

And so by and large, what we find, in a very large

number of cases, that there's some basis to the complaint, if you put yourself in the alleger's shoes, which we try to do, and understand it from his standpoint, you can see the point.

But then when you go and look at how the company dealt with it, in most cases you find it had been dealt with.

It isn't the sort of thing where there's no action at all, and that the activity was a responsible resolution.

In a few cases, we've found we didn't agree with the resolution. There was a number of engineering dispositions that we thought weren't really right, and got those turned around.

But it had gone through the proper processes and I think that's inevitable to find some things that we don't agree with.

But we did not find very many things where you go look and you find not only is the guy right, but it had been mismanaged and mishandled and there were maybe probably less than a dozen items like that, I'd say, and most of them were not, at least in the construction area, that I'm aware of, were not significant. Now, Harold's area, I don't know that much about.

MR. DENTON: This issue will just have to be

continuously followed, and like an operating plant allegations, come in the unresolved issues that are for OI, will hav to be sure that each report that is made available is followed up on promptly.

But I guess we have discussed with the Commission on several occasions, do you use something like criteria, or do you wait until the investigation of the allegation is pursued?

We've done a lot of them and we wanted to report what we have done.

COMMISSIONER ASSELSTINE: I think ...

CHAIRMAN PALLADINO: But they will be pursued.

MR. MARTIN: Yes, sir.

MR. DENTON: We'll continue to.

CHAIRMAN PALLADINO: Regardless of what happens.

MR. DIRCKS: I think we should emphasize that point. We will follow up on these matters, and if there are enforcement actions here, we will take enforcement actions.

We're not saying, "Forget this." We are saying we'll follow up on it and will pursue whatever violations come up through the enforcement path.

COMMISSIONER BERNTHAL: Can I phrase the question? I think Jim has one or two questions yet, but I want to interrupt and get at this point of how exactly you're

handling and dealing with these things.

Is it fair to say, then, and perhaps I need to ask Ben Hayes this question as well, but is it fair to say that of all the allegations that you have in front of you today, if this were an operating plant, none of them fall into a category were, as has happened a time or two in my short tenure here, you or perhaps other members of our staff, would come rushing into the chairman's office and say, "We've got a problem and we need to meet on it."

Is that a fair representation of your current evaluation? I realize that's what you're essentially saying on paper here.

But I'd like to hear you comment on it.

MR. BISHOP: Before you answer, I would like to say that we have to condition that with the body of knowledge we have about this facility.

For example, if I received an allegation about a specific weld or improper inspector qualification at an operating facility, where I don't have that body of knowledge that I have on Diablo, we would tend to react immediately.

But in this case, we have a large body of knowledge that we're using as a reference on what we do and what we do not know.

And with that clarification, I would say yes, from my perspective.

MR. DENTON: That's ...

COMMISSIONER BERNTHAL: That's on the hardware side. Perhaps the left-hand side, as well, needs some comment.

MR. DENTON: Well, I agree with Tom. Some of the allegations are quite significant on first reading if they were true.

And I think if we got those on operating plants, we would immediately contact the resident of the region and try to establish the validity of it.

So none of them based on our knowledge of them now would prompt me to request a shutdown of an operating plant, based on what we know.

That's on the right-hand part. On the left-hand part, the statistics are still pretty small. There are only a few cases where the Department of Labor has upheld charges of harassment.

There are a few cases where they didn't. There might be some pending. It looks like the company is making every effort to be sure that harassment does not occur.

I think they've taken some recent actions based on the events of the past few weeks, and I would envision

that there are to be meetings between ourselves and enforcement and the company to follow up, if there's more that goes on.

But to look at what has gone on, it is not a big pattern. But it's not, at the same time, there have been some cases where it probably did go on and appropriate actions should be taken.

I think our few cases DOL has upheld, a few cases they have denied.

COMMISSIONER BERNTHAL: But the point is, then, what you have before you and in your hands right now, would not be the kind of thing that you would feel would require you to take immediate measures if it were an operating plant.

MR. DENTON: It does not appear to have affected the quality of the reactor itself, and does not appear to be pervasive.

CHAIRMAN PALLADINO: Jim?

COMMISSIONER ASSELSTINE: Just one more question on the 400 or so items where you haven't finished your review yet on the right-hand side.

Jack, you mentioned that one of the things that you looked at is where you get a large number of allegations from the same individual, some sense of how accurate and reliable those have been.

I wonder if that has been part of your basis for concluding that those 400 items, some of those 400 items that you haven't completed your review on yet, don't necessarily impact on full power.

And the reason I ask the question, as I remember, one of the first licensing cases that came before the Commission after I joined the Commission, we received a number of allegations from one individual, some of which were accurate and identified technical concerns, others of which there seemed no basis whatsoever.

MR. MARTIN: Yes.

COMMISSIONER ASSELSTINE: I wonder if that is part of your thinking, how much weight you can give to it.

MR. DENTON: Let me start there, Commissioner.

COMMISSIONER ASSELSTINE: And I want to hear from you, Harold, too.

MR. DENTON: But I don't think we want to get pushed into saying that somewhere in the 1,400 you won't find one that requires follow up.

What we are saying, we have applied the criteria that we told the Commission we were going to apply, and we're not, can't be prophets and say what's going to come out as you look at the next 1,400, I mean in the next 400.

But in looking, they didn't meet the criteria that

I felt the Commission had accepted last time, and if you want absolute certainty that there is not going to be one that on inspection does make a change, we can't guarantee that. We can tell you what we have done and what we haven't done, and the basis for it, but you seem to want us to assure you that none of the other 1400...

COMMISSIONER ASSELSTINE: I'm not trying to push you that way. What I'm trying to do is try to get a sense for what information you used in applying this criteria.

MR. MARTIN: Let me answer it this way. I guess I like to deal in facts and issues, not personalities.

We've tried very hard here, and I think, as I've said before, that the people making these allegations, many of them seem to know what they're talking about.

They are reasonably informed. They're substantive kinds of questions.

So that I have not discounted, if we've got 100 allegations from Mr. A., and 50 of them haven't panned out, we have not discounted the rest because this guy's a nut.

And anyway, what rather what I've done is looked at them from the standpoint of on the surface of it, do they pass the screening criteria.

Then secondly, if they're the same kinds of issues

that he's raised before, and the same general area, the same organization, the same sorts of, like involving welder qualification or something like that, that inevitably has crept into the thinking that we have not screened them on the basis that we've got a track record on so-and-so because most of the allegations we've received have not been frivolous at all.

And so I couldn't do that anyway. And I don't believe we've done it, although there has been, for example, many of the people have submitted, say, 100 or more allegations, and if we've already looked in and closed out 60% of them, and the remaining 40% are similar to those we've already closed out, that provides additional assurance or additonal feeling that there probably won't be anything there, but I still think we have to continue to look into them.

COMMISSIONER ASSELSTINE: That's what I'm trying to get a sense for, is what the bounds of the uncertainty really are.

And I gather ...

MR. MARTIN: Less than it would appear on the chart, is, I guess what I'm saying, but I don't know how to quantify it exactly.

COMMISSIONER ASSELSTINE: I gather if you say you have 100 allegations on welder qualifications, and

you've looked at 60 out of 100, you might well take into account the fact that in looking at the 60 out of 100 in that particular area, you haven't found anything...

MR. MARTIN: That's right.

COMMISSIONER ASSELSTINE: ...significant, saying, well, we don't think there's a significant problem in going ahead, prior to having looked at the other 40. Would that be a fair statement?

MR. MARTIN: Yes. And I think what we've said before is we've looked at enough of these in almost all these areas to develop a sense that basic management systems that you depend upon for quality, are working.

Now whether there have been lapses or specific cases where it didn't work or not, there may be, and some of these unresolved items may turn up some of those, but we don't expect to see wholesale problems.

And we can speak with some authority, having looked into large numbers of cases.

CHAIRMAN PALLADINO: Can I just follow up? Because I had asked a similar question earlier, and I got an answer that I want to make sure either I understood...

MR. MARTIN: I believe it was the same.

CHAIRMAN PALLADINO: ...or I could be corrected. It was my impression that you said with regard to those

that you hadn't yet examined in detail, you did look at them and go through the screening process.

MR. MARTIN: Yes.

CHAIRMAN PALLADINO: So that even if an individual had given you 100 allegations and 50 of them you had looked at in detail, you still looked at the other 50 to see if they passed the screening process.

MR. MARTIN: Yes, sir. So not only were they screened, but in many cases, we have substantial information already.

CHAIRMAN PALLADINO: Let me just follow up on one more. If it didn't pass the screening, by that, I mean, yes, there seem to be some technical issue, did you follow up enough to know what the nature of that technical issue was?

MR. MARTIN: Yes. And as a matter of fact, since the last meeting, there was one of those that cropped up in the bolting area, that just didn't pass.

And we've had to spend quite a bit of time getting to the bottom of that. That's now considered resolved, so that there were a dozen or so of those have come up as we've gone through this process.

And we've outlined those as being items that have to be dealt with and resolved before we can go ahead.

CHAIRMAN PALLADINO: Go ahead, Jim.

COMMISSIONER ASSELSTINE: Let's see. I think that basically covers the question I had, although I think Fred had one other that I think is worth asking and just getting cleared up.

COMMISSIONER BERNTHAL: Harold, you've referred two or three times to the guidelines and directives that the Commission has laid out for your evaluation of allegations.

I'm thinking that maybe for the public record, you should tell us what you thought those directives and guidelines were, just so I can see whether I still agree with them.

CHAIRMAN PALLADINO: I don't think we develop them, but I think the staff developed them and we okayed them.

COMMISSIONER BERNTHAL: That's right, but I think it would be good to state what you think they are for the public record.

MR. DENTON: Tom Bishop has the SER that contains them. Why don't you go through them, Tom.

MR. BISHOP: We've discussed this in previous Commission meetings. I think that's what (inaudible) and Harold were referring to.

They're contained in SSER 22, paragraph four, and it goes on for two or three pages, giving the criteria

for those allegations on a precriticality decision and then another set of discussion for exceeding 5%. Do you want me to read those to you?

COMMISSIONER BERNTHAL: I think it would be good. I don't suggest that you read two or three single-spaced, typewritten pages.

(Simultaneous conversation.)

MR. BISHOP: Sure. Pretty short.

COMMISSIONER BERNTHAL: But could you give a brief indication here of those guidelines?

MR. MARTIN: Okay. I would urge the interested parties to read it. I mean, paraphrasing it, I don't think, will do justice to capture completely the thinking that went into it. So I think we run the risk of being a bit brief here.

MR. BISHOP: Let me just read a couple of the paragraphs. It says, "During the preliminary review, the following considerations were applied.

Is the allegation a specific safety or quality issue or a generalized concern?

Has the staff previously addressed the issue? Has the issue been previously dealt with or is it now being dealt with by the licensee?

Is the allegation reasonable, and does it sound competent?

Does the allegation represent a significant safety or management concern?

Taking those factors into account, the staff applied the following criteria for assessing which allegations require resolution prior to exceeding criticality," and then it gives a precriticality decision.

It says, "In addition, the staff applied a third criterion, as followed to determine which allegations or concerns must be resolved prior to exceeding 5% power.

Prior to exceeding 5% power, those allegations or concerns must be resolved which offer specific new information not previously available to the staff and which may reasonably be expected to involve sizable failures of systems that contain radioactivity or of the ECCS system.

In addition, sufficient technical information regarding these allegations or concerns is not presently available to the staff for programs have not been developed or implemented to ensure that regulatory concerns related to reactor safety will be resolved prior to exceeding 5% power.

In formulating these criteria, the staff emphasized that the new information must be definitive, specific, and

creditable. As the staff has gained experience..." and it goes on into...that's the essential thing.

CHAIRMAN PALLADINO: Thank you.

MR. MARTIN: One other thing I think would be pertinent that we have not mentioned here is that I believe a good number of the 400 or so items that are in the not-resolved category were ones that were received recently, like June.

And I think if you look at the statistics, we've done a pretty good job keeping up with the older ones, and there was a big slug of them came in in June that we just haven't been able to resolve.

And I think that's one of the reasons why we still have ...

COMMISSIONER ASSELSTINE: Jack, what's your schedule for closing out the 700 or so that are listed in the not-resolved category?

MR. MARTIN: Well, I think we can knock off about 300 of them in the next week or so, and the rest of them, I think in the next couple of months.

Frankly, the flood of allegations we've received in the last couple of months--I'm not asking for sympathy, but they've been sufficiency diffuse and disorganized , that we've spent most of our time trying to categorize, collate, and figure out what's duplicates in doing the

screening rather than working on resolution. And I think a lot of it will depend on how much new stuff is coming in.

Because I think maybe my priorities are mixed up, but I think new things that come in, it's important to at least screen them properly and see if there's any problems in there.

And to the degree in which they're well-organized, well-presented, that's easy. But that hasn't been the case recently.

So I would guess in the next--certainly before another couple of months are out, I hope to have these finished, but it could be somewhat longer.

I'd like to get it done and out of the way so it doesn't string out very much longer.

CHAIRMAN PALLADINO: Are we in the position to proceed, then, with other aspects of the briefing?

COMMISSIONER ASSELSTINE: Let me ask. I have one other question on bolts on the containment liner. Is that better for when we get to construction QA?

MR. BISHOP: We can talk about that now, if you like.

COMMISSIONER ASSELSTINE: I had a question concerning the use of the bolts with the heads removed in the containment liner.

Is that separate?

MR. BISHOP: Any particular question, or you'd just like us to lay out the general...

COMMISSIONER ASSELSTINE: Yes, why don't you tell me is there a problem there.

MR. BISHOP: Our conclusion is, no, there is not a problem there. The specific issues involved with use of those bolts was primarily the alleged lack of a proper procedure to weld that bolt because of the material.

The individual providing the allegation felt that that material was not what is called a P1 material.

In the ASME Code, they allow you to weld P1 material to other P1 material or P1 to another P number, but you have to qualify your procedure in each case to do that.

It was his opinion that in this case, they were welding P1 material to something, whatever the A307 was.

The specific resolution on that one is that the ASME Code Case Number N-71 recognized A307 bolts as P1 material.

In fact, in, I believe it's the '83 edition of the ASME Code that's now included specifically as a P1 material.

The procedure that was used is a P1 material to P1 material, and therefore the concern on that particular issue went away.

COMMISSIONER ASSELSTINE: So it's fair to say that this is one of those examples where what you were told was accurate in the kind of material that was used, but it turned out to be an acceptable approach.

MR. BISHOP: Yes. I guess I would add that from the alleger's perspective, it's easy to understand why he would have that concern.

You open up the color code, older edition of the code, and you don't have access to the code case, that's a proper question to ask.

CHAIRMAN PALLADINO: Okay.

COMMISSIONER ASSELSTINE: That's all I have.

CHAIRMAN PALLADINO: Can we go on, then, with this?

MR. DENTON: Yes. Since we're on bolting, I should mention that there were about 50 allegations which either came in through 2.206 petitions or through interviews staff held with anonymous individuals, that related to the question of anchor bolts.

We retained the assistance of a Dr. Burdett at the University of Tennessee, and Brookhaven National Laboratory, they reviewed these allegations and we concluded in a report we provided you that this issue

is resolved, and that's about 50 or 55 of the allegations that are in the unresolved list. Let me turn next to the issuance...

COMMISSIONER ASSELSTINE: And how were those resolved, Harold, basically, in terms of the anchor bolt problems?

The anchor bolts were improperly sized, improperly used, or...

MR. DENTON: Let me ask Mr. Vollmer or his staff to describe the details.

COMMISSIONER ASSELSTINE: Okay.

MR. DENTON: I think they related to a number of issues regarding to the bolt, such as sliding hulls, imbedment, reuse of washers, these kind of details.

COMMISSIONER ASSELSTINE: Is this a question about the short ones, too, or not?

MR. VOLLMER: Subject to resolution was that based on Mr. Burdett's experience and both testing and analytical, that we found satisfactory evidence, both analytical and experimental, that the bolts were placed in such a manner that they would be applicable loads.

And although in some cases the allegers felt that since there was, for example, very small amount of wall beyond where the bolt was placed, and things like that, that this would not give adequate strength to the

structures being held by the bolts.

Upon reflection by our consultants, they felt that we had good evidence that the loads could be accommodated. So that's the basic resolution. We could do into any detail that you wish.

MR. DENTON: We have a consultant in that area available today if you'd like to hear from Dr. Burdett.

COMMISSIONER ASSELSTINE: I think that's fine.

COMMISSIONER BERNTHAL: Let me, as long as we're talking about nuts and bolts here, ask a question about structural steel.

On this document that was passed out, Jack, where Lawrence Livermore Laboratory personnel, I gather, assisted you or carried out an independent evaluation as consultants, how was it?

MR. MARTIN: Well, we did some of both. You can see this is a little confusing, but there's a horizontal line there of NRC-examined where we have 56.

Those are ones our inspectors--government inspectors--did personally. Then down where it says LLNL-examined is 66.

COMMISSIONER BERNTHAL: Okay.

MR. MARTIN: So we did about half and they did about half.

COMMISSIONER BERNTHAL: All right. Let me ask a question, then. Under pipe supports, you've got the

Lawrence Livermore Laboratory people examined nearly 300.

MR. MARTIN: Right.

COMMISSIONER BERNTHAL: They found only three problems, I guess, that were problems, which is some comfort, since that's been a major issue from time to time here.

MR. MARTIN: Exactly.

COMMISSIONER BERNTHAL: And raceway supports, they examined 166, and found one problem of the 166, which also looks pretty good.

But I was a little bit surprised at the structural steel conenctions where 66 were examined by Lawrence Livermore people, ten were found to be unsatisfactory.

Total examined, I guess that's by you and by them, is that what that means?

MR. MARTIN: Correct.

COMMISSIONER BERNTHAL: 122, of which 21 were unsatisfactory. The others, while the other unsatisfactory reports are seemingly insignificant statistically, but I'm not so sure I would draw that conclusion there.

MR. BISHOP: I can speak to that if you'd like.

COMMISSIONER BERNTHAL: Yes.

COMMISSIONER ASSELSTINE: Also, when you look at

the NRC-examined list, it looks like it says 56, 21 welds were unsatisfactory.

MR. BISHOP: If you look at the footnote, there is some cross-numbering, because we took into account some of the Livermore numbers.

COMMISSIONER BERNTHAL: Nevertheless, it looks statistically significant.

MR. BISHOP: It is a case where we found welds that were higher than we would like to see, but if my recollection serves me right, that was back in January of '83, welds, structural welds in the fuel-handling building.

I might add just as an aside, while we looked at something like 122 connections, it involves something close to 1,000 welds, and we're talking about a population of about 1,000 welds.

Nevertheless, we went in and we did find discrepant and unacceptable conditions in the fuel-handling, building, structural welding.

We issued enforcement action at that time. The utility coincidentally had an audit in progress and had come to the same conclusion as we did.

The corrective action included a 100% reinspection of all welds in the fuel-handling building.

They started out with a small sample. I believe it

was a 25% sample. They found discrepencies and they enlarged it to 100% reinspection.

They went to other areas where this welding had occurred in the annulus and in the auxiliary building to check samples of welding there.

In short, the problem was identified. They took action to assess the adequacy of earlier work. They also, of course, as required by our enforcement correspondence, were required to look at the root cause, was it due to too many people with insufficient training or welding inspectors not keeping up, and that's generally what they concluded, was that they had a large influx of welders in the November, December, January time frame.

And the rate of inspector on board, they came on board also at that time, but their training and inspection activity was somewhat delayed.

Consequently, they had to go back and do the reinspections as well as scrutinize.

CHAIRMAN PALLADINO: Tom, in addition to doing 100% reinspection, was corrective action taken when faulty welds were found?

MR. BISHOP: Yes.

MR. MARTIN: This is a case that I recall quite vividly, in that I wonder myself, you know, is this an

indicator. How far does this extend in time and space?

And I think our conclusion on this is that we got into this, I believe, in the permanent building, wasn't it?

MR. BISHOP: No, it was the fuel-handling.

MR. MARTIN: Fuel-handling building, where the bulk of this stuff was due to a contractor who had not done much of this kind of work before.

He was contracted to handle this fuel-handling building, built up a large work force to do it, and just didn't get off to a very good start.

And fortunately, we were able to find this and get it turned around, but it did require him going back to look at all the work that he'd done up to that point.

And the utility and the contractor confirmed what we found, is that they were just not doing very well and they had to reduce some of it.

COMMISSIONER BERNTHAL: You anticipated my question. It sounded like you were saying that the focus of the difficulties was in the fuel-handling building.

MR. MARTIN: Yes.

COMMISSIONER BERNTHAL: And are you saying, then, that you've broadened your investigation of welding to

other buildings? You again can cite statistically low or insignificant or comparable other plant numbers and deficiencies you found there?

MR. MARTIN: Yes.

COMMISSIONER BERNTHAL: Is that a fair statement?

MR. MARTIN: That's a fair statement.

MR. BISHIP: That subject is discussed in the briefing book we gave you, and there's another sentence in there that is misleading.

I want to correct that for the record. We talk about that particular case of the fuel-handling building and welds.

And then it is mentioned that in relationship to the allegations, which is difficult to precisely say we are inspecting for allegations or we're inspecting for modifications, because the two went on concurrently, but that there were some non-compliances, none of which involve specific hardware inadequacies.

And I don't want you to be misled in looking at such things as the anchor bolts in the electrical areas, we found two loose anchor bolt nuts or something of that nature, and none is very absolute, and I didn't want to leave you with the impression there was absolutely none but it was an acceptable amount.

CHAIRMAN PALLADINO: All right. You may proceed.

MR. DENTON: I'd like to go next to the area of small bore piping. After the Commission decision on low power, in which we imposed a number of conditions on the licensee, it became apparent that there were differing views within the staff regarding the adequacy of snubbers and supports and thermal gaps and these sort of issues in the piping.

Bill directed the formation of a peer panel to objectively review these differences of opinion. I want to have Dick Vollmer describe the activities.

He was the director of this effort. I'd just like to note for the Commission that the group that was put together includes individuals of well-known reputations in this field, members of the main committee of the ASME, that's the American Society for Mechanical Engineers.

This includes one Mr. Yin's former supervisors, it includes other regional inspectors who cover this area, and individuals from other offices and regions.

We told Mr. Yin at the time that we'd like for him to participate fully with the peer review group, and that we would provide him an opportunity to comment if he felt the need to on the report that they produced.

His comments are attached to the report because this process did not resolve the differing views within

the staff.

I thought it wise to seek the views of the ACRS. Three members of the Committee had originally requested an opportunity to review the results of the licensee's calculations in this area.

And at least one commissioner had at one time suggested we go back to the ACRS. The ACRS had a subcommittee meeting and a full committee meeting on this topic. And you have their letter.

If you like, Mr. Vollmer can go into more detail and tell you what he did, but in the interest of time, I'll let you decide.

We have three or four slides, if you'd like Mr. Vollmer to describe them.

CHAIRMAN PALLADINO: I think that is it an important issue, and I think, as a matter of fact, we ought to go into it, unless the commissioners...

UNIDENTIFIED: I can't hear.

CHAIRMAN PALLADINO: I'm sorry. Thank you. I say I believe this is a very important area and we should go into it in a little bit more depth.

I further believe that it might be appropriate, unless the Commission objects, to have Mr. Yin read his statement.

He has prepared a statement to the Commission, and

I would propose to follow up by asking Mr. Ebersole to highlight the letter that the Commission received from the ACRS.

COMMISSIONER ASSELSTINE: I agree with that. I think that would be useful.

MR. DENTON: Let me ask Mr. Vollmer, then, to describe the activities of the review group, its differences of opinion, which still exists, as you are aware, between Mr. Yin and the group.

MR. VOLLMER: Thank you. I would like to briefly describe the background leading to the formation of the group, the qualifications of the members who participated in the group.

What we did, to try to resolve these issues, and finally, the conclusions of this effort.

As you will recall, at the March 26th Commission meeting, certain issues were raised by Mr. Yin which he felt should preclude operation of Diablo Canyon at low power.

You requested that the ACRS and the staff look into these issues and report back to the Commission and, as Harold indicated, EDO directed the review group to be formed.

And at that time it consisted of eight staff members and one consultant. We met with Mr. Yin to

discuss in detail the issues that he had and his basis for concern in the issues.

We met with the licensees, principal alleger. performed site inspection, and met with the ACRS.

CHAIRMAN PALLADINO: What time frame are you ...

MR. VOLLMER: That's about two weeks after the March 26th Commission meeting. In that two-week period, we performed the activities I just described.

And that being the basis for the conclusion at that time, which was endorsed by the ACRS, that the issues raised should not preclude operation of the Diablo Canyon at low power.

However, we recommended that seven license conditions addressing these issues, some addressed by Mr. Yin and some we added ourselves, be part of the low power license, and that these issues be resolved prior to a decision on full power.

So following the Commission decision on low power, the scope of the review team was reoriented, as shown in the first slide, namely, the seven license conditions, which we went over with the Commission at that time, in (Inaudible) detail.

We also added as part of the scope of our review, the Independent Design Verification Program, looking into that, where Mr. Yin had found this to be lacking

in certain areas, in particular the rationale used by the IDVP for sample size and their decision criteria.

And finally, review of the conduct of activities performed by the on-site project engineering group which we sort of lumped and called programmatic issues.

The next slide will show the expansion of the review group that was accomodated to try to address all these issues in a timely manner.

We added one staff member and five consultants. Next slide, please. Only two of these members had any detailed prior involvement with IDVP issues, piping issues or the issues involved here.

I might indicate that the group was constituted to be rich in practical experience with nuclear plant piping and components, both in the analytical sense and in the field hardware sense.

They were asked to give their judgment on these issues and to pursue the issues to the extent that they felt necessary to support whatever conclusions we needed to draw.

I'll be brief on this. Mr. Allison and Mr. Heishman, from the Inspection Enforcement Office, have had substantial involvement in Integrated Design Inspection activities, construction activities, and overall plant inspection activities.

Mr. Bosnak, who is the chief of our mechanical engineering branch, you may know, has been a member of the main committee of the ASME boiler pressure vessel committee for a number of years, since 1968.

He has also received what I could characterize as the ASME's highest award for outstanding contributions to the development of national safety standards.

Mr. Burr and Mr. Morton, who are from EG&G, work at the Idaho National Engineering Laboratory, our expert in piping systems and analysis, and have a great deal of practical experience in those areas.

Mr. Chen and Mr. Fleck represent a great deal of experience from another of our organizations run by DOE, namely, the Energy Technology Engineering Center.

And they also have a great deal of hardware and analytical experience in structures, piping, piping supports, such systems.

Mr. Hartzman and Mr. Sullivan and, of course, Mr. Knight, are members of the NRR staff. Mr. Hartzman had been pre-involved in Diablo Canyon, so he and Mr. Knight are the ones I would characterize as fairly close to these issues in the past.

Generally, the rest of the list has not been particularly close to the issues.

Mr. Manoly is from Region I. He has a good deal of

experience with architect engineer. He is now sort of a peer to Mr. Yin, doing the same type of inspections for Region I, and he has been a very valuable member of the group.

Mr. Rodabaugh is a well-known authority in piping and stress analysis, fatigue and loading capacity. He's also a member of the ASME boiler and pressure vessel committee on nuclear components, and I hope I didn't leave anybody out except myself and Mr. Taylor, who you know.

Bernie Saffell, who is a program manager for Brookhaven National Laboratory, Battelle Columbus Laboratory, excuse me.

And he also has a great deal of analytical and practical experience with such things as being responsible for the piping and loft, where they not only had to be designed but a great deal of confirmatory testing.

So again, we tried to make the group rich in experience across the board, and look for their professional judgments in all of these areas which were akin to areas that they have already had a good deal of prior experience.

Since the effort was initiated, next slide, please, the peer review group or parts thereof have held 24

meetings or audits, as indicated on this slide.

These included three transcribed meetings with the licensee, three meetings with allegers, two of which were transcribed, ten engineering or hardware audits which I would characterize as smaller group would go in and look in great detail at specific calculational packages, or go into the plant and look very carefully at hardware and how it was compared this with the design and see if the judgment was there for performance and functionability.

And finally, we had four meetings with the ACRS or subcommittees, including one meeting with the ACRS members and Mr. Yin at the plant, the purpose of which was to have Mr. Yin indicate to ACRS and the rest of us the examples of his hardware problems.

Each task group spent approximately a week looking at detailed calculational and engineering packages, and conducting pipe walkdowns and other hardware inspections.

A separate task group was also formed to look at the IDVP work, and that's part of the summary report that we prepared in SSER 25.

The licensee, in response to the license conditions, and in response to additional work that the Staff Peer Review Group had asked the licensee to do, I'm not sure what the licensee's effort was, but in

many cases, we expanded the scope of our activity far beyond what was anticipated at the time we made our presentation to you for low power license.

I guess as an acknowledgement of that, the group that we have put together here spent a total of well over two professional staff years just in this activity since the last part of March.

We gave them no allocations in terms of scope and time in pursuing these activities, although we did set target completion dates for it.

I might indicate the target completion dates were not met because review group work was not completed to the satisfaction of the group members.

I think an equally important element in the work conducted by the group was the inclusion to the fullest extent possible of Mr. Yin in the group's activities.

He was invited to all of our meetings and audits, was provided with all the documents we received from the licensee, as well as draft reports and internal memoranda were shared with him.

The final slide indicates the results of the Peer Review Group effort. This report, as I indicated in SSER 25, which also includes Mr. Yin's comments on our draft report, and the ACRS report to the Commission is also included there.

We did find areas of insufficient documentation. We found errors, we found failure to follow documented procedures.

And we found practices that were not generally used to the knowledge and experience of the review group members, and therefore required their follow-up.

However, in probing the issues, the group did find that the engineering judgments could be supported and that the hardware in the plant met applicable requirements.

We did not give away any margin required by applicable code of regulatory criteria. I think that's an important thing to consider because where we did require the licensee to go back and do reanalysis or sharpen the pencil and so on, we did so in an extent that would not cut applicable code or regulatory margins, but if it could be demonstrated by a more sophisticated analysis that it met these margins then the resultant design or analysis would be satisfactory.

So I want to emphasize that we did not give away design margin that are required by our regulations and so forth.

And the conclusion, I guess, the group was unable to really find any safety issues in the as-designed and as-built plant.

Again, we looked more at the bottom line and recognized all the way along that there were errors and perhaps bad practices that got us to that end point, that we focused on the end point.

We found significant...

CHAIRMAN PALLADINO: I don't understand. You said you found...use your words again. Bad practices and failures?

MR. VOLLMER: I think, for example, I think Harold mentioned before that the on-site project engineering group had not followed their own procedures.

They had exceeded their authority in doing work that their procedures would allow them to do.

They did not necessarily follow the PTL QA procedures that they should have. But we went and looked at the final design packages, we looked at the as-built plant hardware, and despite the lack in some cases of following proper procedures, the engineering effort was appropriate to the task that was to be done.

And the final design, in the judgment of the peer group and, of course, in the judgment of the IDVP and a lot of other people that looked at that, is acceptable and meets regulatory requirements.

So again, we did not try to go back and say, did they meet all their procedural requirements, because

clearly in some cases they didn't.

And there's no point in trying to prove or disprove that.

COMMISSIONER ASSELSTINE: Dick, it sounds like what you're saying is that there was a breakdown in the QA program, particularly with respect to this on-site engineering group.

MR. VOLLMER: That's right.

COMMISSIONER ASSELSTINE: And what you've tried to do now is go back and by looking at the plant itself, the work that was done, compensate for that breakdown in the QA program.

Is that a fair characterization?

MR. VOLLMER: I think so, but more than just look at the hardware, go back and look at some of the detailed engineering packages.

COMMISSIONER ASSELSTINE: Okay, the design...

MR. VOLLMER: See that they eventually found a good engineering rectification of any previous deficiencies.

MR. DENTON: One of the license conditions, for example, required the company to recalculate the adequacy of each one of the supports or hangers which had been designed by this on-site engineering group.

They did that, and then Dick's group audited the company's recalculation of all of it, and then looked

at them also.

COMMISSIONER ASSELSTINE: Isn't a key question in our judgment of how much confidence we can have in this review program, that the extent to which both the company was required to look at these things, what they were required to do, and the extent to which we audited.

MR. DENTON: The company was required to do 100%, and then the peer group audited to the extent their professional judgment said were necessary.

MR. VOLLMER: That particular license condition Harold's talking about, there was something like 350 piping support analyses that had to be reviewed by the company.

We looked at their program for review of those, the check list, to see exactly how they proceeded through that.

We looked at roughly 20 packages in great detail and some of these were engineering packages, half or more inch thick, and some of these covered quite a history of the design process, and modifications and so on.

(Inaudible) really trace that back and came to the judgment that in the final analysis, appropriate engineering consideration had been given in almost all

cases.

Now there were some examples of hardware modifications, three of these had to do with angles for supports that exceeded the length that they should have, and without being raised, it's questionable whether or not one could sharpen the pencil and find these adequate, but the tack was taken, as we would support it with the licensee, they stiffened them by adding support to them.

They did not follow their own procedures. Well, let's see, in the judgment of the staff, these links were long enough in these three unsupported angles that they should have been, given additional support, the licensee argued that he had demonstrated evidence that he did have an adequate system but rather than go through the analytical process, he fixed them.

COMMISSIONER ASSELSTINE: Were the 350 packages, that's the total population for the plant?

MR. VOLLMER: That's total population for the license condition to receive review of all small bore piping supports which were reanalyzed and requalified by computer analysis.

COMMISSIONER ASSELSTINE: Okay.

MR. VOLLMER: That was the total population, yes.

COMMISSIONER ASSELSTINE: Okay. And we looked at 20.

MR. VOLLMER: We looked at 20.

COMMISSIONER ASSELSTINE: Of the 350 or so.

MR. VOLLMER: Six percent, I think, was the actual number.

COMMISSIONER ASSELSTINE: And did we find anything wrong in the reanalysis work, in the 20 that we looked at?

MR. VOLLMER: We found that...

COMMISSIONER ASSELSTINE: Anything that would question the quality of the reanalysis work in any way?

MR. VOLLMER: No. We agreed with the quality of the reanalysis. There were errors found...

COMMISSIONER ASSELSTINE: In the conclusions that they reached.

MR. VOLLMER: Yes, we agreed with that.

COMMISSIONER ASSELSTINE: The reanalysis itself might have disclosed errors in the original calculations.

MR. VOLLMER: That's right.

COMMISSIONER ASSELSTINE: But in terms of the reanalysis work.

MR. VOLLMER: Yes, their reanalysis consisted in many cases of a detailed check list. In some cases they found it necessary to go in and do detailed calculations because one couldn't tell from the more cursory review of the adequacy of the system.

COMMISSIONER ASSELSTINE: Yes, when I read the supplement to the SER and the license condition, for that matter, it was a little confusing to me what the utility had actually done, because Harold mentioned recalculation, but I see review of reanalysis...

MR. VOLLMER: I think review is the proper work which...

COMMISSIONER ASSELSTINE: But you didn't go back and calculate every one.

MR. VOLLMER: ...which in some cases did involve recalculation, but not necessarily a complete reanalysis.

COMMISSIONER ASSELSTINE: What was the criterion for deciding which ones they had to go back and completely recalculate, and which ones they simply had to go back and review or reanalyze, and what's the difference between review and reanalyze, versus recalculation?

MR. VOLLMER: Let me ask the task group leader on that, Mr. Manoly, if he'll answer it. Mr. Manoly is the inspector from Region I.

MR. MANOLY: Yes.

COMMISSIONER ASSELSTINE: Did you get the question?

MR. MANOLY: Yes. My name is Karl Manoly, NRC Region I. The question is about the criterion that they used

for the review of the calculations?

COMMISSIONER ASSELSTINE: Yes, to decide whether to fully recalculate or to review or reanalyze, and if you can tell me what the difference is between review and reanalyze and fully reviewing the calculations.

MR. MANOLY: The licensee had developed three instructions that was used as the basis for the review process.

And the review was done based on these instructions that we had approved and gone through with with the licensee.

Sometimes the review (Inaudible) five things that were minor or major, but we had to check it out on the list it, anyhow. And some required analysis. But really based on the judgment of the reviewer, whether he had to do reanalysis or not.

COMMISSIONER ASSELSTINE: You mentioned there were three instructions?

MR. MANOLY: Three instructions.

COMMISSIONER ASSELSTINE: And that governed the decision about whether you had to recalculate or whether the review was enough.

MR. MANOLY: Yes. There were many geometric differences between what was done initially and what the geometry support looks like.

The reviewer might elect to reanalyze the supports

using computer, again, just to confirm the original judgment that was done, maybe done on approximations.

COMMISSIONER ASSELSTINE: How much discretion does that give to the individual reviewer, the utility's reviewer, in deciding whether to do the recalculation or whether simply to just do a review?

I guess what I'm trying to get a sense of is how much confidence can we have in the portions that were simply reviewed as opposed to recalculating?

The sense I had, when we talked about this issue before, was that everything was going to be recalculated.

MR. MANOLY: Not everything.

MR. DENTON: Let me refer to you for the specific, but just keep in mind the re-review was not done by the on-site engineering group which was the cause of the problem.

They were done by the headquarters San Francisco office, which we had reviewed in connection with the IDVP and other calculations.

So it was not the same group doing the work over. It was brand-new individuals who had been involved in the IDVP. I'll let you answer the details on how they decided.

MR. MANOLY: When you get to design, there are a lot

of things that you know from experience, as you do it over and over, how much the change in results can be.

And really, that's here the key issue, is you look at the calculation package, and you know that the numbers have changed by a few inches here and there.

What kind of change in results can it be? And designers with more experience can make that judgment (inaudible) on other guys with less experience.

And that's what we tried to do when we went there with our team, is to see if the judgment when it was made, was adequate or not.

And we found that most all the time, the judgments happened to be proper, in some cases where there were a few dimensional differences they had decided not to go (inaudible).

So it was just a matter of (inaudible) that we had to go up and redo it over again.

COMMISSIONER ASSELSTINE: Were there instances in the few that you all actually audited in which you weren't satisfied that reanalysis was sufficient and directed that they actually do a recalculation?

MR. MANOLY: No. We didn't require them to do any reanalysis or any reevaluation.

You have to realize that these inspections were done on-site and checked and reviewed, and then in San

Francisco was a different team of engineers that relooked at these packages, rechecked them.

So it had gone through two cycles of (inaudible) checking and review.

COMMISSIONER ASSELSTINE: Okay.

CHAIRMAN PALLADINO: Okay.

MR. MANOLY: Thank you.

COMMISSIONER BERNTHAL: I had one specific question, and I don't know whether there's an overlap here or not.

But we talked a few minutes ago about the reinspection of pipe supports and especially the Lawrence Livermore Laboratory had done a good deal of that.

Is there necessarily any overlap at all between these two?

MR. MARTIN: Well, I was thinking about that. What we did and what the Livermore people did was check them against the drawings that applied.

Now I think when they checked the calculations, I guess we did not coordinate these at all.

We took Livermore and turned that--you know, they've been operating sort of independently here for months on end.

COMMISSIONER BERNTHAL: Yes. Yes.

MR. MARTIN: Sort of off quite separate from the rest of this.

MR. VOLLMER: They were so independent, I think, at one time the two groups met head-on crawling along a steam line and said, "What are you doing here?"

(Laughter.)

But I think the focus of the Livermore work was more with, did it meet the hardware criteria for installation, were the welds appropriate, and so on.

So we looked more at the design. But confirmatory, we certainly didn't stop there. We did look at the hardware also.

I think if I could characterize the thrust, ours was more design and theirs was more looking at the adequacy of the hardware as installed.

COMMISSIONER BERNTHAL: On the outside chance that there might have been, did you check to see whether there was overlap, significant, I should say, overlap, between what they did and what you've been doing?

Are there any conclusions to be attached to that, if there was? I guess it would be random chance, if there were.

MR. VOLLMER: No, we have not. I have not, anyway. My group has not.

MR. DENTON: They're different activities, and I

think just to reiterate what Jack said, he was checking to see if they were built the way the drawings said.

COMMISSIONER BERNTHAL: I understand.

MR. DENTON: And then you can look upon this effort as saying, were the drawings correct.

MR. BISHOP: We are aware of some overlap. The degree of that, I ...

MR. DENTON: I didn't mind it at the time. I think, Jack, you started your effort before the peer group got started.

It seemed worthwhile because of the issues in this, just to keep both groups going, and get a double look at certain things.

MR. MARTIN: Well, essentially, one's looking at construction quality and the other at design.

CHAIRMAN PALLADINO: Any more, Dick?

MR. VOLLMER: Finally, if I may, during the second of the main issues, namely, that of the Independent Design Verification Program, we had a five-member review group, which spent time at the NRC offices and over three days at the offices of Robert Cloud, where a lot of this work was done.

And discussed in detail and looked in detail at some of the packages that they had put together in forming their judgments for IDVP.

We got some packages out of storage, we focused more on their decision criteria, and how they decided whether or not something was generic in nature or could be dismissed as a random error, and came with the conclusion that the previous staff conclusions and the Teledyne conclusions regarding IDVP remain valid, that is, we felt that the process met guidelines and criteria set forth by the Commission originally.

The last item was that of the on-site project engineering group, the programmatic issues, and this group, as we indicated, had been the subject of a number of allegations and these had in many cases been substantiated that they exceeded their authority, procedural authority to do work.

They had been given the directions by memoranda, and they didn't follow, in some cases, the correct QA practices.

We reviewed, actually, in large part, work done by that group under License Condition 1. In addition, on June 14th, the licensee rescinded the responsibility and authority of this group to do safety-related work, which would lead to a final engineering package or hardware modification.

Since the review group was focusing on the adequacy of the actual work and since the licensee revoked

responsibility of that group, we reoriented our review plans and sent a team to the engineering and site offices to audit the licensee's effectiveness in removing the engineering authority from this group doing safety-related work, and in transferring it to the offices in San Francisco.

Our report to this audit has not been issued yet because this took place a week ago, concluded a week ago, but I've been told that the conclusions of that group are that the licensee's efforts in this area were effective.

We felt that really mooted the issue since despite the perhaps poor procedural aspects used in the work done by this group, we felt that we had a good handle that the technical adequacy and engineering adequacy was adequate.

I've asked each member of the peer review group to review the group report and my comments of today, and there was concurrence in both of those.

As Harold indicated, most of the review group are here and would be happy to go into whatever detail the Commission wishes in response to your questions.

COMMISSIONER ASSELSTINE: I had a few more questions about a couple of specifics in the peer group report.

One was on page 1-5. Under item number four, say, "Considerations of seismic loads on support structures resulting from the self-weight excitation of the supports were accounted for in some supports and ignored in others.

The task group determined that such considerations should be included in the evaluation of small bore and large bore pipe supports where it is significant.

The evaluation, however, need not be completed before ascension to full power."

Would you tell me what the basis for the judgment is that that deficiency does not have to be corrected until after full power?

MR. VOLLMER: Kamal, Do you want to address this? I'm still trying to find it. I hope he heard it.

COMMISSIONER ASSELSTINE: Page 1-5, about the top half of the page.

MR. VOLLMER: Okay. Did you hear it?

MR. MANOLY: Yes. Your question is how significant the contribution of self-weight excitation is to the-- usually in the design of pipe supports, the support is small and basically a small component.

You don't consider excitation of the structure itself. As supports get bigger, when you have multi-support or some large frame supporting, then (inaudible)

contribution on the weight becomes bigger and sometimes you have to reach around a long way to reach the pipe, which results in bigger members.

For those, effective self-excitation becomes more considerable, and from what we've seen that they have addressed in some of that, some were not considered.

Some we don't expect that they should be considered, but for a sake of completeness, we ask them to review all the supports and include the self-weight excitation.

In our judgment, it's not going to affect the overall margin of support like significant amount that you would lose a lot of your monitoring from the self-weight excitation.

COMMISSIONER ASSELSTINE: Okay.

MR. MANOLY: There is enough adequate margin in the support, even if you have that additional stress from the self-excitation is not going to be exceeded.

COMMISSIONER ASSELSTINE: Okay. And you're satisfied that there aren't any of them out there that have larger components or pipes on them as well, so that...

MR. MANOLY: Well, they are doing that effort now, and they committed to completing it by October first.

COMMISSIONER ASSELSTINE: My second question was on

page 2-7, regarding snubbers, the last paragraph on the page. You say, "To verify the information provided in the licensee's submittal, the task group reviewed three piping system analyses."

Could you tell me what percentage that was of the total population? And is it a big enough percentage so that it gives you a high degree of confidence in the accuracy of ...

MR. VOLLMER: This is Bernie Saffell, of Battelle Columbus Lab, who was the task group leader on that area.

COMMISSIONER ASSELSTINE: Okay. Last paragraph on 2-7, first sentence.

MR. SAFFELL: Okay. We reviewed only three analyses where we looked at the analysis with the snubber and without.

We actually reviewed more than that with the support in there.

In terms of total population, I have to go back to the original submittal. Three, I believe, is of the order of like 2% or 3%. It's not a very large percentage.

But that coupled with the review we did of analyses with the supports in place, provided the confidence required to make that judgment.

COMMISSIONER ASSELSTINE: Give me a rough comparison, say, if they were basically around 100 analyses in all.

MR. SAFFELL: Oh, no. There were like--I don't remember the exact number. Just a second. Do you remember the number of snubbers within the 5D.

UNIDENTIFIED: About 30.

MR. SAFFELL: About 30 supports within the 5D.

COMMISSIONER ASSELSTINE: So you looked at 10%.

MR. SAFFELL: Okay. Without, and we looked at more than that where we just looked at one analysis as opposed to both analyses.

COMMISSIONER ASSELSTINE: You're satisfied that that's a big enough population?

MR. SAFFELL: Yes, sir.

COMMISSIONER ASSELSTINE: To give you confidence in the quality of the analysis?

MR. SAFFELL: Yes, sir. Well, as I say, those three coupled with the ones we looked at where we didn't look at the analysis without, provided that confidence, yes, sir.

COMMISSIONER ASSELSTINE: Thank you. And the last question I had was on page 4-5, under Conclusions. You say, "PG&E has identified all pipe supports for which thermal gaps have been specifically included in the

piping thermal analyses, section four of the report, identified as reference one, includes a commitment to undertake a program, to qualify the piping system supports for loads obtained with the gaps ignored in the thermal analyses.

PG&E has also committed to complete this program by the end of the first refueling outage."

Could you give me the basis for concluding that that analysis does not have to be done prior to full power operation?

MR. VOLLMER: Yes. I'd like to have Mr. Sullivan, task group leader in that area.

MR. SULLIVAN: Excuse me. I just want to refresh my memory here.

COMMISSIONER ASSELSTINE: Okay.

MR. SULLIVAN: We wrote up an explanation on a previous page, and let me read that, and then I think if that doesn't answer the question, we can go into some more of the details.

COMMISSIONER ASSELSTINE: Okay. This is on 4-4?

MR. SULLIVAN: Right. "The piping systems for thermal gaps and service above 200 degrees during normal and upset have been analyzed using as-built gaps, have been shown to meet criteria, that they do meet code criteria as they've been analyzed.

These systems have also been heated up and cooled down through hot functional testing without any adverse effects.

During one fuel cycle, the number of additional thermal cycles for these systems would be small and the as-built gaps would not be expected to change appreciably.

Therefore, the task group finds the proposed program to remove gaps from the thermal analyses of these piping systems and requalify anything as necessary by the end of the first refueling outage as acceptable." I paraphrased there a little bit at the end.

COMMISSIONER ASSELSTINE: Okay.

MR. SULLIVAN: Does that answer the question?

COMMISSIONER ASSELSTINE: Yes, I think it does. You're satisfied...

MR. DENTON: Ted, maybe you could just elaborate on this a bit. How big are the gaps that we're talking about, and what type shimming is being considered?

MR. SULLIVAN: Okay. To get all the points here, we're only talking about small bore piping and the gaps are the normal construction tolerance gaps with a maximum of 3/16s of an inch.

COMMISSIONER ASSELSTINE: I had a couple of other

questions for the staff, not based upon the SER, but based upon Isa Yin's inspection report. I don't know whether you want to hold off on that until after we hear from Isa.

CHAIRMAN PALLADINO: Yes, I was thinking that we probably ought to hear from Isa.

COMMISSIONER ASSELSTINE: Fine.

CHAIRMAN PALLADINO: The question is should we try to complete this before lunch. Perhaps, since we've been sitting here for quite a while, and I don't want to rush this, let me suggest that we break for lunch in a minute or so, then start with Mr. Yin's presentation, ask the ACRS to comment on its role, and then open to questions related to the whole topic. All right?

COMMISSIONER ASSELSTINE: Great. Good idea.

CHAIRMAN PALLADINO: Okay. Well, thank you. We'll stand recessed, and we will convene at 1:30. All right.

(Whereupon, the meeting recessed at 12:20 p.m.)

(The meeting reconvened at 1:30 p.m.)

CHAIRMAN PALLADINO: This is a continuation of our meeting, which we're considering the question of whether or not Diablo Canyon should be permitted to go up to full power.

I propose that we start the afternoon's session by

having Mr. Isa Yin deliver his prepared statement.

I would propose then to ask Mr. Ebersole, as Chairman of the ACRS, to summarize the results of their review of this matter.

I would then ask Mr. Vollmer to indicate if there are any other differing professional opinions among the members of the peer review group, and if so, to highlight them or have the individuals invol ed so indicate their position.

So why don't we begin with having Mr. Isa Yin present his statement.

MR. YIN: Mr. Chairman and members of the Commission, thank you for inviting me to present my personal view of matters concerning the issuance of Diablo Canyon Unit 1 full power license.

As you know, I was requested by the headquarters staff to participate in the NRC`s investigation of allegations concerning the construction of Diablo Canyon.

I was specifically assigned to pursue allegations in the piping design control area.

Based on inspections conducted periodically from November 29, 1983, to May 2, 1984, I identified many significant technical and QA deficiencies.

Contrary to the approach normally taken by my

Region with significant problems, no enforcement conference was held, nor was there any enforcement action taken.

No requests were made for license program upgrade, and there was no attempt to broaden the inspection areas and scope.

Defective programs such as Quick Fixes and Onsite Project Engineering Group design activities were allowed to continue until June 1984, when the licensee decided to abolish these practices.

My request to follow up on the license program revision was denied.

In the follow up on the seven License Condition items that were incorporated into the low power license, even though I was the instigator for six of the seven items, and would normally be considered to be the most knowledgeable man on the issue and details, nevertheless, I was not considered essential in the follow up review and evalation.

Peer Review Team inspection for Items number one and seven was conducted on that week on May 1984, during my vacation overseas.

Peer Review Team inspections for items number two to number six were performed during the fourth week of May 1984, when I returned from vacation and accompanied

the ACRS on the site tour.

Subsequent review of the Peer Review Team reports contained in the draft SSER revealed that they contained mostly undocumented reviews and casual observations.

There were cases where the inspection sample selected was extremely small, where problems originally identified continue to exist, where review criteria were compromised without technical justification, and where Team failed to address the specific program deficiency issues.

For the number of staff assigned and hired to work in the Peer Review Teams and the length of time spent since April 13, 1984 Commission meeting, I don't feel as though we have really addressed all the issues.

The 29-page "Concern Items on Independent Design Verification Evaluation of Large Bore and Small Bore Piping and Pipe Support Design," resulting from my review of a number of Cloud reports, were submitted to NRR for evaluation on April 25, 1984.

Although these were a part of my original planned inspection, I requested NRR staff involvement based on the considerations that, first, since NRR co-managed the program, any findings would be against our own staffers.

Second, since NRR had already accepted the program, they should be able to explain the situation if deficiencies were being identified.

The inspection was not scheduled until the week of June 17, 1984.

Burdened by long presentations, indoctrinations for the Special Review Team members, discussion on issues unrelated to the IDVP, and the unavailability of documents that had been stored in remote locations, and my personal schedule difficulties, the actual time that I spent inspecting that week was less than 12 hours.

My request was to travel back Sunday to continue the inspection first thing Monday was denied.

As you can see, I was not pleased with how NRR has been managing and resolving my inspection findings. I believe additional investigation and inspection effort is warranted to properly close out identified areas of concern.

I believe this could be accomplished in three to five weeks. This follow up inspection would provide the Commission a clearer picture of the extent of the problem or the lack of problem.

In any event, if the Commission decides to grant the Diablo Canyon 1 a full power operating license today, I shall respect the Commission's judgment and

decision, and shall cooperate fully in any follow up actions deemed necessary.

Looking back, I know that I have been honest in my work, and feel that I have fulfilled my assigned duty. Despite differences in professional opinion, I have not doubted the NRR management's honest and integrity, and wish them the best of luck in handling the many other ongoing troubled facilities.

Thank you.

CHAIRMAN PALLADINO: Thank you, Mr. Yin. I do want to commend Mr. Yin for his forthrightness in coming forward with his comments.

It's always distressing to have differing professional opinions in any field, but we have to cope with them.

And the Commission, recognizing the implications of differing professional opinions, asked the ACRS, the Advisory Committee for Reactor Safeguards, to look into the matter and give us its judgment.

We have with us today Mr. Jesse Ebersole, the Chairman of the ACRS, and at this time, I would propose to have Mr. Ebersole highlight the results of their review.

MR. EBERSOLE: Thank you, Mr. Chairman. It's not always that the ACRS letters to you are models of

brevity and clarity, but I think maybe this is an exception, so I can read the gist of it. It's hardly one page. I think it covers the problem efficiently.

During the 291st meeting on July 12-14, 1984, the Advisory Committee on Reactor Safeguards completed its review of a draft report prepared by the Diablo Canyon Peer Review Group, as requested by your memorandum dated July 9, 1984.

This matter was considered during a subcommittee meeting held in Washington, D.C., on July 11, 1984. During the review, we had the benefit of discussions with members of the NRC staff, including NRC inspector, Mr. Isa Yin, representatives of the Pacific Gas and Electric Company, and representatives of the Independent Design Verification Program.

We also heard statements from two members of the public.

The draft report of the Peer Review Group relates to activities undertaken by the licensee in accordance with the seven conditions imposed by the Commission and the low power license for the Diablo Canyon Nuclear Power Plant Unit 1.

The report also addresses issues raised regarding the scope and effectiveness of the IDVP and concerns related to the quality assurance aspects of

the work done by the on-site engineering group. The Peer Review Group has concluded that the seven license conditions have been addressed satisfactorily by the licensee, that the previous conclusions of the NRC staff regarding the acceptability of the IDVP remain valid, and that the programmatic issues concerning the on-site engineering group have been resolved.

Although Mr. Yin participated to some degree in the reviews made by the Peer Review Group, he has concerns about the extent of the reviews and the judgment of the basis for some of its findings.

We believe that Mr. Yin's concerns represent a difference in professional engineering judgment.

We believe that the Peer Review Group's review of the licensee activities was adequate for the purpose.

We agree with the conclusions reached by the Peer Review Group, that the issues discussed in the draft report have been resolved, and should not prevent operation of the Diablo Canyon Nuclear Power Plant Unit 1 at full power.

CHAIRMAN PALLADINO: All right. Thank you.

MR. EBERSOLE: That is our summation of the problem.

CHAIRMAN PALLADINO: All right. Let me suggest, before we open up to questions, that we might hear from

Mr. Vollmer, with regard to the evidence of any other differing professional opinion on any aspect of this review and any comments he wishes to make on these two presentations, then open it up to Commission questions.

MR. VOLLMER: Mr. Chairman, I can only say, as I indicated earlier, that the report has been sent around to the individuals as recently as this week.

Each member of the group was asked to comment on it and asked if we had concurrence. I'm not aware of any difference in the group with respect to the ingredients of the report, or the remarks I made here today.

I would ask if there is anybody who may wish to comment, that they would do so. I don't see any.

CHAIRMAN PALLADINO: Are all the members of the Peer Review Group here?

MR. VOLLMER: All with the exception of Mr. Heishman and Mr. Fleck of ETEC. As I said, they were asked specifically for their comments on the draft report, and this week, they were all delivered a copy of the full report, with the remarks that I made to you, at least the ones I had written down, and asked for their concurrence.

I had no comments from anybody.

CHAIRMAN PALLADINO: All right. Do you have any further comments?

MR. VOLLMER: No, sir.

CHAIRMAN PALLADINO: Okay. Thank you. Open to questions from the Commission.

COMMISSIONER BERNTHAL: Well, I just wanted to--I believe you touched on this before, Dick, but maybe it bears repeating.

Slide ten of our briefing file here is headed "Conclusions of Peer Review Group" and I just wanted to ask a general question, not just at you, but also of whoever may wish to speak for the outside members of Peer Review Group, as to whether that means that the members of your group unanimously or not unanimously, I would like to know, in fact, have reviewed those conclusions and all agree with them?

Or what is the situation? Obviously Mr. Yin does not agree with them, but what about the rest?

MR. VOLLMER: Again, I asked for their concurrence on the substance of these conclusions, just taken out of the report.

COMMISSIONER BERNTHAL: Those conclusions, yes.

MR. VOLLMER: And again, I've gotten no feedback to the contrary, and all my communications with them have been positive.

I would say that I would ask them to stand if there were any comments to the contrary on these conclusions.

My understanding is there are not.

MR. DENTON: Mr. Vollmer polled the group and no one had any differing view, but since they're all here, maybe we just ought to be sure that if anyone does feel differently, they can stand up and say so.

COMMISSIONER BERNTHAL: Is there anyone that would care to make a comment, particularly if you differ with the general conclusions that have been presented?

MR. VOLLMER: I might indicate I asked Mr. Sullivan, who is my technical assistant, to go around and poll everybody after this meeting started, and the results, as I understand, are negative.

Nobody has any comment, and they are supportive of the conclusions.

COMMISSIONER BERNTHAL: Okay. Thank you.

CHAIRMAN PALLADINO: Other questions?

COMMISSIONER ASSELSTINE: I have just a couple. One of the things that troubles me a bit about the reviews, both of the staff, the Peer Review Group, and the ACRS, is that it seems to me the sequence of things got a little mixed up.

We received on July 30th, a board notification that includes Mr. Yin's detailed inspection report of July 26th.

That report, it seems to me, reading through it,

includes a great deal of detail in terms of Mr. Yin's inspection findings over the past several months.

I gather because of the date of that document, that that was not part of the Peer Review Team's review, or before the ACRS at the time that the ACRS provided its advice.

Is that correct on both of those scores?

MR. VOLLMER: The draft? I recall revision 3, or 2 or 3 of his inspection report, really formed the basis for the initiation of the Peer Review Group work.

I can't personally answer for how different this particular report is than that version, but when we received this, I sent copies to the members of the Review Group and asked them the areas they were responsible for, to take a look at Isa's final inspection report, to see if it made any difference, any changes to their conclusions.

COMMISSIONER ASSELSTINE: Has that review been concluded?

MR. VOLLMER: Since I sent it to them, I don't know. I would only have to assume that they received it about probably the beginning of this week, and they were asked to look at it.

I would have to ask them individually if they've all looked at it. I don't know.

But again, I'd have to ask Isa if the substance of the report was the same in the revision 2 and 3, I believe, that we really initiated our review on.

MR. DENTON: I think the differing views, Commissioner, go beyond the factual basis in the report.

That report would not settle the issue one way or the other.

COMMISSIONER ASSELSTINE: Although if this was the basis, if an earlier version of the inspection report was really the basis for the Peer Review Team's review, as Dick indicated, then it seems to me it would be interesting to know whether the final version differs in material respects from the items that were covered in the earlier version.

MR. DENTON: We will look at that, Commissioner, but what we really looked at was the company's response to the seven issues in the license conditions.

And the differing views on that were the basis for the principal review.

COMMISSIONER ASSELSTINE: I had three questions about the Peer Review Team's agreement or disagreement with three items in Isa's inspection report.

One's on page 17, where Isa says, "The staff (meaning him, I think), concluded that the

administrative controls imposed on the site engineering activities have been inadequate and ineffective. The specific allegation items were substantiated."

Did the Peer Review Team agree with that conclusion, Dick?

MR. VOLLMER: As I had indicated, we did find that there were areas that the on-site project engineering group exceeded their procedural latitude in the things that they reviewed.

I think they're documented areas where they did not use the right procedures and did not have adequate training, or at least training called for by the quality assurance procedures.

Again, we did not probe to verification of that one way or the other. That was taken as a given, and looked rather to go for the end product and see if the end product, to the extent we could tell, the same project again had gone through a PGD review to the extent of the small bore piping calculations and see if the engineering judgments were supportable in that end product, and we found that to be the case.

COMMISSIONER ASSELSTINE: Is that basically true for all of Mr. Yin's negative findings in the inspection report that you accepted all those as having been established and as a given?

MR. VOLLMER: Well, to some extent, Ithink in the areas of programmatic review, I think clearly both the audits that Mr. Yin had made, and, as we look back, audits that were made by the IDVP, would bear out the fact that these deficiencies did exist.

And so one can't do anything about a past QA deficiency except look at the current adequacy of the engineering and the hardware, and that's what we focused on.

We didn't really spend too much time on that, I would have to say.

CHAIRMAN PALLADINO: Another question?

COMMISSIONER ASSELSTINE: I had one other one that I just wanted to go back and clarify with Dick, from our earlier discussion about the SER.

I want to make sure I understand what you found in the audits of the PG&E corrective program. If I understood what you said earlier, when you did all of your audits for the Peer Review effort, you did not find any errors or any discrepencies in the review work that had been done by PG&E or the reanalysis work that had been done.

You agreed in every respect with the process that they had used, in doing the review, and the reanalysis, and you agreed in every respect with the conclusions

that they had reached.

Is that an accurate characterization?

MR. DENTON: I think any and all are two words I've stopped using, because in fact...

COMMISSIONER ASSELSTINE: In all significant respects.

(Laughter.)

MR. VOLLMER: We did, again, find an area, for example, which I had indicated in the unsupported braces, where we felt that the licensee's evaluation of that was something that we couldn't support, and again, it was his engineering judgment which may, if you did a sophisticated and detailed calculation, could perhaps be borne out.

But we felt and we judged that it was better to go in and fix those. I mean that's three instances out of quite a number of cases.

But to answer your question more specifically, I think I'd have to ask Mr. Manoly to come up and correct me if there's any more detail he wants to add.

It's my understanding that we found that the licensee did, indeed, follow the procedure that he had agreed, that had staff agreement in its appropriateness to do the review for these calculational packages.

As I understand it, we did not find him deviating from that. That doesn't mean necessarily that since our audit was like 6%, that there could not have been deficiencies if one had done a more complete audit.

COMMISSIONER ASSELSTINE: But at least for the items you audited, by and large, you are satisfied both with the process (inaudible) and with the results (inaudible).

MR. VOLLMER: Both with the process and the results, yes, sir.

COMMISSIONER ASSELSTINE: As identified. I take it, in at least some areas, the applicant's review process did identify deficiencies that had to be corrected.

Can you give me a qualitative sense for how much of those deficiencies were in items that were covered by the IDVP and the IGP?

MR. VOLLMER: I'm going to ask Jim Knight to try to address that, since he is ..

MR. KNIGHT: Jim Knight, from the staff. When you say qualitative, it becomes difficult to...

COMMISSIONER ASSELSTINE: I thought it would be easier than ...

MR. KNIGHT: Well, not really, because...

COMMISSIONER ASSELSTINE: Quantitative is fine, if

you can.

MR. KNIGHT: Strictly speaking, the IDVP looked explicitly at small bore piping.

COMMISSIONER ASSELSTINE: Yes.

MR. KNIGHT: In the process that evolved was the IDVP first finding a number of problems and then declaring that either the sample had to be expanded.

I'm going way back to the beginning of the IDVP program.

COMMISSIONER ASSELSTINE: Yes.

MR. KNIGHT: That the sample had to be expanded or at least that was the initial path, and then PG&E deciding that they would start the in essence what would become the Diablo Canyon project and go back and do essentially a complete review.

And again, to be careful of words, there was some groups that felt they could, for good reason, could be excluded from an explicit review, but look at all the areas that needed to be looked at.

Following the IDVP, again, look at samples of the completed work, and in fact found, again, one might say, some problems.

And throughout this whole process, we're in an area where strictly speaking, any deviation from the process or any deviation from a criterion is identified as a

deficiency. These deficiencies have broad spectrum of significance.

The IDVP looked at the overall process, they looked at the quality of work that was being done, they looked at the nature of the deficiencies they found, and with some exceptions, they did say go back and review.

One that has become a classic is the use of certain stress intensification factors. They felt that was too broadly occurring, so they sent the people back to look at those.

But when they were through, they were satisfied from the IDVP's mind, that there was an effective engineering job being done, and they so declared, based on our review of activites, the quality of the people they had assigned, the methodology they were using, we concurred with that.

A long way to get to your answer, but now we come to the era where...

COMMISSIONER ASSELSTINE: Right.

MR. KNIGHT: Isa looked at some of the results, our staff looked at the results. I looked at calculation packages that were provided to us by the intervenors.

We saw errors. Not judging for the instant that time whether or not that error was significant, there

were simply errors, and there were in the sample of packages we have, which I think now could be viewed as being a slewed sample, but in the sample of packages we had, there were enough errors so that we said, in essence, enough.

The utility should go back and review all of thos calculations, all of that class of calculation, and those were the ones done by computer.

So in an attempt to summarize my answer for you, the IDVP had looked in a quantitative sense. I cannot go back and say on support X, Y, Z, the IDVP had looked explicitly at it and then we found errors.

COMMISSIONER ASSELSTINE: I guess what I was trying to get a sense for is the original QA program said that the work was done right, and it turns out it wasn't.

Then the IDVP program said there are errors, and those errors were corrected.

Then some of the allegations and Mr. Yin's inspection identified still other errors. Now we've had another reanalysis.

What I'm trying to get a sense for is how many more errors, what kind, and how significant those were that were identified in this last reanalysis, as compared to all the work that had been done prior to that time.

MR. DENTON: Let me try to set the perspective on

this, Commissioner. What we're talking about are piping supports and snubbers, by and large.

And there are two classes of those. There are the types which you can buy off the shelf, so to speak. These are ones that are sold commercially.

You've looked in handbooks and you make sure the conditions match up. There are others which have to be designed. The Commission doesn't have detailed regulations on the design of snubbers and supports. Of course, they're governed by codes, so you find a vast diversity in how the code gets translated into a snubber or a hanger.

And in fact, the ASME Code has slowly been expanding out to pick up the design of snubbers, and maybe once the Code fully expands out there, some of the differences of opinion about how to treat certain aspects of these might go away.

But at the moment, it is an area in which engineers are free to apply their imagination, provided they meet the basic Code principles.

I think that's part of the reason that you find these kinds of things going on, and bear in mind these are passive supports.

COMMISSIONER ASSELSTINE: Yes.

These are not active things that move during normal

plant operations. The company's response to 2C2 said that there were some rigid restraints and stiffening of angle members on three small bore pipe supports and there were shimming of certain rigid pipe restraints.

So that's the kind of actions that took place based on this result that went here at the end. That doesn't answer the total question, but we're sweeping through with ever finer fishnets, looking for problems in what are passive components.

MR. KNIGHT: Perhaps, if I may, to at least share with you the basis for our confidence. When this reverification process started, after we had told the utility, "We feel that it's upon you to go back and look at all of these calculations," and again we had the discussion this morning, it did not necessarily mean recalculate everything.

What it did mean was develop a systematic documented procedure, so that both you and the staff can assure that each calculation has been treated and has been treated in the same manner as all the others and that you have, in fact, included in that treatment all of the pertinent matters that need to be considered in judging the acceptability of the calculation.

When that process first started, we sent, as a matter of fact, it was Mr. Manoly, early in the game,

out to look at the process.

Did the process that was being put in place fulfill the requirements as we saw them? Did the people who were being assigned to this job have the prerequisite experience and expertise?

At that stage, we found that they had moved the operation to the San Francisco office. These were people who had, we believed, amply demonstrated their capability.

There was certainly far tighter control over the quality assurance aspects, they have a very suitable program.

Subsequent to that, we made two more audits of these activities, each time looking at a different set of calculations, each time refreshing our own view of the process as it was being conducted, of the people who were involved and the manner in which they were conducting their work.

And each of these times we came back fully satisfied that you had a fully competent group of engineers using a well-documented and appropriate procedure and that they were, in fact, making their way through each one of the problems in a systematic way.

Another aspect that came up during discussion, did we in fact find that in each and every case did we

agree there were in fact, as one would expect from our team, some occasions where they disagreed again.

We said, "Well, that might be all right, but we think you should have made a number there instead of making a judgment."

Or, "We think instead of just skipping that step and not recording it on the sheet as an intentional thing, you should have written down that the stress in member Z is trivial, and move on."

And I would suspect that every time we went back, we'd find something else. It becomes diminimous, I guess is the word, that you'll never, in all likelihood, going to find a separate body of engineers viewing a given approach and coming to a total conclusions, I mean, total agreement.

But the substance of our work, the substance of the conclusions, and we certainly have the people here to call me if I misspeak, is that it was a very high quality, very amply-conducted program and it gives us the assurance that we should have that the job is done.

COMMISSIONER ASSELSTINE: I wonder if you could describe the kind of program that you think is needed to resolve these concerns to your satisfaction.

You mentioned the period of three to five weeks to do that. I wonder if you could just talk about some

of the key elements on what you think needs to be done to resolve the concerns to your satisfaction.

MR. YIN: Yes. Let me try. First of all, I would like to take another look at the IDVP, because the IDVP is based on the so-called Independent Design Verification Program management plan, Revision 1, dated July 6, '82.

Within the plan, it's specifically saying that if you identify the problem, you should assess the reason for the discrepency (inaudible). And you should also request additional information.

It seems to me that so many deficiencies identified in the process of performing the IDVP, and yet there was no attention of expanding this sample size.

I think that we should give another look at that issue.

The issue is very important because it is going to involve a large bore support, which is going to see a lot more load, a lot more displacement. So I think that issue is very, very crucial.

The second thing, I think the hardware problem involving the interference. We so far have not established there is an etiquette for acceptable program in the site.

To deal with that issue, that is, if you have large

bore piping that is installed to close to the electrical equipments like switch gear panels and cable trays and so on, would that be a problem during the seismic event, would that large bore would swing excessively, that may damage those electrical equipment.

There is also a lack of program addressed at whether or not the pipe itself will be damaged by hitting the structures.

Furthermore, there is no program addressed as to whether or not the distribution of loads will change that would cause a large overloading on the equipment, such pumps and turbines, which is vital in the operation of the systems.

In addition to that, I think it's also important for us to take a look at the revised program, the abolish of quick fixes at the site, the abolish of the design activities that was ongoing even after the problem was identified, for more than six months, and what kind of an impact that has for Unit 2, for instance, because while we're talking about the bottom line with Unit 1, one should not forget there is also Unit 2 going on.

So these are the several things I can think of right away, and also I would reevaluate all six of my

seven items. You know, (inaudible) in the sample size, for instance, outside of the 15,000 so-called quick fixes, the staff had inspected four hangers.

And I think that the sample size is extremely small, and if I would go back and take a look at at least 40 of them.

So these are the kinds of things I would look at. (Inaudible) up the sample size, do more in depth review, and above all, I would document everything I see, (inaudible) and then draw my conclusion, not just draw the conclusion based on my personal feelings, but based on the data that I obtained during my review.

CHAIRMAN PALLADINO: Isa, do you get the impression that the individuals on the Peer Review Group did not keep track of the data so that they had a basis for a decision?

Are you saying that they just went on feeling? I'm not quite clear what you're implying.

MR. YIN: The items, as you see my testimony, item one and seven was done within about a week and then a follow up for a couple of visits, in none of them I participate, so I don't know what they have reviewed.

Items two to six, which is five items, is all closed out within less than a week. So I think that was lack of time to look at it in detail.

To me, you have set a schedule and tried to meet the schedule. Of course, you have to work and chose a limit for the time.

But it seems to me that we should not really be bound by the scheduling restraint. We have identified problems, we should look into it deeper and follow in our scope of inspection.

COMMISSIONER ASSELSTINE: Dick, let me ask you about the quick fix items that Isa just mentioned. In fact, is that right that you look at four out of 15,000 items?

I'm no engineer, but that sure--if that's right, that sure seems like a small sample size to me.

MR. VOLLMER: Let me ask Bob Bosnak to tell you what went on in that area. It's a very important area. Bob?

MR. BOSNAK: I'm Bob Bosnak. We looked at about 50 of the items, and we went down to the site and we singled out some 4 to 5 to look at, and we looked at actually more, but we documented, I think, the four that Isa is pointing out.

But at PG&E offices, we did look at at least 50 of what we call the TC, tolerance clarification packages.

We also looked at the Diablo problem packages. There was another (inaudible) in license condition six. We

looked at about 25 of those. And this did not take place over a period of a week; we were at the site for a period of a week and in the offices in San Francisco.

But there were several weeks before that and several weeks after that while we were going through and drawing our conclusions, phone calls, and other meetings with PG&E to make sure we understood what we had.

COMMISSIONER ASSELSTINE: You said you looked at 50 items, but you documented four?

MR. BOSNAK: We documented four of the ones--we actually documented more, but if you look in the supplement, supplement 25, you'll see approximately 50 of the ones that we did review.

The four that Isa mentions were the ones that we looked at at the site. We actually look at others which we didn't document, but these were ones that were brought to our attention, in fact, the night before one of the meetings that we had, transcribed meetings, with one of the allegers.

CHAIRMAN PALLADINO: I wonder if I could understand. You're saying you've looked at the calculational package to see whether or not they had adequate clearance under design conditions.

MR. BOSNAK: We looked at calculational packages to

make sure that we understood what was there and that the changes that were made were correctly made, that they were analyzed properly.

Then when we went to the site, we looked to see that they did represent as-built conditions, and that was what we're talking about, about four or five.

We didn't really have, during the one day that we were there, a longer period available, but we felt that was sufficient.

If we found any that didn't agree with the as-built packages, the calculational package, we felt we would have to go back, but we didn't. We didn't find any of those situations.

CHAIRMAN PALLADINO: So you looked at the as-built clearance and compared it with ...

MR. BOSNAK: Some supports were actually changed in configuration. We looked to see that, to see if that was true, and that the package that we saw represented the as-built condition, and that was exactly what we were looking for when we went to the site.

COMMISSIONER ASSELSTINE: How much were time constraints a factor in terms of deciding how much to look at, how much to look at actually in the plant, which ones to document, how many items to document?

Was that at all a factor, or did you have free reign to do whatever you wanted, and you just didn't feel like you needed it documented?

MR. BOSNAK: If we had wanted to go back and spend several more days at the site, we could have, but we didn't feel that was necessary.

MR. DENTON: I gave this group top priority.

CHAIRMAN PALLADINO: Wait. Just one question. Did PG&E check the as-built clearances, or did some subcontractor check the as-built clearances more than just the case that you spot-checked?

MR. BOSNAK: No, this was done by the company. All of these were checked by the company.

CHAIRMAN PALLADINO: But was it checked by the company? That's what I'm asking.

MR. BOSNAK: Yes, they were.

CHAIRMAN PALLADINO: So that's consistent with the way we do many things.

The company does the work and we do spot-checking, not only the calculations but also ...

MR. BOSNAK: While we're at the site, we actually check these ourselves, the several that we did. This was the group itself. But all the rest were checked by the company.

COMMISSIONER BERNTHAL: Let's see...excuse me.

CHAIRMAN PALLADINO: That's important. The impression I was getting was that nobody had checked these.

MR. BOSNAK: No, that's not correct.

CHAIRMAN PALLADINO: Okay.

COMMISSIONER BERNTHAL: Let me see if I understand, though, Mr. Yin. You're not disputing that those particular ones may have turned out to be correct.

You're disputing the sample size primarily, is that the point?

MR. YIN: Let me clarify. There are really basically two issues involved, and we seem to be mixing it up.

The first issue involving whether or not those quickly fix documents have been reviewed by the Bechtel home office engineers.

That was one issue. And the Peer Review Team had picked 50 to review, and they have identified, indeed, those have been reviewed. The second issue is whether or not the as-built drawing that was sent over to the home office indeed represents the hardware condition at the site. And based on the allegation made during the May 22nd, they have showed us that indeed there was (inaudible) some other things that was not included

into the as-built package. So I think it's important to assure ourselves, based on a larger sample size, that the people, that the engineer received at the Bechtel home office, indeed representing the real thing at the site, and I don't think four is representative for the whole picture.

CHAIRMAN PALLADINO: But that was an audit to see whether or not PG&E had done its job right.

MR. YIN: That's correct. So far, what we have done is all auditing of PG&E's effort, everything they're supposed to do.

We just audit them to see if they have done it correctly based on procedures, and whether or not even the procedure is adequate itself.

MR. EBERSOLE: I'd like to comment on one of the items that Isa mentioned, the abandoned bolt holes and abandoned anchor bolts are one of the things that was brought to our attention.

And this is something that is not normally shown on as-builts. It was checked by our structural people as well.

But we did record that as a result of the meeting, and we did look into it. And this particular item is something that's not normally recorded.

MR. YIN: Well, the abandoned bolt holes and also

added-on (inaudible) additional (inaudible) welding on the existing (inaudible) plane, that could have effect on the base plate itself, all these things should be included, should be a factor.

Even some of the welding configuration was different, based on the material the alleger presented during the evening meeting on May 22nd.

So I think it's important that we look even more and deeper in that area.

MR. EBERSOLE: We did look at that particular support, we looked at the change in material of the anchor bolt, and we saw that the calculations were revised.

So we felt we followed through on those particular things. We noticed wing plates on support base plates that were properly recorded in the as-built drawings.

So again, for the things that we looked at, we had no problems.

CHAIRMAN PALLADINO: Other questions by commissioners?

COMMISSIONER BERNTHAL: Let me ask a further question on the statistical sampling issue that Jim has raised.

I hope I'm not asking you to be repetitive here, but I'm still sitting here, whether it's four that you

checked carefully, or whether even if it's 50 out of 15,000, I guess it was, can you give an argument that in fact one should not assume strictly statistical sampling here?

I presume from what you've said that these were selected based on some sense of, first of all, from what Mr. Yin said, and I presume other reasons which maybe you can inform me about, on where you thought you might find problems.

Or are all 15,000 equally suspect, and was it truly a random sampling?

MR. BOSNAK: Well, we looked at some because they were singled out to us by allegers. We looked at others just based on a random sampling.

We went beyond what the company looked at. They looked at 2,000 out of the 15,000. We look at several other, and what we were trying to determine was whether or not there were any things that were significant.

If we had a fix that was insignificant, in other words, just a minor clearance problem, there's no problem.

But where a design base plate or design support configuration is changed, we wanted to be sure that that was, in fact, gone through and reanalyzed.

And all of these things were reanalyzed. That's

the point that, when I mentioned the 2,000, the 2,000 were looked at to see if anything, you might say, slipped through the program and was something that shouldn't have been done, shouldn't have been done by the quick fix program.

And yes, we did find that. That was one of our findings. There were things that should not have been quickly fixed; they should have been done by an engineering field change, but they were not.

So then the question is, were they all analyzed. Yes, they were, and that's the total of them, not 2,000 out of 15,000.

COMMISSIONER ASSELSTINE: All 15,000 were looked at?

MR. BOSNAK: Correct.

COMMISSIONER BERNTHAL: All 15,000 were looked at. And now I am not getting...

COMMISSIONER ASSELSTINE: I don't understand the 2,000.

CHAIRMAN PALLADINO: I didn't understand that. I was going to come back with you.

COMMISSIONER BERNTHAL: Was yours a second order look at the 2,000 that were looked at by the company?

MR. BOSNAK: We looked at the 2,000, and then we looked at some additional ones that--again, they were

trying to identify which slipped through the TC net, which should not have been done by the quick fix program.

CHAIRMAN PALLADINO: Could you explain the 2,000 and 15,000 again?

COMMISSIONER ASSELSTINE: What did PG&E do for the full 15,000 as compared to the 2,000?

MR. BOSNAK: Let me go back to supplement 25. There were approximately 15,000 TCs. The licensee re-reviewed 2,000 of those 15,000.

This is what he did. And in order to determine which of those contained what I'd call significant design changes that shouldn't have been in the TC program.

With those, he made the determination that the as-builts and the calculations agree. We looked at 50 TCs, and not necessarily out of the 2,000 that he re-reviewed.

COMMISSIONER ASSELSTINE: Why wasn't the licensee required to look at all 15,000?

MR. BOSNAK: He was to determine by the license condition which one of those, which of those exceeded the--which deviated from the program scope.

COMMISSIONER ASSELSTINE: So 2,000 of the 15,000 deviated from the program scope.

MR. BOSNAK: No. No, he looked at 2,000, and he found that there were, I think, he found somewhat in the order of 40 or 50 of those that deviated from the program scope in significant design changes.

We looked at additional samples and we found others that deviated from the program scope, but the bottom line was that irrespective of whether they deviated, that was a finding of the group.

They did deviate from their program, and that was one of the reasons that the company terminated the program.

But all of these things that had significant changes were checked to see if the as-built condition and the design package were in agreement, and they were.

These were on the significant changes, and we looked, as we said, at 50. This is the task group itself.

COMMISSIONER BERNTHAL: So the licensee looked at 2,000, found 40 or 50 deviations from the scope.

CHAIRMAN PALLADINO: What do you mean by "looked at"? Excuse me. I don't understand what he means by the word "look at." That's my problem.

COMMISSIONER ASSELSTINE: Re-review was his word.

MR. BOSNAK: This was a rather large program to

decide...

CHAIRMAN PALLADINO: Are you looking at the equipment, are you looking at calculations, are you looking at analysis method?

Then I can follow.

COMMISSIONER ASSELSTINE: Or both?

CHAIRMAN PALLADINO: Or both.

MR. BOSNAK: Both.

CHAIRMAN PALLADINO: Well, I think we ought to--if we're going to go in this depth, we ought to understand it well enough so that we can use it in our judgment.

MR. BOSNAK: If you look at page 6-9, if you'd like to get into the depth that you're indicating, Table 6-1 is the summary of the company's review findings.

It gives you an idea of just exactly the type of differences that they found, and whether or not they were significant.

We talked to some of the people that made the decisions on whether they were significant or not.

They depend on whether or not a support base plate or a support configuration was changed so that the original analysis no longer applied.

For instance, weld sizes may have changed. The dimension of the base plate itself may have changed, so that the original calculations are no longer valid.

That was the significant change. If it was a minor move, a very small change in just the location of the support, it was not a significant item. That was properly part of the program scope.

COMMISSIONER BERNTHAL: Let me finish my question, if I may, Jim, so I understand what we're talking about here.

The company looked at 2,000. They found 40 or 50...

MR. BOSNAK: That should not have been in the TC program.

COMMISSIONER BERNTHAL: Right.

MR. BOSNAK: That was the conclusion.

COMMISSIONER BERNTHAL: And you looked at an additional 50, is that what you told us?

MR. BOSNAK: We looked at a total of 50. Some of those were of the sample of the 2,000, and some were not.

Some went beyond there, and we found also in the ones that we looked at, things that were significant.

COMMISSIONER BERNTHAL: Four or five, you said?

MR. BOSNAK: No. Four or five were the ones that we looked at at the site.

COMMISSIONER BERNTHAL: I'm sorry.

MR. BOSNAK: We looked at 50, and we found, I'd

say, approximately 20% of the 50 were from things that the company did not look at.

And the other 80% were a re-review of what the company did.

COMMISSIONER BERNTHAL: Then I guess I have to go back and ask the same question that Jim asked, since it seems like your finding rate is about the same for your sample as for the company's sample.

Why do you stop at 2,000? Maybe I'm missing the point here.

COMMISSIONER ASSELSTINE: Yeah, I guess I still don't have a feel for what the criterion was for selecting the 2,000 and why it was viewed as appropriate for the company only to look at 2,000 as opposed to some larger sample.

MR. VOLLMER: The company looked at a relatively large sample, to 2,000, to see which of those did not properly fix in the program guidelines that were set up for this so-called quick fix (inaudible).

They found a certain amount. We took another sample, we found a certain amount.

The key point here is, that seems to be getting lost, is that in reviewing in detail these packages that accompany each of these (inaudible) changes, we did not find technical problems with them, despite

whether or not they were done properly by the program or improperly.

The point is that the engineering and the end product of all that we sampled--correct me if I'm wrong, Bob--was adequate engineering, had been used, and the margins of safety required by code and regulations had been preserved.

So irrespective of which way, which direction those particular things took, when we looked at the bottom line engineering, if you will, we found that to be adequate.

COMMISSIONER ASSELSTINE: That's useful information. I guess I'm still wondering, though, why at the outset, before we knew all of that, we told them for the small bore piping calculations, we want you to do 100% re-review, for quick fix items, you only have to look at a sample of 2,000 out of 15,000, which I gather...

MR. BOSNAK: For small bore, there were calculational errors found by the staff. That was about a 20% error rate, so we felt that it was advisable to go back and redo those.

Here we did not find those kinds of things. In the sample that the staff did of the small bore piping, that was the error rate that we found.

And we felt that was not good enough. Here we didn't find it.

COMMISSIONER ASSELSTINE: In the other aspects of the other elements of the Peer Review Group effort, is there a similar judgment made that in other instances other than these small bore calculations we did not require the company to go back and do 100% re-review?

MR. BOSNAK: Yes, I would say so. One of the questions that you had prior to this, Commissioner, was with respect to the IDVP.

And if you would read--and I think this might answer your question--on page 14, we did mention here, this was one of the findings that the IDVP detected the kind of random input errors of the kind which prompted license condition number one.

They did find these kinds of errors and they again used their judgment and decided that it was not necessary to go back and redo these.

They saw that they had a relatively small impact on the plant, the hardware in the plant. The only thing that we did mention, we did note that there was no mention in any of the IDRs of license condition seven, and we felt that was kind of a minor deficiency, that later also had no effect.

So the IDVP did find these kinds of things that

were found by the staff, and they used their judgment as well.

COMMISSIONER ASSELSTINE: I have a question for Jesse.

MR. EBERSOLE: Yes.

COMMISSIONER ASSELSTINE: A little bit on a little different subject. Jesse, when you all sent us your April 9th letter, you and two of your colleagues had included an additional view, where you said, "Prior to an ascent in power above 5%, the NRC staff should prepare a document discussing in considerable detail how the various relevant issues raised by its inspectors and others had been handled.

The NRC staff should also perform a careful examination of a selected sample of actual construction details to help assure that the appropriate quality has been accomplished.

In your view, does the Peer Review report do that?

MR. EBERSOLE: Yes, in a composite sense, we think it does that.

CHAIRMAN PALLADINO: Okay. Thank you. Well, I'm going to thank Mr. Yin and thank Mr. Ebersole. I think this question of where we come down on differing professional opinion is something that each commissioner is going to have to give careful

consideration.

COMMISSIONER ROBERTS: Mr. Chairman, could I--I hate to knit pick, but I think the ACRS quite accurately in their letter said, "We believe that Mr. Yin's concerns represent a difference in professional engineering judgment."

By the NRC manual, a difference in professional opinion is a well-defined procedure, and that's not what we're dealing with.

And my pointing that out in no way denigrates your concerns or your sincerity, and we appreciate your letting us have your views.

But this is not a differing professional opinion. It's a difference of engineering judgment.

The NRC manual is quite specific about the procedures for differing professional opinion.

CHAIRMAN PALLADINO: Well, maybe I used the wrong word, but my intent was to recognize...

COMMISSIONER ROBERTS: I understand.

CHAIRMAN PALLADINO: ...this, and point out that it's a fact that each commissioner is going to have to consider in his judgment. And again, that's where it comes down to.

COMMISSIONER ASSELSTINE: Joe, I would just join you in the comment you made at the outset, that I think

I certainly agree with you.

I appreciate the efforts that Mr. Yin has made to bring these items to our attention, and I think he was instrumental in identifying the matters of significant concern that I think need to be considered by all of us and resolved.

CHAIRMAN PALLADINO: Okay.

MR. EBERSOLE: I might add that we live with this all the time. It just doesn't get as explicit as this has.

CHAIRMAN PALLADINO: Okay. Well, thank you, gentlemen. Now I wonder if we might proceed with the rest of the staff briefing.

MR. DENTON: Let me go back to Darrell Eisenhut. We only have a few topics left, and we'll try to summarize those.

MR. EISENHUT: If I may go to slide number eleven, this is a discussion of the Seismic Design Reevaluation Program.

There has been considerable discussion over the last few months on this issue. You will recall we discussed this at some length in the March...

CHAIRMAN PALLADINO: I'm sorry, what slide are we on? Thank you.

MR. EISENHUT: On slide 11, Seismic Design Basis

Reevaluation Program, we discussed this in some depth during the March and April Commission meetings.

You wil recall at that time that we put in place in the 5% license, a short license condition, which basically requires the reevaluation program.

The Commission asked us to go back, consider and develop a more detailed license condition after consultation with the ACRS.

That process has been completed, we do have a letter from the ACRS which basically endorses a proposed license condition as included in the proposed full power license amendment, amendment ten, which was sent down to the Commission.

I would just--slide 12 enumerates that, so I'd like to skip that in the interest of time and go on to slide 13.

MR. DENTON: I think in slide 13, the regional administrator has covered what he's done in looking at the performance.

Unless you have questions about readiness, I think that's been covered by Jack Martin.

MR. EISENHUT: I was going to say the same thing holds for 13, 14, and 15. Basically we're summarizing the overall readiness (Inaudible) quality and overall status of the plant, the basis of the inspections, a number of third party reviews, etc.

We believe those have now reached to the end of the process, to our satisfaction.

Slide 16 and 17 are summary slides that are put together by ELD. I propose not going through those also in depth.

They basically summarize the entire hearing status as we understand it. They're included here for completeness.

We again, from that standpoint, don't see any issue that needs to further be discussed.

If I could go to slide 18, then, with the issuance of the 5% license, which reinstated the suspension, there were two license conditions requiring additional work prior to going above 5%.

Those are the items under Item A. those two license conditions have been satisfied and are addressed in two safety evaluations, supplements number 24 and 25.

The full power license amendment that is before the Commission is relatively straightforward in this case. There are seven items that were changed by this amendment.

They basically are in the mode of an update. The technical specifications, there were some minor changes that had to be put in place.

The fire protection system question simply refers, in this case, to an SSER-23. And that is literally the change that was made in the license condition to incorporate reference to another SSER.

COMMISSIONER ASSELSTINE: Darrel, I had a question about that one. I looked through it. It seemed like there were an awful lot of deviations for this plant on fire protection.

Is my sense right that there is an extraordinary number of deviations on this plant? Appendix R doesn't directly apply, but in terms of a comparison of the plant to Appendix R, there are a large number of items where they don't meet?

MR. VOLLMER: I think, to give you a little bit of history on that, the plant had been reviewed in accordance with the standard review plan requirements, probably in 1978, which, at that time, had the standard review plan requirements for fire protection, which generally embodied at least the fire protection features of Appendix R.

And they were given an acceptable write up by the staff on that. Some years later, a couple of years ago, then, with Appendix R, as we did with all NTOLs, we went back with the feeling that we should make sure that all plants consider any deviations that they might

have from Appendix R, even though it's not applicable for the recent OLs.

We went back and asked them to re-look at their plant, and came up with these deviations.

Now to answer your question specifically, I've asked this question of my staff. They feel that this particular plant is in good shape from a fire protection point of view, and that the deviations that they have are not unusual for a plant of this vintage and that they have evaluated all of the differences between the plant configuration in Appendix R and feel that appropriate measures have been taken to accommodate any of the Appendix R deficiencies.

COMMISSIONER ASSELSTINE: Good.

MR. EISENHUT: I should also point out that those items, SSER-23, there were some six or eight items listed.

We very recently have gotten a letter from the utility that those items are now in place.

COMMISSIONER ASSELSTINE: Good.

MR. EISENHUT: And have been completed, in fact, the modifications. Item four under the license conditions was supplement under NUREG 737 on dates for emergency response capability facilities.

Five is the item on seismic design verification,

seismic design reevaluation, excuse me. Six is to update the license in accordance with 50.73. It's a clarification.

The expiration date change reflects the fact that this plant is now, I think, it's changed to 2008.

There are three new license conditions. These three new license conditions at the bottom of the page were two generic issues that had been undergoing development during the period of time since the low power license was issued.

And as you will recall, we now have a standard condition reference 44 CFR 350 for emergency preparedness.

It's our view that this license amendment does not involve any exemptions to the regulations by issuing amendment ten of the license.

One last matter I would mention is that we do have before us a number of 2.206 petitions. First, we had a petition that was submitted in February, which was the remedy that was requested was not issuing a 5% license.

Then we had a second 2.206 submitted in May with a number of supplements to that up including, I believe, we've received four 2.206 petitions in the last four or five days.

The staff will be looking at those and processing

them. Up to this point, we see nothing in those 2.206 petitions that should stand in the way of a decision.

Basically, that is the last item that we propose.

MR. DENTON: This concludes our planned briefing, Mr. Chairman. This review of these design errors that were detected several years ago have consumed considerable amounts of staff man power and resources.

We've made the applicant do an awful lot of checking. We do conclude that it does meet the Commission regulations.

COMMISSIONER BERNTHAL: May I just ask one question about the seismic design basis reevaluation, and make this clear for the record?

Is it a statement of fact, then, as it exists now that the staff concurs and the utility's seismic design reevaluation, we've received a document just very recently, I guess, from the staff.

Could you summarize that for me?

CHAIRMAN PALLADINO: That would...

MR. DENTON: We've had the program under development and what we were proposing was a license condition that would require a program.

COMMISSIONER BERNTHAL: Yes.

MR. DENTON: And we have a license condition that we're satisfied with.

MR. EISENHUT: And that license condition requires the submittal of a program for a review by January 30, 1985.

MR. DENTON: Yes, certain elements in the program.

CHAIRMAN PALLADINO: Could I ask the staff to make its overall recommendation with regard to power ascension and going up to full power for this plant?

MR. DENTON: I think we find that the plant does meet the Commission's regulations for power ascension and full power operation.

CHAIRMAN PALLADINO: And do you have a recommendation on what we do?

MR. DENTON: Well, I'd recommend issuing a license, but we've stopped making recommendations because I don't want to appear to be an advocate for operations.

(Laughter.)

I want to just assert that we have done the review, and we think it fulfills the regulations.

CHAIRMAN PALLADINO: Okay. That's fair enough.

COMMISSIONER ASSELSTINE: I have one question, Joe.

CHAIRMAN PALLADINO: Okay. Of the staff?

COMMISSIONER ASSELSTINE: Yes.

CHAIRMAN PALLADINO: Go ahead.

COMMISSIONER ASSELSTINE: I think it's just a clarification on supplement 24, page 3-2, there's a

paragraph on environmental qualification of electrical equipment.

Does that paragrapn basically mean that they are in compliance with 50.49? It didn't say so explicitly. I thought that was the gist of it, but I just want to make sure.

MR. DENTON: That's page 3-2?

COMMISSIONER ASSELSTINE: 3-2, yes.

MR. DENTON: The answer to that would be yes, they are in compliance with 50.49.

COMMISSIONER ASSELSTINE: Okay.

CHAIRMAN PALLADINO: Now I am aware of at least two more topics that should be addressed. One, we have the report from OIA on investigations associated with one of the 2.206 petitions. And I think we ought to hear that report.

And then I would like OGC to bring us up to date on the status of consideration of earthquakes on emergency preparedness.

But unless the commissioners have some other thoughts, I would propose at this time to call on Mr. George Messenger of OIA to report on the 2.206 petition that they investigated.

MR. MESSENGER: Mr. Chairman, I have with me the investigator, Ronald Smith.

CHAIRMAN PALLADINO: Could you speak into the mike?

MR. MESSENGER: I have with the me investigator, Ronald Smith, should you have any questions that possibly I couldn't answer.

The Office of Inspector and Auditor conducted an investigation into allegations against seven NRC employees which was initiated June 14, 1984 as a result of two petitions dated April 12 and May 3, 1984, submitted by Thomas Devine, Government Accountability Project GAP, pursuant to 10 CFR 2.206.

The petitions contained two general allegations, whether there have been misleading or material false statements by the NRC staff to the Commission during the March 19, 26, 27, or April 13, 1984 briefings, or in Supplemental Safety Evaluation Reports, SSER 21, December '83 or SSER 22, March '84, and the causes of QA breakdown within the NRC staff responsible for Diablo Canyon.

When interviewed concerning these two general allegations, Thomas Devine provided information which formed the basis for 16 allegations.

Fourteen of the allegations were that individual NRC employees, on different occasions, either by statement or omission, falsely advised the commissioners on various issues of import to the

commissioners' decision on low power testing at Diablo Canyon.

Two allegations were against the NRC staff for, one, an alleged false statement in NUREG 0675, which is SSER 22, and for, two, failing to give sufficiently complete an accurate notice to the Atomic Safety and Licensing Appeal Board of a particular issue.

None of the allegations as submitted were substantiated by this investigation. A report on the results of the investigation was completed late August 1, 1984.

On July 24, 1984, Thomas Devine declared that he was withdrawing all allegations and would follow upon that declaration in writing.

His reasons for withdrawal were set out in a letter to the Commission dated July 25, 1984.

The copy of this letter was provided to OIA by the Commission on July 30, 1984. This matter is addressed under separate cover to the Commission.

That completes my statement.

CHAIRMAN PALLADINO: Thank you. In this letter of July 25th, the allegation was made, I guess it was signed by Mr. Devine, saying, for example, the staff took credit for interviews with whistleblowers who have never met the staff.

Can you comment on that?

MR. SMITH: Not without reviewing the reports, sir, because the allegation, I'd have to try to figure out which allegation he's referring to there, because, again, he's taken--Mr. Devine has taken information that--oh, I'm sorry.

I misunderstood your question. You mean as to me? I thought you were talking about the staff, because similar allegations were made to the staff.

CHAIRMAN PALLADINO: No.

MR. SMITH: All right.

CHAIRMAN PALLADINO: This was an allegation made about you.

MR. SMITH: Yes. The basis for the comment was that, as I understand it, was that Mr. Devine wanted me to talk to the same people who had provided him information which he also provided me.

When he apprised me of this, I said, "Do they have or do you have any information which you have not already provided to me?"

I never got a response that such was the case, which led to my response that, "If you are just having me talk to these people to get the same information I already have, there is really no reason to talk to them."

Because basically whether I get the information firsthand from the individual or secondhand through him as their counsel, is really irrelevant, because it's the information that's of import to the investigation.

CHAIRMAN PALLADINO: Do you feel you've looked into the necessary information, the available information, to make sure that you had an adequate, reasonable finding?

MR. SMITH: Based on the allegations which Mr. Devine and I, together, drafted and which he subsequently modified, and the information which he provided to me, I can say with all professional confidence that, yes, that's true.

CHAIRMAN PALLADINO: Other questions for OIA?

COMMISSIONER ASSELSTINE: Ron, I gather you had concluded, though, that some of these allegations were vague and imprecise.

That suggests in my mind that you'd want to go back to the people that had provided the allegations and resolve any vagueness that you think might be associated with the allegations, just to make sure you fully understand exactly what they're telling you.

I wonder if you could address that point a bit? I know you did in your August 1st memo, but I guess I didn't fully understand your comment.

MR. SMITH: Imprecise might be the word to put more

emphasis on, rather than vague. I suppose vague in this context was more conclusiary than descriptive.

By imprecise, some of the allegations were framed in terms, which upon investigation, either the reference in the transcript, for instance, was taken out of context, and therefore was not correct in the way the allegations framed the particular event to have occurred.

At least as I read the transcript and as I understood the explanation of the events as provided particularly by the people who answered the specific allegations against them, the second one that comes quickly to mind is that of imprecise and vague would be, there was an allegation concerning whether some discussions of a particular individual's or individuals' affidavit and information he had provided had been discussed in IE report page 8337, I believe.

In talking to the individual associated with 8337, that was true. And the reason that was true is because that particular report covered different matters, and intentionally was not included in that report.

So I guess that is an example that it was vague in the sense it was a general comment that something wasn't included in a report.

It was imprecise, also, as it turned out, because

it intentionally was not included.

COMMISSIONER ASSELSTINE: Is it fair to say that the allegations themselves were all clear enough so that you fully understood and there weren't any questions in your mind about what they were pointing to, but rather, once you looked at it, you didn't find that those allegations were substantiated?

MR. SMITH: I've been thinking this morning and this afternoon and hearing some of the soliloquy going on earlier today, back to my days as a prosecutor.

And to be quite honest, when I finished with the allegations, I could, not to be too facetious, found myself salivating again that maybe I had a shot at a good criminal charge in many of the cases.

So yes, I was satisfied I understood them. I must qualify that in that in some discussions yesterday, we have a procedure in our office where, as an independent review, in one particular allegation regarding whether there was an agreement by the NRC that Mr. Yin would be the one to whom GAP allegers would talk, it was my clear understanding, and I think an objective reading of both the allegation and the evidence I had, that the thrust of Mr. Devine's allegation was that there had been a specific agreement with the NRC that Mr. Yin would be the person to talk to the allegers.

When the transcript is examined, in fact, Mr. Devine did ask that that be the case, whereupon Mr. Yin himself responded that, "No, I shouldn't receive these myself, but as part of a group."

Now it's now my understanding, and I have not talked to Mr. Devine to confirm this, but I understand, as a matter, that he may be also saying that that was the agreement.

In other words, in answering the question, "Can we talk to Yin?"--I know this is rather complicated, but it's the best I could work it out--when the NRC answered, "No, not to him alone," and then he answered, "As part of a group," then it's possible that Mr. Devine is inferring, and I think it would have to be an inference, that that response constituted agreement that Mr. Yin would thereafter be involved in all interviews.

I, of course, read the transcript differently, and I looked at the very narrow issue as I understood it, and as I say, in my judgment, that would be an inference.

I cannot see that there was any such agreement.

CHAIRMAN PALLADINO: Other questions? Well, thank you very much. Next I'm going to ask OGC to say of the status of Commission activities with regard to the

impact of earthquakes on emergency planning.

MR. MALSCH: Mr. Chairman, by Commission order dated April 3, 1984, the Commission requested the party's response to several questions bearing on whether this case warranted some specific consideration of the effect of seismic events on emergency planning.

Responses were received from Pacific Gas & Electric Company, the NRC staff, and joint interveners.

My understanding is that the Commission is still considering this matter and is in the process of trying to draft a decision, but that at least on root issue, there is Commission majority in support of the proposition that this case does not warrant any specific pre-licensing consideration of the effects of seismic events on emergency planning.

But the details of the order are still being worked on and we do not have exact agreement on the text of the order itself.

CHAIRMAN PALLADINO: This says that the Commission stands by the San Onofre decision, in this matter.

MR. MALSCH: At least on this particular matter.

CHAIRMAN PALLADINO: Any other comments? Any other topics or questions for discussion by members of the Commission?

MR. MALSCH: I had one other question. That was

just to confirm what I think is the case, that all the licensing board's conditions have been satisfied.

I think I heard Darrell say they were, but I wasn't certain that was the case.

CHAIRMAN PALLADINO: Darrel Eisenhut?

MR. EISENHUT: That is correct, yes, sir.

CHAIRMAN PALLADINO: Any other?

COMMISSIONER ASSELSTINE: I had one other quick question, and that has to do with the most recent appeal board decision on the motions for reopening.

We have not seen an analysis either by OPE or by OGC of that decision, and I guess I just ask OGC if they're aware of any concerns regarding that decision that would in any way affect the Commission's decision on whether to proceed with the full power vote today.

CHAIRMAN PALLADINO: Which one is that, Jim, that you're talking about? Is that the one where we...

COMMISSIONER ASSELSTINE: Here it is. ALAB 775.

MR. TRUBATCH: As a legal matter, the tendency of those petitions is very similar to the tendency of any exceptions before the appeal board when the Commission decides to go forward with the effectiveness decision.

As for the technical content, I think you should address that question to OPE.

CHAIRMAN PALLADINO: Bill Reamer. Where are they?

Bill Reamer? Will you get him for me?

COMMISSIONER ASSELSTINE: Is he here or not?

CHAIRMAN PALLADINO: What's that? I'm trying to ask Bill Reamer. I want to make sure that whatever I am about to say relates to the right ALAB.

COMMISSIONER ROBERTS: I want to ask Jack Martin a quick question, if he's still here.

COMMISSIONER ASSELSTINE: He's in the back.

COMMISSIONER ROBERTS: Do you concur with the NRR statement made by Mr. Denton that the plant meets our regulations and can go to full power? Do you concur in that judgment?

MR. MARTIN: Yes, I do.

COMMISSIONER ROBERTS: Thank you.

MR. MALSCH: Mr. Chairman, I did have one small follow up.

CHAIRMAN PALLADINO: I'm not sure we've addressed the question of Commissioner Asselstine.

COMMISSIONER ASSELSTINE: I think Jack's working on it. I can see him back there.

CHAIRMAN PALLADINO: What I was trying to determine was that the one where we have notation votes?

COMMISSIONER ASSELSTINE: No.

MR. TRUBATCH: That is the appeal board decision denying the second round or subsequent round of request

to reopen the record on construction quality assurance and design quality assurance.

COMMISSIONER ASSELSTINE: Yes.

MR. TRUBATCH: There is a petition pending before the Commission to review that decision, and there have been oppositions filed by PG&E and the NRC staff.

CHAIRMAN PALLADINO: Where do we stand on when they take the votes on that, do you know?

MR. TRUBATCH: There has been no OGC analysis.

COMMISSIONER ASSELSTINE: There's not vote sheet because there's no OGC or no OPE analysis of it yet.

CHAIRMAN PALLADINO: I see. Is it essential that we...

MR. TRUBATCH: To repeat again, on the legal side, we see it as no different from the dependency of exceptions before the appeal board which have never stopped the Commission or which the Commission doesn't find interferes with the effectiveness procedure.

COMMISSIONER ASSELSTINE: I guess what I'm wondering is if Jack is aware of anything in the substance of the decision that indicates to him a problem that would be in any way relevant to the Commission's vote on a full power license.

MR. ZERBE: We're not aware of it, that there is, but we haven't made a detailed review of that ALAB,

so if you want that, we would have to do that separately here.

COMMISSIONER ASSELSTINE: Okay. So I should be surprised if in the very near future we got a paper from OGC and OPE saying there are big problems with that decision?

MR. ZERBE: Yes, you should be surprised with that.

(Laughter.)

COMMISSIONER ASSELSTINE: I've been surprised in the past.

(Laughter.)

MR. TRUBATCH: Could you qualify that surprise in what sense?

COMMISSIONER ASSELSTINE: Well, in the sense that Jack says that based upon the review they've done so far, he doesn't see a big concern.

MR. TRUBATCH: Well, there's a difference between the effect of the decision on a full power license and where the decision is a matter of a decision, warrants review.

There could be a policy issue in the decision which the Commission should take up, whether they're right or wrong.

COMMISSIONER ASSELSTINE: Yes. What I'm asking is, are they in any way relevant to a decision to go to full power? Jack said he doesn't think so.

MR. MALSCH: I had one small item. The meeting has been very useful and provided a lot of information, and I think it would be useful if the Commission would agree that a transcript of the meeting could be cited.

CHAIRMAN PALLADINO: What's that?

MR. MALSCH: That a transcript of the meeting could be cited and used by the parties in legal briefs or arguments or whatever.

Normally that's not permitted. But I think that would be useful in this case.

CHAIRMAN PALLADINO: What do we have to do to permit that?

MR. MALSCH: Just agree with that proposition, that's really all.

(Laughter.)

CHAIRMAN PALLADINO: Is there anything...what's the downside of doing that?

COMMISSIONER BERNTHAL: Be careful, Joe.

(Laughter.)

MR. MALSCH: There is no downside to that. It's just that the rules provide that unless the Commission provides otherwise it's not proper to cite transcripts of Commission meetings, even if they're open meetings.

CHAIRMAN PALLADINO: And you are recommending that we...

MR. MALSCH: I recommend that the parties be allowed to cite.

CHAIRMAN PALLADINO: Any objection by other commissioners?

COMMISSIONER ASSELSTINE: No.

COMMISSIONER BERNTHAL: I guess not.

CHAIRMAN PALLADINO: All right. Thank you. Any other matters of general discussion that we should address now?

Well, I'm going to propose that after I make a comment or two, that we take about a 15-minute break.

When we come back, I'd like the Commission to address the question as to whether or not it's ready to vote.

By that I mean, does it have enough information, and if there is not enough information on the feeling of a particular commissioner, he should identify what it is, and then we'll have to get the sense of the Commission.

If there is agreement there is sufficient information to make a decision one way or the other, then I would call for a vote on that question. So...

COMMISSIONER BERNTHAL: Can we ask another question when we come back, in case we'd like a little more information?

CHAIRMAN PALLADINO: We always can ask questions. I don't mean that we're cutting off debate. I'm hoping that the key individuals are not going away, so that if you have questions, they can be answered.

Okay. Well, we will recess for 15 minute, and if the Commission needs any more time than that, we'll get word back to you.

(Whereupon, a brief recess was taken.)

CHAIRMAN PALLADINO: The Secretary was approached by a representative of Mothers for Peace, with a request to be able to address the Commission for ten minutes.

A polling of the Commission has indicated a willingness oh the part of the Commission to hear the representative for five minutes by the clock.

There was also a request from a representative from GAP to address the Commission. They strictly are not a party, however, they have been involved heavily in this case.

The majority of the Commission have agreed to grant five minutes to GAP. The applicant will then, therefore, also be given five minutes to respond, and if the staff wishes to respond, they can have five minutes.

But all of these will be by the clock. Inasmuch as

we may be receiving new information, the Commission feels we will have to break again to reflect on that information for ten minutes, and then we'll reconvene to see where we go from there.

At this time, I wonder if we could have the representative from Mothers for Peace join us at the table.

The Secretary will keep time and alert you when you have one minute to go.

MS. CULVER: Gentlemen, my name is Nancy Culver. I represent the San Luis Obispo Mothers for Peace, and I take the long view in this case, ten and a half years.

During that ten and a half years, that we participated in this case as interveners. The NRC has dealt with the issue we have raised, by and large, by either ignoring them or by telling us things that turned out to not be true.

For example, we raised the issue of quality assurance for six years, and each time, you refused to hold hearings.

And now you have the nerve to complain to us about the so-called last minute quality assurance allegations, while at the same time, you're confronted with the Pullman audit, and other evidence of a widespread breakdown of quality assurance.

Even today, you continue to deny any hearings on construction quality assurance.

Now as for the issues of assurances that turned out to be false, maybe you didn't mean to tell us things that weren't true, and if that's so, we question your competence.

And if you did mean to tell us things that weren't true, then we question your integrity.

If the utility had acted as you have, your own regulations and the law would allow you to suspend or revoke the license of the plant, and depending on the degree of willfulness, ask for criminal prosecution.

The unresolved issues in this case are too numerous to discuss and are contained in the hundreds of legal filings by our attorneys.

I want to focus today on only two--seismic design and the complicating factors of an earthquake on emergency planning.

The NRC approved the seismic design based on a whole list of assumptions, many of them highly controversial.

Even worse, new evidence, studies done just in recent months, demonstrate that that design may be even more inadequate than we had previously thought.

Contrary to NRC findings, the Hosgri Fault appears

to be a thrust fault capable of forces two to three times earlier estimates, and it may actually dip directly underneath the plant, and some experts believe that focusing of seismic energy is probable, not a "maybe," not "iffy."

In addition, the NRC has concluded that Diablo Canyon sits in an area of low to moderate seismic activity.

Gentlemen, you're the only people who think that. Since 1978, seven earthquakes have occurred on or near the Hosgri Fault, including one on that fault just six weeks ago.

We have asked for new hearings on seismicity to consider this important new evidence. You, in turn, have asked the utility to perform a new study to be completed in 1988.

How in the world can you allow Diablo Canyon to operate at full power for four years before you even evaluate the significance of this new information for the plant's seismic design?

We raised the issue of the complications of an earthquake for emergency planning in licensing proceedings several years ago.

You ruled against us, wouldn't hear that issue, based on a previous case in which you said the issue

would be studied generically.

Now three years later, no analysis has been done either generic or site-specific, and you're poised to license the plant.

Since an earthquake is at this particular plant the most likely cause of emergency, an emergency plan that fails to take into account an earthquake isn't worth the paper it's written on.

I realize you don't think a lot about earthquakes, living in Washington, D.C. I urge you to do so.

Whether an accident at Diablo Canyon might be caused by an earthquake, by an ineffective quality assurance program, by piping problems, or by any one of a dozen other issues that you have ignored, the residents of California know exactly where to place the blame.

We will hold you five men at this table wholly and completely responsible, and in that event, we will seek criminal prosecution.

You will be held accountable for your failure to take Diablo Canyon's deficiencies seriously.

CHAIRMAN PALLADINO: All right. Thank you. Any questions by commissioners? All right. Thank you very much.

Okay. Now can we have the representative from GAP?

MR. DEVINE: My name is Thomas Devine. I'm the legal director at the Government Accountability Project.

I would like to make two overview comments abcut this morning's briefing. First is a response to the Office of Inspector and Auditor report.

I won't go into detail except to say that OIA has now reached the same level they concluded about the NRC staff in 1981.

Their investigation didn't meet the minimum government standards for the definition of an investigation.

I further would like to say that the Commission itself could have been a little more thorough in your questioning of Mr. Smith.

As he told me after the briefing out in the hallway, if you had asked him whether the staff had been candid in their responses to him, he would have said he doesn't know.

Well, we told him the staff was not candid in their responses to him, and he chose not to talk to talk to the whistleblowers who could prove it.

Number two, I think the most significant thing that has occurred in this decision concerns the chart that you all handed out on the Office of Investigations.

There are 99 allegations there, which have been classified not necessary for resolution prior to full power licensing.

Among the allegations which have been defined out of relevance for a full power licensing decision are a destruction of documents, false statements, and harassment and retaliation of employees who try to raise problems.

Until today, those have been relevant issues for a full power license. Today they're not even on the agenda.

Instead, after receiving evidence last December that in the seismic design review, the licensee destroyed the calculations which disagreed with predetermined conclusions, transferred out the engineers who didn't follow the party line, and then rewrote the engineering logs to erase any reference to their work.

That's been deemed irrelevant for the licensing decision. The Office of Investigations hasn't gotten to it in seven months.

And instead, you are accepting the accuracy of the licensee's current answers as an assumption and just reviewing them for technical support. In my opinion, that's a disgrace.

Third, as whistleblower support organization, we concentrate on pursuing charges of retaliation by employees.

We try to protect the right to dissent. This morning, Mr. Martin stated that there is no pattern of retaliation at Diablo Canyon which would affect the quality of the plant.

Well, I've worked with the whistleblowers who have raised the issues at Diablo Canyon, and we have presented over 50 affidavits to the Nuclear Regulatory Commission.

Out of the employees who signed those affidavits, one is still working at Diablo Canyon. All of the rest of them either resigned due to harassment, been fired, or laid off.

Now that strikes me as a pattern. The employees on-site think it's the kiss of death to go to the Nuclear Regulatory Commission.

But has it had any effect on the plant? Well, I'd like to point out to you an example of evidence we received from last week.

Last Thursday on site, the employees were told that they should sign a training sheet certifying their participation in a training program.

The problem is, the training program didn't occur. It never happened. In fact, as you gentlemen can see,

they were asked to sign a blank form.

Fifteen people out of a shop of 16 chose to sign that blank form because they didn't want any trouble. The 16th refused, and he was laid off two days later.

Now frankly, gentlemen, I think there is some effect (inaudible) from this. I wonder if this is something that you consider out of line, having 15 people sign a blank piece of paper certifying their participation in a welding improvement program.

Ironically, one of the phony retraining forms involved a program to prevent further falsification of records. The response was to falsify a new set of records.

Finally, the staff has said that there is nothing out of line, that the majority of the allegations just don't have any impact.

I don't know how the staff can make that conclusion. How do they know? Since the April 13 Love-Howard test vote, the technical staff has spent a total of four hours talking with all of the whistleblowers who presented 800 allegations in sworn statements during that time.

They didn't even begin to respond to them. If they had, they would have received the evidence which I'm going to present to you now.

I will give you two examples of information that the staff could have gotten if they were interested.

First is the area of accuracy of drawings. We pointed out to you earlier this year that drawings that the operators have didn't agree with the drawings of approved design.

That means the operators might be relying on things that are inaccurate. Well, the staff told us in June that those problems had all been solved last year.

Well, as a matter of fact, they weren't. I'm going to distribute to you all an internal report dated December 11, 1983, and another one dated December 10, 1983.

CHAIRMAN PALLADINO: Do you have another copy?

MR. DEVINE: There was five that I gave you all, Chairman.

COMMISSIONER ROBERTS: I think you missed one stack. I'm sorry.

MR. DEVINE: Those are separate documents.

CHAIRMAN PALLADINO: We'll make a copy.

MR. DEVINE: You will note on the December 10, 1983 memo--I'm sorry if I'm going too fast, but I've only been given five minutes--that the piping drawings and the operator drawings don't agree.

In fact, the operator drawings don't even show

valves that are located in the plant.

The response of management to this was documented by the engineer on December 19, 1983. It is also understood per conversation with you to his supervisor, that no PNID-designed to ovid operator-comparison is to be done, and any problems with the ovids operator drawings is to be ignored.

This was for Unit 1, gentlemen. I don't think they know what they've got up there, and it's a deliberate management decision not to find out. There is a second problem I'd like to give you as an example today. Please excuse my error, there was a fifth.

CHAIRMAN PALLADINO: Wait a minute. These are not all stapled and I'm not sure what I've got here.

COMMISSIONER ASSELSTINE: This is a full package.

MR. DEVINE: The second example involves hydrostatic tests. These are the only tests where we checked to see if the plant can meet the claimed margins in its design.

Well, this spring, a whistleblower, an engineer on site, was reviewing the records for Unit 2. He found that 60% of the hydrostatic test for Unit 2 legally should have failed.

Some of the cases were due to overpressurization up to 70% in the examples that we saw. That could lead

to damage of the pipes and premature aging.

Other examples were due to underpressurization, where they were up to over 1000% under the minimum required in order to prove that the plant could meet its design.

This happened in 60% of the hydrostatic tests for Unit 2, according to the alleger. He wasn't permitted to go back to Unit 1 and check on it.

As far as I can tell, both of these incidents should have been reported to the Commission. Neither of them were.

And we don't know whether that plant can meet its design.

Gentlemen, I called up Mr. Bishop, of Region V, in early June to inform him about both of these problems. Mr. Bishop said, "Thank you."

Now it's the end of July, beginning of August. It's still not in the record until this moment. The reason it's not in the record is because the staff didn't give a darn.

And now the question is whether you gentlemen do.

CHAIRMAN PALLADINO: All right. Thank you. Any questions by commissioners?

All right. Does the applicant wish to respond?

COMMISSIONER BERNTHAL: Let me just make one

comment for Mr. Devine's benefit, so that people understand that these aren't things that have just now come before us, at least in the first case you mentioned.

I have looked at the affidavit, the new affidavit which you submitted earlier today, and in fact discussed the matter with our Office of Investigations.

I, of course, am not going to make a judgment on my own that matter at this time, but I have given that some attention today.

MR. MANIATIS: I'm George Maniatis (phonetic), executive vice president of Facilities and Electric Resources Development for Pacific Gas & Electric Company.

With me today are Howard Friend, of Bechtel, the Diablo Canyon project completion manager, Jim Schiffer, our manager of nuclear plant operations, and Bruce Norton, our licensing attorney.

I'd like to thank the Commission for this opportunity to make a few remarks in support of our request for a full power operating license for Diablo Canyon.

Let me say at the outset that we concur fully with the staff's assessment regarding the readiness of Diablo Canyon to commence operation above 5% power.

The work done by all parties to the Diablo Canyon proceedings, to reach this state of readiness, has been diligent, thorough, and massive.

As you've been informed by the staff, we have successfully completed all actions and activities required by the Nuclear Regulatory Commission for a full power operating license for Unit 1.

These actions and activities have included successful completion of fuel loading, start up and low power testing, completion of all physical work required for full power operation, completion of all reviews requested by the staff, resolution of all issues raised in the licensing proceedings to the satisfaction of PG&E, the staff of the Nuclear Regulatory Commission, the Advisory Committee on Reactor Safeguards, and the Atomic Safety and Licensing Appeal Board, and most important, attainment of a high state of readiness to operate Diablo Canyon in a safe and reliable manner at all power levels, including full power, as described by Mr. Martin.

Attainment of this state of readiness to commence operations above 5% power is by any measure a notable technical achievement and team accomplishment.

As the executive with overall responsibility for the design, construction, licensing and operation of

Diablo Canyon, I wish to assure this Commission that the senior management at PG&E will continue to exercise strong and vigilant oversight of the operation of Diablo Canyon to assure its safe and reliable operation at all times.

In conclusion, I would like to reiterate that Unit 1 of the Diablo Canyon Nuclear Power Plant is ready now in all respects to commence power ascension and operation above 5% power.

The number and breadth of independent reviews certify to the correctness of the plant's design and construction are unprecedented in the industry of commercial nuclear power.

We believe that these reviews, together with the affirmative recommendations of the staff, Region V, and the ACRS, provide this Commission with needed assurance that Diablo Canyon can be operated at full power without endangering the public health and safety.

Accordingly, we respectfully urge the Commission to act favorably on our request and grant PG&E authority to operate Diablo Canyon at full power. Thank you.

CHAIRMAN PALLADINO: Any questions? Thank you very much. Does the staff have any comments they'd like to make at this time?

MR. DIRCKS: I think there were a couple of points

in Mr. Devine's statement that we'd like to clear up for the record.

MR. BISHOP: This is Tom Bishop. I was just going through our computer program that prints out our 1,404 allegations.

I didn't have quite the time to go through all of it, but both those instances that Mr. Devine mentioned are in our program and were part of the assessment in coming to the conclusions that we made to you and the other commissioners.

Specifically, allegation 1286 deals with the December '83 internal memo. On that particular subject, I'm speaking from memory, but our report we issued on that subject of the accuracy of those drawings recognizes that there are some bits and pieces to be cleaned up.

We are quite confident that the drawings that are available to those operators both in the form of the ovids, as they're called, or the piping and instrumentation diagrams, are accurate for their intended purpose.

And that was the reason for our allegation review board drawing the conclusion that this particular item did not need complete resolution prior to a full power consideration.

The second item, dealing with the Unit 2 hydrostatic tests, again was known to us. Unfortunately I didn't have time to look through the 1,400 to give you the exact number.

We are aware that the Unit 2 hydrostatic test program has some work done on it. I am not going to endorse the degree of problems that Mr. Devine infers.

I haven't checked those details in Unit 2. But again, in Unit 1, we are quite confident that those hydrostatic tests have been properly done.

I would speak not only from the staff's perspective but also those that relate to the ASME Code piping or independently accepted by the code-authorized nuclear inspector.

There's a lot more to be said but just to let you know that we are familiar with those two issues and they were considered in our recommendations to you.

CHAIRMAN PALLADINO: Thank you. Any questions?

MR. SMITH: Ronald Smith, OIA. I hoped not to be back up here, but I feel I must correct the statement made by Mr. Devine.

He has taken comments in the discussion effort to maintain open communication completely out of context, which were speculative in nature.

I reiterate my earlier testimony that I have

absolutely no basis in connection with his allegations to have any doubt as to the staff's integrity or honesty before this Commission.

As I said, I've attempted to keep open communication with Mr. Devine, and I'm, quite frankly, disappointed that he would take that effort and use it in the manner he did.

CHAIRMAN PALLADINO: Any questions by commissioners?

COMMISSIONER ASSELSTINE: No.

CHAIRMAN PALLADINO: It was at the request of one commissioner, and I would concur with it, that we should break for ten minutes and consider orief matters.

Then we'll come back and address the questions raised.

(Whereupon, a brief recess was taken.)

CHAIRMAN PALLADINO: Please come to order. At this time, I'd like to poll the Commission to determine whether or not the Commission feels that it has the information it needs to make a decision on whether or not to permit power ascension and operation up to full power.

Basically, is the Commission ready to vote. I for one feel that I nave the necessary information to make

a decision. I am prepared to vote. Let me ask Commissioner Roberts.

COMMISSIONER ROBERTS: I share the same view.

CHAIRMAN PALLADINO: Commissioner Asselstine?

COMMISSIONER ASSELSTINE: There is one aspect on which I don't think we have the information we need to make a decision, and that's on the complication effects of earthquakes on emergency planning.

But the difficulty with that is the manner in which the Commission has handled that issue. And that's an item of concern to me.

CHAIRMAN PALLADINO: Well, I think the approach has been to treat that as a separate matter on the basis that the Commission is reaffirming its San Onofre decision.

Commissioner Bernthal?

COMMISSIONER BERNTHAL: Yeah, I'm prepared to vote. I would just comment that with respect to Commissioner Asselstine's comment on earthquakes and emergency planning, I guess we simply arrive at different opinions, really on the technical issue here.

I do not consider the plants as designed in California to be unique as compared to a number of other plants where in recorded history very destructive earthquakes have occurred as well, and I think the

Commission should make a decision in the near future on whether generic consideration should be made of that broader issue.

But I do not consider that issue to be unique to this site.

CHAIRMAN PALLADINO: Commissioner Zech?

COMMISSIONER ZECH: If I may, Mr. Chairman, I'd like to make a statement. First of all, I'd like to compliment and commend all who come before the Commission today.

I think the statements have been very helpful and professional, very valuable, certainly has been helpful to me.

The history of the licensing of Diablo Canyon Nuclear Power Plant is complex and protracted. The record of the proceeding is voluminous.

I have reviewed a considerable part of the record. I have visited Diablo Canyon plant, I have talked to the utility management personnel, including some of the operators.

However, the time available to me as a commissioner has simply not been sufficient for me to satisfy myself that I have read, analyzed, and adequately reflected upon all the relevant material.

If my vote were needed either yea or nay, I believe

I would need several more weeks before I could come to a decision. Therefore, I have concluded that I cannot vote today on the full power license decision for Diablo Canyon.

CHAIRMAN PALLADINO: Does that mean you're not participating?

COMMISSIONER ZECH: I'm not sure of the technical term, Mr. Chairman, but it means that I'm not ready to vote today, and whatever non-participating legally means, I suppose that means I'm not going to participate. But I'm not ready to vote today.

(Laughter.)

CHAIRMAN PALLADINO: All right. Well, I gather the majority of the Commission is ready to vote. I'd like to ask and poll the commissioners on the question of whether or not the Diablo Canyon plant should be permitted to proceed with power ascension and operation up to full power.

Now this has been a very complicated case. It has faced a number of issues, and has taken very careful study to try to make a determination on which way to go.

I have concluded that full power operation should be approved and power ascension up to full power should be approved, and I cast my vote in that direction.

I have confidence in the seismic design of the plant based on my assessment of the reviews conducted by the NRC staff, the ACRS, and the NRC appeal board.

I believe the questions which led to the suspension of low power license in 1981 have been adequately and extensively addressed by the licensee, by the NRC staff, and by the NRC appeal board.

I am satisfied that the concerns of NRC inspector Isa Yin have been fully aired and adequately addressed.

I rely not only on the staff's views of this matter but also on my assessment of the situation, and on the review of Mr. Yin's concerns by the Advisory Committee on Reactor Safeguards.

As I indicated earlier, it is always disturbing to have to face differing judgments--I want to use the right word--not only in the case of reactor operations but also in many other activities that we humans engage in.

Nevertheless, there comes a time for making a judgment, and I think that the matter has been aired properly and that we've had independent review.

My assessment is that with all due respect to Mr. Yin, we are prepared to proceed with ascension to power and full power operation.

I believe that the procedures we have adopted for

screening and evaluating many allegations involving Diablo Canyon provide reasonable assurance that the plant is not beset by safety deficiencies that would endanger the health and safety of the public in the vicinity of the plant.

I am also satisfied that the resolution of the operator staffing issues at the plant and I note the evaluation of Federal Emergency Management Agency which has approved the adequacy of off-site emergency planning.

Let me turn next to Mr. Roberts.

COMMISSIONER ROBERTS: A couple of brief points. Diablo Canyon has been reviewed in meticulous detail by an extraordinary team of licensee personnel and contractors, the NRC staff and its contractors, as well as third party reviewers and the Advisory Committee on Reactor Safeguards.

Each of these reviews point to a conclusion that this plant has been designed to meet our regulations and built in accordance with the design.

There are currently no design or construction flaws of such significance that would indicate the plant is not physically ready for full power operation.

The plant staff has been well-trained and been evaluated by the NRC and found adequately qualified to

operate this plant. The NRC has gone well beyond the requirements of NRC procedures for public participation and has been responsive to public concerns.

A record number of allegations from the public have been reviewed and analyzed.

Those which were found to have technical merit have been appropriately acted upon.

The fuel loading and low power operations have been closely monitored by the NRC and performance has been found to be satisfactory.

The plant has been operated in a safe manner. Without question, the NRC has an obligation to review safety matters and to ensure that safety problems are identified and corrected.

It also has a duty to reach a decision once we have fulfilled that obligation.

Now after exhaustive and comprehensive review, the NRR staff and NRC Region V have concluded that this plant is ready in all respects for full power operation.

I personally believe that this plant is ready to begin power ascension and should be issued a license.

CHAIRMAN PALLADINO: You're in favor?

COMMISSIONER ROBERTS: Yes.

CHAIRMAN PALLADINO: All right. Commissioner

Asselstine?

(Laughter.)

CHAIRMAN PALLADINO: I just like to get these things settled.

(Laughter.)

COMMISSIONER ROBERTS: You don't like those nods that don't get in the record.

CHAIRMAN PALLADINO: Commissioner Asselstine?

COMMISSIONER ASSELSTINE: I want to make a few comments on four points. I'll say at the outset that I'm voting against full power operation for the plant based upon the remaining concerns that I have.

The first point I want to touch on briefly is the complicating effects of earthquakes on emergency planning.

My own view is that the Commission is compelled, both as a matter of law and of logic, to consider the complicating effects of earthquakes in individual licensing hearings in cases for plants such as Diablo Canyon that are located in high seismic areas.

I think the Commission's San Onofre decision was wrong, and I think the Commission has done little over the past three years to pursue the kind of generic consideration that was described in that decision.

I also think that the majority's return now to that

approach, of returning to generic rulemaking consideration, doesn't fit the facts in this case, either.

There will be a separate order by the Commission on that subject, and I'll have more detailed views. The majority's rationale still seems to be shifting in support of its position.

So I'll discuss in detail my concerns with the majority's decision once it's finalized.

I recognize this is a problem of the Commission's making and that it would unnecessarily penalize the licensee in denying an operating license at this time.

Nevertheless, I still think that's what is required both as a matter of law and as a matter of logic.

On the subject of seismic design quality assurance, I have to say that I'm disappointed in the staff's handling of Mr. Yin's concerns.

When I voted for low power operation, it was with the expectation that Mr. Yin and the staff were in agreement on how those concerns were to be resolved.

I think it was particularly important in this case, given both the past breakdowns in quality assurance for this plant and the particular significance of seismicity for this plant, that those concerns should have been laid to rest in a manner that satisfied all

concerned. And the handling of this matter does leave me with some doubts on the seismic design area.

I'd like to suggest that the Commission and the staff consider permitting Mr. Yin to pursue his concerns over the next few months until they are resolved to his satisfaction as well.

I think that that's something, if it's practical to do, would be worth doing so that not only his concerns would be addressed, but also the members of the public who may share those concerns will be satisfied that seismic design for this plant is indeed adequate.

With regard to the Office of Investigator and Auditor report on the allegations regarding the staff's presentations, I'd have to say that I still have some concerns about the quality of the report and the depth of the thoroughness of that investigation.

I think that's something that I want to pursue as a separate matter, but I was not persuaded that that matter has been laid to rest as yet.

The final item I want to touch on are the appeal board decisions regarding design quality assurance and reopening the record on seismic design quality assurance and construction quality assurance that are now pending before the Commission.

My own view is that both of those decisions should

be considered by the Commission and considered by the Commission promptly.

I am particularly troubled by the lack of any detailed rationale for the appeal board's decision not to reopen the record on both of those issues, and I think the Commission needs to face those issues promptly.

My principal concern has to do with the treatment of the complicating effects of earthquakes on emergency planning, and that decision, together with my remaining doubts on the seismic design quality assurance area, lead me to conclude that I must vote against full power operation at this time.

CHAIRMAN PALLADINO: Commissioner Bernthal?

COMMISSIONER BERNTHAL: Let me first speak to the suggestion that Commissioner Asselstine has made with respect to Mr. Yin being asked to continue some of his studies and resolve some of his own difficulties.

I would have no problem with that, Mr. Chairman, provided that that's a practical and workable arrangement.

I have concerns that that may not be advisable for an operating plant, and in fact, Mr. Yin himself probably would be the best person to consult in that regard.

But if Mr. Yin and his staff felt that that was something that's workable and makes sense, I would certainly accept their professional judgment on that.

I also want to speak in some detail to the issue of earthquakes, because the issue of earthquakes is certainly the most visible issue, especially in California and is unique to California, if not to Diablo Canyon itself.

One of the major questions that has run throughout our proceedings in Diablo Canyon is the question of the seismic design adequacy of the Diablo Canyon facility.

No one should be under any illusions that the science of geology and seismic science at this point today is an exact science.

It's a study of forecasting seismic events, which I think has not yet ascended to the rank and reliability of forecasting the weather by a long shot.

But the best experts in the field available today have offered us reasonable and, I believe, sufficient assurance that the design basis and construction of this plant is adequate to withstand the maximum probable seismic event in the geologic region of Diablo Canyon.

I support it, the ACRS has recommended it, the utility has proposed, the ACRS and our staff have

signed off on a continuing review and evaluation of the state of the seismic art and science as it develops and relates to Diablo Canyon for the next several years.

I intend to watch that development rather carefully.

In particular, I'd like to respond as well to one of the issues that was raised in our second brief session here by one of the intervener groups, a group that has devoted a great deal of time and effort to this problem.

Because the issue of the Hosgri Fault and the fact that it's a thrust type fault and not a strike slip fault, as we might have previously thought, was raised at that time, and I'd like to speak to that for a moment.

The indications when we went through this issue in some detail at our earlier meeting were that in fact one geologic paper, one geologic study, as I understand it, done primarily on behalf of the petroleum industry, indicated that indeed the Hosgri Fault may be somewhat closer than previous thought to the Diablo Canyon site, but that at the same time, because of the nature of the fault, the probability of a large 7.5 design basis magnitude quake would under this newest hypothesis be less frequent.

I therefore find no reason based on that latest of what I am convinced will be many, many more papers on California geology and seismology, to change my position of the seismic adequacy of the Diablo Canyon plant, and I have reached that conclusion, certainly not on the basis of my own expertise alone, but on the recommendation of the ACRS and what has been shown in previous meetings at this table to be the consensus of expert opinion.

I would also like to speak briefly to the matter of allegations. We've had a large volume of allegations in connection with the proceeding.

But finally, I have to take a look at two issues, and I always try and separate these issues. First of all, do the allegations call into question the structural hardware physical integrity of the plant?

I simply find no basis, based on the recommendations of our staff and outside groups, including the ACRS, that have considered this matter, not the matter of allegations themselves, I should emphasize, but have considered the hardware integrity of the plant, for calling into question at this point the hardware of the plant.

As to how those allegations might touch on current plant management, I will stand by the staff evaluation

of that at the moment, as I would on an operating plant, and we will let these investigations proceed and we will review them as they go on and look very carefully, as we always do, at allegations that might call into question the adequacy of plant management.

One issue that I think was brushed over somewhat too briefly today and therefore, if my fellow commissioners will bear with me, I realize it's late, I think we should comment on briefly, is the issue of operator qualifications.

That is an issue that was raised by the gentleman, commissioner, who sat at this position on the table before me, Commissioner Gilinsky, considered that a major issue in relation to Diablo Canyon.

It's certainly an important issue and in general, one of the most important issues that we face throughout the industry today.

I believe in the case of Diablo Canyon that that issue has been adequately addressed by the certifications that we have received with respect to shift advisors that would be present, and by the additional training with which the staff at Diablo Canyon has received in the last several months.

I would caution and comment, however, that there should be no illusion in the industry at large or

in the management at Diablo Canyon that the standards of today, which I consider a beginning on the road to excellence, are going to be the final standard tomorrow.

I consider the standards of today to be adequate beyond a reasonable doubt for the safe operation of this plant and other plants in this country, but we should look forward to the day when we find excellence beyond any question in such operations.

Lastly, just a comment on the issue that Jim has raised on earthquakes and emergency planning. I would just point out that my technical basis for standing by the technical judgment made in the San Onofre decision is finally based on my decision that Diablo Canyon is not unique in respect to earthquakes and emergency planning.

I would point out that two of the three most destructive quakes in this country in recorded history have occurred, in fact, east of the Mississippi River. Well, I guess one was a few miles west, perhaps, but in any case, the Eastern part of the country.

And therefore, I believe that that's a generic issue and an issue that I certainly would not argue with Commissioner Asselstine that the Commission should have considered earlier, and I will make no

excuses for the fact that the Commission has not taken up that generic issue at an earlier time.

But I don't believe that it's unique to the case of Diablo Canyon. We should have started on this two years ago, and I'm free to take my 10% of the responsibility on that matter.

I hope that we will move quickly now. The Chairman wants me to take 20% but I've argued I've only been here half of that time, so I'll take 10%.

(Laughter.)

And with that, I'm prepared today, Mr. Chairman, to cast my vote affirmatively for full power operation for this plant.

CHAIRMAN PALLADINO: Thank you. As you heard--I'm sorry. Commissioner Zech. Additional comments?

COMMISSIONER ZECH: I'm not voting, Mr. Chairman, as I stated.

CHAIRMAN PALLADINO: As you heard, we have three in favor of authorizing power ascension and operation up to full power. We have one against, and one not voting.

Before we adjourn, though, I want to address another point. In order to implement our decision, we're going to need an order which will be prepared by OGC.

OGC may have some question about guidance. I'm not

sure if you've got all the guidance you need to prepare such an order, but at this time, I thought I'd ask you to see if there is any particular point in which you'd like Commission comments.

MR. MALSCH: At this point, we have all the guidance we need.

CHAIRMAN PALLADINO: All right. It is going to take some time to prepare the order. I've been talking to OGC representatives before we got started.

They are going to try to have an order for the Commission by next Wednesday. They might have the draft by Monday, but let's see if we can't complete the issuance or complete our approval of the order, and as long as the order is consistent with what we said so far, I understand we don't have to have a public meeting to affirm it.

In any event, it is the plan to delay the effective date of the order by one week after the date of the order.

I'm sorry. We're going to delay the effectiveness of the order by one week beyond the date of the order so individuals who want to take action will have enough time to do so.

Now is there any other matter we should be discussing with regard to Diablo Canyon?

COMMISSIONER ASSELSTINE: No.

CHAIRMAN PALLADINO: All right. A couple of housekeeping items. We are cancelling the affirmation session for this afternoon, and we'll schedule any affirmation item that's on the schedule for a later time.

But I would like the commissioners to meet in a brief agenda planning session in the other conference room in about ten minutes.

COMMISSIONER ASSELSTINE: Sure.

CHAIRMAN PALLADINO: With the appropriate staff. Thank you all. We stand adjourned.

(Whereupon, the meeting adjourned at 4:40 p.m.)

CERTIFICATE OF PROCEEDINGS

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

In the matter of:

DISCUSSION/VOTE ON ISSUANCE OF FULL POWER LICENSE FOR DIABLO CANYON

Date of Proceeding: AUGUST 2, 1984

Place of Proceeding: WASHINGTON, D.C.

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

JOE NEWMAN

Official Reporter

Joe Newman/ddr

Official Reporter - Signature

COMMISSION BRIEFING

FULL POWER LICENSE AMENDMENT

PACIFIC GAS & ELECTRIC COMPANY

DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1

LICENSEE AND PLANT

- OWNER / LICENSEE - PACIFIC GAS AND ELECTRIC COMPANY (PG&E)

- PLANT
  - 2 PWR UNITS
  - NSSS - WESTINGHOUSE: 3338 MWT (1084 MWE)
  - LARGE, DRY, REINFORCED CONCRETE CONTAINMENT
  - ORIGINAL ARCHITECT ENGINEER - PG&E
  - CURRENT ARCHITECT ENGINEER - DIABLO CANYON PROJECT (PG&E / BECHTEL)
  - CONSTRUCTOR - PG&E

- SITE
  - CENTRAL CALIFORNIA COAST
  - VERY LOW POPULATION AREA
  - HOSGRI FAULT (5.8 KM)

- EMERGENCY PREPAREDNESS (EP)
  - ONSITE EP ADEQUATE:

    LICENSING BOARD INIT. DECS. LOW POWER - JULY 1981
    AFFIRMED BY APPEAL BOARD, MAY 1983
    COMMISSION DECLINED REVIEW
    LICENSING BOARD INIT. DECS. FULL POWER - AUGUST 1982
  - ADEQUACY OF OFFSITE EP (INCLUDING FEMA FINDINGS):

    LICENSING BOARD INIT. DECS. FULL POWER - AUGUST 1982
  - ASLB REQUIREMENT FOR FORMAL FEMA FINDINGS VACATED - JUNE 1984
  - LAST EMERGENCY EXERCISE CONDUCTED - OCTOBER 19, 1983
  - FEMA INTERIM FINDINGS ON STATE PLAN - JULY 1984

DIABLO CANYON 1

SLIDE 1

BACKGROUND / CHRONOLOGY

SEPTEMBER 21, 1981	- COMMISSION BRIEFING RE: LOW POWER AUTHORIZATION
SEPTEMBER 22, 1981	- LOW POWER LICENSE ISSUED
LATE SEPTEMBER, 1981	- "MIRROR IMAGE" PROBLEM DISCOVERED BY PG&E
NOVEMBER 19, 1981	- COMMISSION ORDER SUSPENDS LOW POWER LICENSE
NOVEMBER 19, 1981	- NRR LETTER RE: REQUIREMENTS FOR FULL POWER
DECEMBER 8, 1982	- COMMISSION APPROVES 3-STEP LICENSING PROCESS STEP 1 - FUEL LOAD STEP 2 - CRITICALITY AND OPERATION UP TO 5% STEP 3 - OPERATION ABOVE 5% POWER
NOVEMBER 8, 1983	- COMMISSION APPROVES STEP 1: FUEL LOAD AND COLD SYSTEM TESTING
NOVEMBER 20, 1983	- FUEL LOAD COMPLETE
JANUARY 25; 1984	- COMMISSION APPROVES HOT SYSTEM TESTING
APRIL 13, 1984	- COMMISSION APPROVES STEP 2: OPERATION UP TO 5% POWER (FULL REINSTATEMENT OF SUSPENDED LICENSE)
APRIL 29, 1984	- INITIAL CRITICALITY ACHIEVED
MAY 23, 1984	- LOW POWER TESTING COMPLETED
1981 - 1984	- NUMEROUS COMMISSION MEETINGS - SEVERAL COMMISSION ORDERS - NUMEROUS BOARD NOTIFICATIONS
JULY 25, 1984	- PLANT READY FOR POWER ASCENSION ABOVE 5% POWER

SELECTED ISSUES

COMPLETION OF IDVP/ITP ISSUES FOR FULL POWER DECISION

STAFFING AND QUALIFICATIONS

- SHIFT ADVISORS
- NUMBER AND EXPERIENCE OF OPERATORS

ALLEGATIONS

PIPING AND SUPPORT ISSUES (INCLUDING I. YIN CONCERNS)

LONG TERM SEISMIC DESIGN BASIS REEVALUATION PROGRAM

PLANT READINESS (INCLUDING LOW POWER TESTING)

CONSTRUCTION QUALITY VERIFICATION

HEARING STATUS AND ISSUES

FULL POWER LICENSE AMENDMENT

COMPLETION OF IDVP/ITP ISSUES FOR FULL POWER DECISION

- SSER 20 (DECEMBER 1983) IDENTIFIES:
  - 9 ISSUES TO BE RESOLVED PRIOR TO CRITICALITY/LOW POWER
  - 4 ISSUES TO BE RESOLVED PRIOR TO FULL POWER
- COMMISSION BRIEFING MARCH 26, 1984:
  - 9 ISSUES FOR CRITICALITY/LOW POWER RESOLVED
- SSER 24 (JULY 1984):
  - DOCUMENTS THE RESOLUTION OF REMAINING ISSUES

DIABLO CANYON 1

SLIDE 4

OPERATIONS STAFFING AND QUALIFICATIONS

SHIFT ADVISORS (SA)

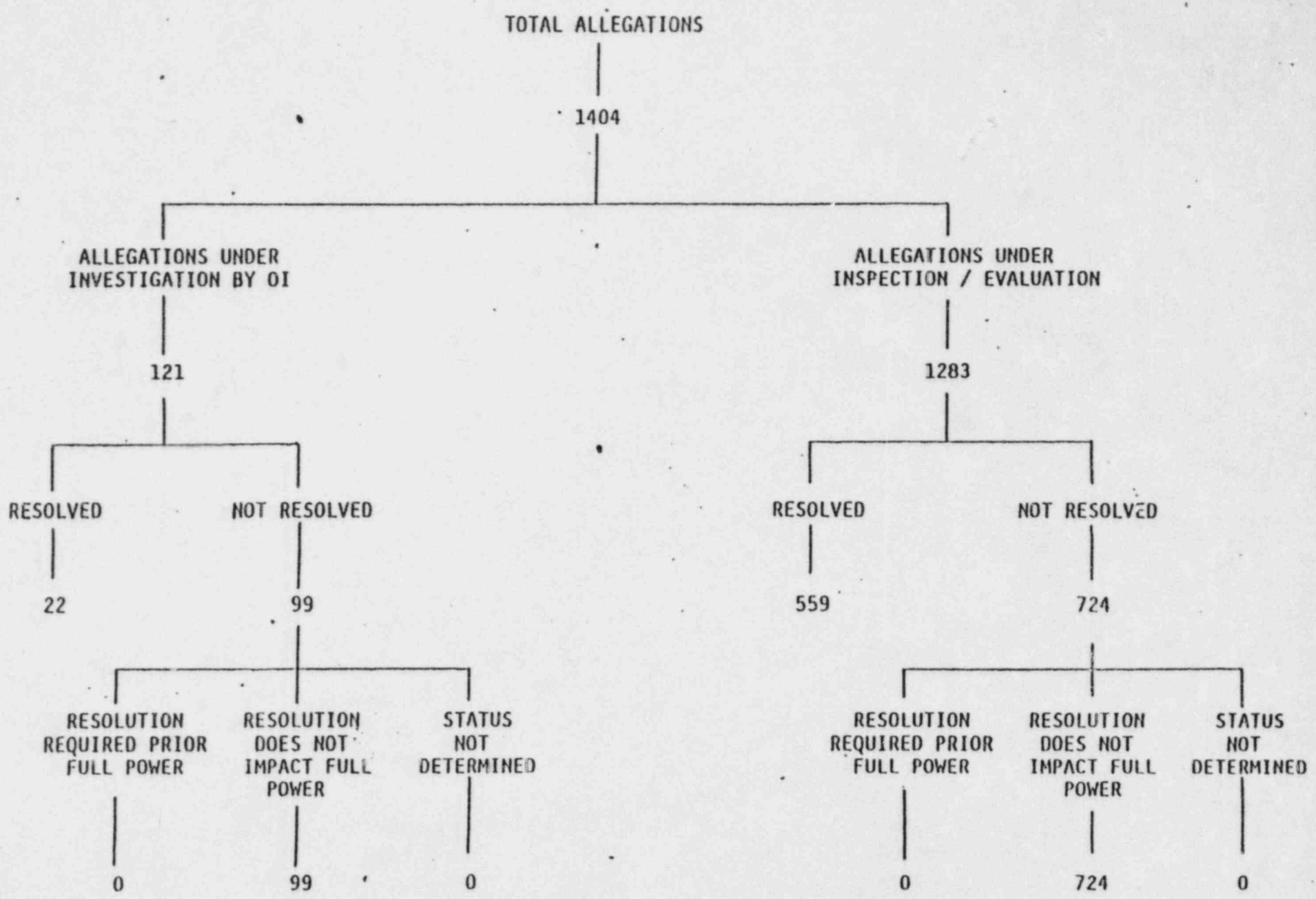
THE STAFF

- REVIEWED SA QUALIFICATIONS
- REVIEWED SA PROCEDURE
- REVIEWED SA TRAINING PROGRAM
- REVIEWED EXAMINATIONS OF FIRST GROUP OF SA CANDIDATES
- MONITORED EXAMINATIONS OF SECOND GROUP OF SA CANDIDATES
- MONITORED OPERATING CREW PERFORMANCE DURING STARTUP AND LOW-POWER TESTING

CONCLUSIONS

- DIABLO CANYON SHIFT ADVISORS MEET THE GUIDELINES ADOPTED BY THE COMMISSION IN THE CHAIRMAN'S JUNE 14, 1984 LETTER
- THE DIABLO CANYON SHIFT ADVISORS ARE SUCCESSFULLY INTEGRATED WITH, ACCEPTED BY, AND WORKING WITH THE OPERATING SHIFT CREWS

ALLEGATION STATUS AS OF JULY 8, 1984



DIABLO CANYON 1
SLIDE 6

PIPING & SUPPORTS

ISSUES CONSIDERED BY PEER REVIEW GROUP

A. LICENSE CONDITIONS

1. REVIEW OF SMALL BORE COMPUTER CALCULATIONS
2. RIGID-RIGID SUPPORTS
3. INACTIVE SNUBBERS
4. THERMAL GAPS
5. PIPING SYSTEM WALKDOWNS
6. "QUICK-FIX" PROGRAM
7. SMALL BORE AND LARGE BORE TECHNICAL ISSUES

B. INDEPENDENT DESIGN VERIFICATION PROGRAM

C. PROGRAMMATIC ISSUES

PIPING & SUPPORTS
PARTICIPANTS IN PEER REVIEW GROUP ACTIVITIES

	ORGANIZATION	SPECIFIC ISSUES
D. ALLISON	IE	QA
R. BOSNAK	NRR	LC 2, 3, 6; IDVP
T. BURR	EG&G	LC 2, 3, 6
P. CHEN	ETEC	LC 1, 4, 5
H. FLECK	ETEC	LC 1, 4, 5
M. HARTZMAN	NRR	LC 1, 2, 3, 7; IDVP
R. HEISHMAN	IE	QA
J. KNIGHT	NRR	
K. MANOLY	REGION I	LC 1, 2, 3, 7; IDVP
K. MORTON	EG&G	LC 2, 3, 6
E. RODABAUGH	ECR	LC 4, 5
B. SAFFELL	BCL	LC 2, 3, 6; IDVP
E. SULLIVAN	NRR	LC 4, 5; IDVP
J. TAYLOR	IE	
R. VOLLMER	NRR	

I. YIN INVOLVED IN GROUP ACTIVITIES TO EXTENT POSSIBLE

PIPING & SUPPORTS

PRINCIPAL PEER REVIEW GROUP ACTIVITIES

• MEETINGS WITH ACRS & SUBCOMMITTEE	4
• MEETINGS WITH LICENSEE	3
• DESIGN AUDITS	7
• SITE INSPECTIONS	3
• MEETINGS WITH ALLEGERS	3
• REVIEW GROUP MEETINGS	4

STAFF AND CONSULTANTS RESOURCES IN EXCESS OF 2 PROFESSIONAL STAFF YEARS

DIABLO CANYON 1

SLIDE 9

PIPING & SUPPORTS

CONCLUSIONS OF PEER REVIEW GROUP

- SEVEN CONDITIONS IN LOW POWER LICENSE SATISFACTORILY RESOLVED
- PREVIOUS STAFF CONCLUSIONS ON INDEPENDENT DESIGN VERIFICATION PROGRAM REMAIN VALID
- PROGRAMMATIC ISSUES INVOLVING ONSITE ENGINEERING RESOLVED
- ABOVE ISSUES SHOULD NOT PREVENT OPERATION OF DIABLO CANYON AT FULL POWER

SEISMIC DESIGN BASIS REEVALUATION PROGRAM

- ACRS LETTER OF JULY 14, 1978 SUGGESTED:
  "THAT THE SEISMIC DESIGN OF DIABLO CANYON BE REEVALUATED IN ABOUT TEN YEARS TAKING INTO ACCOUNT NEW INFORMATION"

- "CROUCH PAPER" (EARLY 1984) - NEW INTERPRETATION OF FAULTING IN CENTRAL CALIFORNIA

- MEETINGS:
  COMMISSION: MARCH 26-27, 1984 (FIRST STAFF PROPOSAL FOR LICENSE CONDITION TO COMMISSION)
  APRIL 13, 1984

  NRC STAFF/PG&E: MAY 8, 1984

  ACRS SUBCOMMITTEE: MAY 24, 1984

  ACRS FULL COMMITTEE: JUNE 14, 1984

- COMMISSION ORDER CLI 84-5 (APRIL 13, 1984) AND LETTER FROM CHAIRMAN TO ACRS (APRIL 13, 1984) REGARDING LICENSE CONDITION FOR PROGRAM

- LICENSE AMENDMENT NO. 9 (APRIL 18, 1984) SETS FORTH LICENSE CONDITION

- ACRS LETTER (JUNE 20, 1984) ENDORSES SPECIFIC PROGRAM ELEMENTS AS PROPOSED BY STAFF

- LICENSE AMENDMENT NO. 10 (PROPOSED) SETS FORTH SPECIFIC PROGRAM ELEMENTS AS LICENSE CONDITION

DIABLO CANYON 1
SLIDE 11

FOUR ELEMENTS FOR SEISMIC DESIGN BASIS REEVALUATION PROGRAM

(1) EVALUATE NEW INFORMATION

(2) REEVALUATE DESIGN BASIS EARTHQUAKE

(3) REEVALUATE GROUND MOTION

(4) ASSESS RESULTS FROM ITEMS (1), (2) AND (3) ABOVE UTILIZING PROBABILISTIC RISK ANALYSIS AND DETERMINISTIC STUDIES

- PROGRAM TO BE SUBMITTED TO STAFF BY JANUARY 1985
- PROGRAM TO BE CONDUCTED BY PG&E
- ALSO, PARALLEL EFFORT BY STAFF

PLANT READINESS

FULL POWER OPERATIONAL READINESS

- LOW POWER TEST PROGRAM
- EVALUATION OF OPERATING CREWS PERFORMANCE
- STATUS OF CONSTRUCTION AND CONSTRUCTION INSPECTIONS
- ITEMS REQUIRING ADDITIONAL LICENSEE ACTION PRIOR TO EXCEEDING 5% POWER

DIABLO CANYON 1

SLIDE 13

CONSTRUCTION QUALITY VERIFICATION

SUMMARY OF PLANT HARDWARE QUALITY VERIFICATIONS

1. THE REGULAR NRC INSPECTION PROGRAM
   - DEFINED BY IE MANUAL CHAPTER 2512 AND PREDECESSORS
   - SUBSTANTIAL PORTION OF INSPECTORS' TIME GIVEN TO DIRECT INSPECTION OF ACTUAL CONSTRUCTION DETAILS
   - PERFORMED DURING PLANT CONSTRUCTION AND SUBSEQUENT MODIFICATION

2. NRC FOLLOW-UP ON ALLEGATIONS

   THOUSANDS OF HOURS OF NRC STAFF EFFORT DEVOTED TO THE FOLLOW-UP AND RESOLUTION OF ALLEGATIONS IN RECENT MONTHS COVERING:
   - SAFETY-RELATED STRUCTURES
   - SAFETY-RELATED PRESSURE BOUNDARIES AND MECHANICAL SYSTEMS
   - SAFETY-RELATED ELECTRICAL SYSTEMS
   - SAFETY-RELATED COMPONENTS
   - QUALITY OF SPECIAL PROCESSES
   - INSTRUMENTATION, CONTROLS, AND PROTECTIVE FEATURES
   - OTHER QUALITY-RELATED INSPECTIONS

3. QUALITY VERIFICATIONS PERFORMED BY THIRD PARTIES
   - INDEPENDENT DESIGN VERIFICATION PROGRAM (IDVP)
   - ASME CODE INSPECTIONS
   - AUTHORIZED CODE INSPECTORS

CONSTRUCTION QUALITY VERIFICATION

LICENSEE QUALITY ASSURANCE PROGRAM

SINCE SEPTEMBER 1981

- PG&E STOPWORK ORDERS
- H. P. FOLEY STOPWORK ORDERS
- PG&E AUDITS
- H. P. FOLEY AUDITS
- PULLMAN POWER PRODUCTS AUDITS

DIABLO CANYON 1

SLIDE 15

HEARING STATUS

APPEAL BOARD COMPLETED:

- CONSTRUCTION QA
  - ALAB-756 (DECEMBER 1983) - DENIED MOTIONS TO REOPEN THE RECORD.

- REOPENED HEARING ON DESIGN QA ISSUES
  - ALAB-763 (MARCH 1984) - FAVORABLY RESOLVED ISSUES IN CONNECTION WITH UNIT 1 BUT REQUIRED LICENSE CONDITIONS REGARDING JET IMPINGEMENT ANALYSES AND CCW OPERATION

- RECENT MOTIONS TO REOPEN THE RECORD ON DESIGN QA AND ON CONSTRUCTION QA, AND LICENSEE CHARACTER AND COMPETENCE BASED ON ALLEGATIONS
  - ALAB-775 (JUNE 1984) - DENIED MOTIONS

- EMERGENCY PLANNING
  - ALAB-776 (JUNE 1984) - ON APPEAL BY STAFF AND PG&E, VACATED LICENSING BOARD CONDITION REQUIRING FORMAL FINDINGS BY FEMA PURSUANT TO 44 CFR 350

HEARING STATUS (CONTINUED)

APPEAL BOARD PENDING:

- APPEAL BY GOVERNOR AND JOINT INTERVENORS OF LICENSING BOARD INITIAL DECISION AUTHORIZING FULL POWER, AUGUST 1982
- MOTION TO REOPEN RECORD ON SEISMIC ISSUES, JULY 1984

COMMISSION

- PETITIONS FOR REVIEW PENDING
  - ALAB-756 (DENIAL OF INITIAL MOTION TO REOPEN RECORD ON CONSTRUCTION QA)
  - ALAB-763 (DECISION ON REOPENED DESIGN QA ISSUES)
  - ALAB-775 (DENIAL OF RECENT MOTIONS TO REOPEN RECORD ON DESIGN QA AND ON CONSTRUCTION QA AND LICENSEE CHARACTER AND COMPETENCE)
  - ALAB-776 (VACATED LICENSING BOARD CONDITION REQUIRING FORMAL FEMA FINDINGS PURSUANT TO 44 CFR 350)
- DETERMINATION OF NEED TO CONSIDER EFFECTS OF EARTHQUAKES ON EMERGENCY PLANNING (CLI-84-4)
- IMMEDIATE EFFECTIVENESS REVIEW OF LICENSING BOARD AUGUST 1982 DECISION AUTHORIZING ISSUANCE OF FULL POWER OLs.
- APPLICATION FOR STAY OF ANTICIPATED FULL POWER DECISION BY COMMISSION, JULY 1984

FULL POWER LICENSE AMENDMENT

A. COMPLETED LOW POWER LICENSE CONDITIONS:

1. ADDITIONAL JET IMPINGMENT ANALYSES (SSER 24)
2. PIPING AND SUPPORT ADEQUACY (SSER 25)

B. REVISED LICENSE CONDITIONS (SSER 27)

1. MAXIMUM POWER LEVEL (100% - 3338 MWT)
2. TECHNICAL SPECIFICATIONS (UPDATE)
3. FIRE PROTECTION SYSTEM (REFERENCE SSER 23)
4. EMERGENCY RESPONSE CAPAPILITY (COMPLETION DATES)
5. SEISMIC DESIGN BASES REEVALUATION PROGRAM (DETAILS)
6. REPORTING OF VIOLATIONS (10 CFR 50.73 CONFORMANCE)
7. EXPIRATION DATE (APRIL 23, 2008)

C. NEW LICENSE CONDITIONS (SSER 27)

1. CONTROL OF HEAVY LOADS (NUREG-0612 PHASE II)
2. EMERGENCY PREPAREDNESS (FEMA 44 CFR PART 350; NRC 10 CFR SECTION 50.54(s)(2))
3. MASONRY WALLS (CRITERIA AND MODIFICATIONS)

12/82

TRANSMITTAL TO: ☒ Document Control Desk, 016 Phillips

ADVANCED COPY TO: ☐ The Public Document Room

DATE: 8/15/84

FROM: SECY OPS BRANCH

cc: OPS File
C&R (Natalie)

Attached are copies of a Commission meeting transcript(s) and related meeting document(s). They are being forwarded for entry on the Daily Accession List and placement in the Public Document Room. No other distribution is requested or required. Existing DCS identification numbers are listed on the individual documents wherever known.

Meeting Title: Ltr/Poss Vote on Full Power Operating License for Diablo Canyon

Meeting Date: 8/2/84 Open X Closed ____

Item Description:	Copies Advanced To PDR	*	DCS Copies (1 of each checked) Original Document	May be Dup*	Duplicate Copy*
1. TRANSCRIPT ___ When checked, DCS should send a copy of this transcript to the LPDR for: ____ w/viewgraphs	1	*	1	___	___
2. Memo ACRS to Paladino, dtd 7/16/84	1	*	___	1	___
3. Testimony prepared by J. Gow, dtd 7/30/84	1	*	___	1	___
4.	___	*	___	___	___

(PDR is advanced one copy of each document, two of each SECY paper.)

*Verify if in DCS, and Change to "PDR Available."

50-275
323

TESTIMONY BEFORE THE COMMISSION HEARING
FOR ISSUANCE OF DIABLO CANYON UNIT 1
FULL POWER OPERATING LICENSE

JULY 30, 1984

Prepared By: I. T. Yin

Mr. Chairman and members of the Commission, thank you for inviting me to present my personal view of matters concerning the issuance of Diablo Canyon Unit 1 full power license.

As you know, I was requested by the Headquarters staff to participate in the NRC's investigation of allegations concerning the construction of Diablo Canyon. I was specifically assigned to pursue allegations in the piping design control area. Based on inspections conducted periodically from November 29, 1983 to May 2, 1984, I identified many significant technical and QA deficiencies. Contrary to the approach normally taken by my Region with significant problems, no enforcement conference was held, nor was there any enforcement action taken. No requests were made for licensee program upgrade, and there was no attempt to broaden the inspection areas and scope. Defective programs, such as Quick Fixes and Onsite Project Engineering Group design activities were allowed to continue until July 1984, when the licensee decided to abolish these practices. My request to followup on the licensee program revision was denied.

In the followup of the seven License Condition items that were incorporated into the low power license, even though I was the instigator for six of the seven items, and would normally be considered to be the most knowledgeable man on the issues and details, nevertheless, I was not considered essential in the followup review and evaluation. Peer Review Team inspection for Items No. 1 and 7 was conducted on the third week of May 1984, during my vacation overseas. Peer Review Team inspections for Items No. 2 to 6 were performed during the fourth week of May 1984, when I returned from vacation, and accompanied the ACRS on the site tour. Subsequent review of the Peer Review Team reports contained in the draft SSER revealed that they contain mostly undocumented reviews and casual observations. There were cases where the inspection sample selected was extremely small, where problems originally identified continued to exist, where review criteria were compromised without technical justification, and where Team failed to address the specific program deficiency issues. For the number of staff assigned and hired to work in the Peer Review Teams, and the length of time spent since the April 13, 1984 Commission meeting, I don't feel as though we've really addressed all the issues.

The 29-page "Concern Items on IDVP Evaluation of L/B and S/B Piping and Pipe Support Design," resulting from my review of a number of Cloud reports, were submitted to NRR for evaluation on April 25, 1984. Although these were a part of my original planned inspection, I requested NRR staff involvement based on the consideration that: (1) since NRR co-managed the program, any

findings would be against our own staffers, and (2) since NRR had already accepted the program, they should be able to explain the situation if deficiencies were being identified. The inspection was not scheduled until the week of June 17, 1984. Burdened by long presentations, indoctrinations for the Special Review Team members, discussion on issues unrelated to the IDVP, unavailability of documents that had been stored in remote locations, and my personal schedule difficulties, the actual time that I spent inspecting that week was less than 12 hours. My request to travel back Sunday to continue the inspection first thing Monday was denied.

As you can see, I was not pleased with how NRR has been managing and resolving my inspection findings. I believe additional investigation and inspection effort is warranted to properly close out identified areas of concern. I believe this could be accomplished in three to five weeks. This followup inspection would provide the Commission a clearer picture of the extent of the problem or the lack of problem.

In any event, if the Commission decides to grant the Diablo Canyon I a full power operating license today, I shall respect the Commission's judgement and decision, and shall cooperate fully in any followup actions deemed necessary. Looking back, I know that I have been honest in my work, and feel that I have fulfilled my assigned duty. Despite difference in professional opinion, I have not doubted the NRR management's honesty and integrity, and wish them the best of luck in handling the many other ongoing troubled facilities.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, D. C. 20555

July 16, 1984

Honorable Nunzio J. Palladino
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Dr. Palladino:

SUBJECT: REVIEW OF THE REPORT OF THE DIABLO CANYON PEER REVIEW GROUP

During its 291st meeting, July 12-14, 1984, the Advisory Committee on Reactor Safeguards completed its review of a draft report (Reference 1) prepared by the Diablo Canyon Peer Review Group as requested by your memorandum dated July 9, 1984. This matter was considered during a Subcommittee meeting held in Washington, D.C. on July 11, 1984. During our review we had the benefit of discussions with members of the NRC Staff, including NRC Inspector, Mr. Isa Yin, representatives of the Pacific Gas and Electric Company (Licensee), and representatives of the Independent Design Verification Program (IDVP) organization. We also heard statements from two members of the public and had the benefit of the documents listed.

The draft report of the Peer Review Group relates to activities undertaken by the Licensee in accordance with the seven conditions imposed by the Commission in the low power license for the Diablo Canyon Nuclear Power Plant, Unit 1. The report also addresses issues raised regarding the scope and effectiveness of the IDVP and concerns relating to quality assurance aspects of the work done by the onsite engineering group.

The Peer Review Group has concluded that the seven license conditions have been addressed satisfactorily by the Licensee, that the previous conclusions of the NRC Staff regarding the acceptability of the IDVP remain valid, and that the Programmatic Issues concerning the onsite engineering group have been resolved.

Although Mr. Yin participated to some degree in the reviews made by the Peer Review Group, he has concerns about the extent of the reviews and the judgmental basis for some of its findings. We believe that Mr. Yin's concerns represent a difference in professional engineering judgment. We believe that the Peer Review Group's review of the Licensee's activities was adequate for the purpose.

7/16..To EDO for Appropriate Action..Cpy to: Chm,Cmrs,RF,SECY..
84-0740

8407170556 2pp

We agree with the conclusions reached by the Peer Review Group that the issues discussed in the draft report have been resolved and should not prevent operation of the Diablo Canyon Nuclear Power Plant, Unit 1 at full power.

Sincerely,

Jesse C. Ebersole

Jesse C. Ebersole
Chairman

References:

1. Memorandum from Richard H. Vollmer, NRR, to R. F. Fraley, ACRS, dated July 6, 1984, Subject: Diablo Canyon License Conditions on Piping and Supports
2. Memorandum from Nunzio J. Palladino, NRC Chairman, to Jesse C. Ebersole, ACRS Chairman, dated July 9, 1984, Subject: Review of Diablo Canyon Issues
3. Memorandum from I. T. Yin, Region III, to Richard H. Vollmer, NRR, undated, Subject: Comments on SSER License Condition 2.C (11) Prepared by the Diablo Canyon Piping Peer Review Panel
4. Draft Memorandum from I. T. Yin, Region III, to Richard H. Vollmer, NRR, undated, Subject: Comments on SSER License Condition 2.C (11) Prepared by the Diablo Canyon Piping Peer Review Panel
5. Letter from Thomas Devine, Counsel, Mothers for Peace, Government Accountability Project, to Nunzio J. Palladino, et al., dated July 11, 1984, Subject: Diablo Canyon Nuclear Power Plant