NUCLEAR REGULATORY COMMISSION



COMMISSION MEETING

In the Matter of: PUBLIC MEETING

DISCUSSION OF DIABLO CANYON LOW-POWER OPERATING LICENSE

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Washington, D. C. AT:

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1	UNITED STATES OF AMERICA
2	NUCLEAR REGULATORY COMMISSION
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4	PUBLIC MEETING
5	DISCUSSION OF DIABLO CANYON LOW-POWER OPERATING LICENSE
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7	Nuclear Regulatory Commission Foom 1130 1717 H Street, N.W.
9	Washington, D.C.
Ĩ	Thursday, August 27, 1981
10	The Commission met, pursuant to notice, at 2:10 p.m.
11	BEFORE:
12	NUNZIO PALLADINO, Chairman of the Commission
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14	PETER A. BRADFORD, Commissioner
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16	THOMAS ROBERTS, Commissioner
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ALDERSON REPORTING COMPANY, INC.

ALSO PRESENT: SAMUEL CHILK LEONARD BICKWIT MARTIN MALSCH FORREST REMICK HAROLD DENTON STEVE HANAUER TOLBERT YOUNG BOB BUCKLEY

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DISCLAMER

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The transcript is intended solely for general informational purposes. As provided by 10 CER 9.103, it is not part of the formal or informal record of decision of the matters discussed. Impressions of opinion in this transcript do not necessarily failent final determinations or beliefs. No pleading or other paper may be filled 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.

PROCEEDINGS

2 CHAIRMAN PALLADINO: The meeting will please come 3 to order.

The discussion this afternoon is a continuation of 5 our consideration of the factors entering into Diablo Canyon 6 low-power license. There are two sets of issues that we 7 want to discuss this afternoon. The first relates to the 8 adequacy of reactor operating staff for low-power operation 9 and that would be an open meeting. It is an uncontested 10 item. But we have several contested items that we want to 11 then discuss, assuming we have time, and that would be in 12 the closed portion of the meeting.

13 We will proceed first with the adequacy of 14 operating staff and then we will recess for a few minutes if 15 we are going to continue with the closed session.

16 COMMISSIONER GILINSKY: Is this truly an 17 uncontested issue, Len?

MR. BICKWIT: Our view is that it should be 19 treated that way. This is a subject which was denied by the 20 licensing board at the licensing board level. You have a 21 letter from Governor Brown's counsel to the effect that it 22 therefore should be treated as a contested matter and 23 therefore not the subject of a briefing from one of the 24 parties in the case.

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As was discussed prior to the last open meeting on this subject, our view is to the contrary, that once a matter which was contested is denied as a subject or 4 contention, then it is appropriate for staff to come in and 5 brief you on that subject matter.

6 COMMISSIONER GILINSKY: It is one thing to have 7 the staff come in and for us to have a meeting of which a 8 transcript is kept so if there is any problem conceptually 9 it could be corrected. Should the issue be allowed in at 10 some later point, others would have an opportunity to deal 11 with what has been said here.

12 It is quite another thing if you are saying that 13 Commissioners can meet with individual parties and discuss 14 these subjects without keeping transcripts.

15 MR. BICKWIT: I am saying that the Commissioners 16 could meet with the staff without keeping transcript, not 17 with other parties.

18 COMMISSIONER GILINSKY: Why can we meet with the 19 staff?

20 MR. BICKWIT: Because the Commission has a 21 function to perform here and the staff has a function to 22 perform here with regard to its immediate effectivenss 23 review. This is a function which is apart from its 24 adjudicatory function.

25 The only reasonable way to construe what the

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1 Commission does under its immediate effectiveness review is 2 to look at it in two parts. One is to look at what the 3 Board has done and review that and decide whether on the 4 basis of the matters in dispute before the Board the 5 Commission can authorize the license to issue. In effect 6 the Commission in that sense is serving as a superboard.

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7 The other thing that the Commission does is in 8 effect it serves as a superstaff. It has the staff come in 9 and brief the Commission on that portion of the proceeding 10 which is not included in the record so that it can make its 11 decision about whether the resolution of those issues as 12 proposed by the staff is appropriate.

13 COMMISCIONER GILINSKY: The fact is the staff is 14 one of the parties. What this means is that if an issue 15 should subsequently be admitted and if contact has taken 16 place during which Commissioners received advice and no 17 record of that is kept, there is no way to correct that 18 defect.

MR. BICKWIT: That is always the case when you are 20 pursuing a nonadjudicatory function. In many circumstances 21 -- and we have confronted these in the past -- you have 22 discussions taking place between staff and the Commission 23 which involves matters which are relevant to the 24 adjudication but the purpose of the briefing is not an 25 adjudicatory one. It is almost as if you were discussing an

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1 enforcing action. That is our view of the matter.

2 COMMISSIONER GILINSKY: But you do say it does not 3 apply to the parties.

4 MR. BICKWIT: I do say that. I say that because 5 the cases which provide for this construction of the 6 ex parte rule as it is postured in the statute make a 7 distinction between staff and the other parties. And it 8 seems reasonable to carry that distinction down through our 9 rules so that we construe our rule the way the cases are 10 construing the statute.

11 COMMISSIONER AHEARNE: But I thought some time 12 ago, a couple of weeks ago in response to Mr. Eradford you 13 had a slightly different position.

14 MR. BICKWIT: That is right. I am glad you raised 15 that. In response to Commissioner Bradford, I did make a 16 statement upon reviewing the transcript which I would like 17 to retract. It has already been retracted in fact.

18 The question was one which I misunderstood and 19 that misunderstanding became apparent immediately after the 20 meeting. All of your officers were notified that the answer 21 which does appear on the transcript that I gave is the wrong 22 answer, i.e. that Commissioners could meet in private with 23 other parties to the proceeding on these issues.

24 COMMISSIONER AHEARNE: It is only the staff.
 25 MR. BICKWIT: It is only the staff. I think it is

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1 a perfectly reasonable way to proceed, to do this in public 2 session, to keep a transcript, to provide that transcript to 3 the other parties and to give them a chance to comment on 4 what happens with respect to the discussion in that 5 transcript. However I am telling you that I do not believe 6 it is required.

7 COMMISSIONER GILINSKY: I must say that I find 8 that an odd ruling. As long as the staff is treated like a 9 regular party in these proceedings, if it were not --

10 MR. BICKWIT: The problem is the staff is doing 11 two things in these proceedings. One, it is performing as a 12 party with respect to matters which really are contested 13 before the Board and where a record is being developed 14 before the Board.

As you know, it is also doing something else. 16 After the Board decides that the contested matters have been 17 resolved to its satisfaction, it authorizes the issue of the 18 license subject to the staff determinations with respect to 19 other issues, issues which have not been taken up before the 20 Board.

21 It is with respect to those issues that we are 22 having this briefing.

COMMISSIONER ERADFORD: What would be the Addifficulty with coming out the other way? That is issues Swhich the party sought to contest and on which the

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1 Commission had reached no final ruling, that is the appeal 2 had not been decided, providing that they would be handled 3 the way we handle contested issues. That is we would have 4 to look elsewhere for technical assessment, treating issues 5 on which contentions have been filed.

6 MR. BICKWIT: Do you mean as contested issues? 7 COMMISSIONER BRADFORD: Yes, as contested issues. 8 I take it we would then end up relying on OPE basics in the 9 way we do --

10 MR. BICKWIT: But you would have no record to 11 review.

12 CHAIRMAN PALLADINO: That is a position that is 13 awkward because if the hearing board does not treat the 14 issue, we have no record there.

15 COMMISSIONER BRADFORD: But there is no record 16 here either.

17 MR. BICKWIT: That is right. That is why we are 18 having this meeting.

19 CHAIRMAN PALLADINO: Otherwise if we are denied 20 access to the staff on that point, we would be denied access 21 to --

MR. BICKWIT: There would be no way you could make 23 a determination that it was in the public interest to 24 operate this plant or not to operate it.

25 COMMISSIONER GILINSKY: I think we ought to have

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1 access to the staff. I also think we ought to have access 2 to others. But whatever is said I think should be recorded 3 and whoever is a party to this case ought to have access to 4 the material.

5 MR. BICKWIT: I agree with that. I think that is 6 good practice. It is happening.

7 am simply telling you that as a legal matter I 8 do not think it is required.

9 CHAIRMAN PALLADINO: We are keeping a transcript 10 and it will be made available.

11 COMMISSIONER GILINSK: Have we invited other 12 parties to this meeting?

13 MR. BICKWIT: Yes. We have not invited them to 14 speak but we have invited them.

15 COMMISSIONER GILINSKY: Has anyone asked to speak?
16 MR. BICKWIT: No.

17 Now what you did the last time we confronted this 18 question was to provide a comment period for the other 19 parties. I think that is appropriate. I think it ought to 20 be a very short comment period.

21 CHAIRMAN PALLADINO: Do you mean as part of this 22 meeting?

23 MR. BICKWIT: No, not as part of the meeting; but 24 we made a transcript of a similar meeting available to the 25 other parties and we asked for their comments. Most of the

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1 comments criticized the General Counsel's rulings on these
2 matters.

3 (Laughter.)

4 MP. BICKWIT: Nonetheless I would advise doing it 5 again.

6 CHAIRMAN PALLADINO: Is there any problem in 7 proceeding that way, making a transcript available and 8 seeking comments?

9 COMMISSIONER AHEARNE: What did you give last time? 10 MR. BICKWIT: Last time we gave ? week.

11 COMMISSIONER AHEARNE: That seems reasonable. We 12got enough comments.

13 CHAIRMAN PALLADINO: Is there any problem with a 14 week?

15 (No response.)

16 CHAIRMAN PALLADINO: Why don't we proceed that way.

17 MR. DENTON: Thank you, Mr. Chairman.

18 I have with me Tolbert Young, the resident 19 inspector. Tolbert, maybe you have a new assignment now.

20 MR. YOUNG: I am section chief now back in 21 Region V.

22 MR. DENTON: Also with me are Bob Buckley, the 23 project manager, and Steve Hanauer, the director of the 24 Division of Human Factor of Safety.

25 CHAIRMAN PALLADINO: Is there a new resident there?

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MR. YOUNG. Yes, sir, two.

2 MR. DENTON: The last time we met with you we 3 talked about some difficulties we foresaw with staffing. 4 Since that time we have continued to explore that area. We 5 have concluded that there is adequate staffing for fuel 6 loading. And depending on the times that elapse between 7 fuel loading and any other possible operation, there are a 8 number of candidates who would be available for test.

9 COMMISSIONER GILINSKY: Are you distinguishing 10 between fuel loading and criticality?

MR. DENTON: Yes. Steve will go into this in more 12 detail. I just wanted to give a brief introduction. Steve 13 has a few slides that will show where we were when we met 14 with you last, the way we see 't now and will discuss some 15 license conditions which we are proposing be added to the 16 license to cover the difficuries we had foreseen last time.

17 Steve?

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18 MR. HANAUER: Mr. Chairman, I have eight 19 viewgraphs and in your handouts the back two pages are two 20 typewritten statements which are unsuitable for viewgraphs 21 which I will come to. They are draft license conditions 22 based on our review of this case and discussions we have had 23 with the Applicant and others.

24 The required staffing on shift is dependent on 25 what they are doing. The number of people available to

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1 staff these shifts depends on the time of the year, since 2 + hey have an active training program and we have an active 3 examination program.

4 The first slide and the first sheet in your 5 handout is a slightly updated version of a table I showed at 6 the last meeting. The left-hand two columns show what is 7 required for the different modes of operation, which I will 8 explain to you in a moment. The right-hand three columns 9 show at three different times how many people are available.

10 The top three numbers on the right-hand side are 11 slightly different from the ones I showed you a few weeks 12 ago. There are two reasons for this. The first is that we 13 discussed at considerable depth with the Applicant the job 14 titles, the job descriptions and the duties of these 15 people. These are the senior reactor operators who serve as 16 s upervisor and as senior control room operator, and 17 these are the people who are in this plant and short supply 18 and therefore it is the top line that we will concentrate 19 on. They have an ample supply of reactor operators and 20 shift technical advisers fully qualified and ready for 21 action.

CHAIRMAN PALLADINO: I did not follow that CHAIRMAN PALLADINO: I did not follow that I see. J have to look over here. Thank you. MR. HANAUER: The senior operators, they need Reight or four to run four shifts. That is to say they need

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1 one or two per shift depending on what they are doing. 2 Let's look at the second viewgraph please and we will come 3 back to the first one.

The second viewgraph explains the mode. I took 5 this right out of the technical specifications. Modes 1, 2, 6 3, 4, crudely speaking, are operating. Mode 5 is cold 7 shutdown where nothing is going on, and Mode 6 is 8 refueling. For cold shutdown, only a skeleton crew is 9 required because the plant is shut down, the temerpature is 10 low and the reactivity is low and the power 1. zero in 11 essence.

12 For refueling one senior operator is required out 13 in the control room, and during the actual movement of fuel 14 another senior operator is required out at the fuel. It is 15 a little bit complicated.

16 For Modes 1, 2, 3, 4 we count these to be 17 operation although they are operation under somewhat 18 different conditions. They are hot; they are pressurized. 19 As you see, the reactivity, the power and the temperature 20 have some variations. It is conveninent to define these 21 differently for other reasons. We have lumped them, the 1, 22 2, 3 and 4 into what I would call the operating modes.

If you go now back to the first viewgraph, you 24 will see that I have assumed four shifts which is what 25 Diablo proposes. For the operating modes, two seniors and

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1 two operators and one shift technical adviser are required 2 on each shift. That means for four shirts they need in 3 particular eight seniors, and that is where the trouble 4 comes.

5 Today there are 13 licensed seniors in the plant. 6 But not all of them are fully available for shift 7 operation. I showed you in some detail about these people 8 last time. If you will turn to Viewgraph 6 you will see a 9 revised layout of who these people are. It is the one 10 headed SRO Experience. There are five management people. 11 reactor superintendent, plant engineer and so on who are not 12 shown on this viewgraph because they are not at issue.

13 The eight people potentially available for shift 14 duty are shown here. Having reviewed much more carefully 15 the jobs involved, we now conclude that seven of them are 16 acceptable to us to stand shift duty and one, although fully 17 gualified, is not acceptable to us to stand routine shift 18 duty because he has other important things to do. He is the 19 operations supervisor and we want him to supervise operation 20 and not to be consumed by routine shift duties.

21 CHAIRMAN PALLADINO: Do the other seven have no 22 other duties?

23 MR. HANAUER: They have no other essential duties 24 that cannot be postponed.

25 COMMISSIONER AHEARNE: Is that postponed or given

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1 to someone else?

2 MR. HANAUER: Postponed or given to someone else; 3 there is indeed a difference but in either case this is 4 satisfactory to us. Let me try to explain as was explained 5 to us by the Applicant and as we have accepted the 6 differences between this and the list I showed you last time.

7 What I showed you last time was four shift seniors 8 and four which I characterized as management and plant 9 staff. One of the ones I characterized as plant staff has 10 actually been moved from the training staff to the shift 11 staff. We are satisfied there are enough training people 12 still on the training staff and we have accepted that 13 change. So you now see five shift seniors on the list where 14 before there were four.

15 The other two changes are the two bottom people on 16 the top list, the senior operations engineer and the 17 operations engineer.

18 CHAIRMAN PALLADINO: Which slide are you looking 19 at?

20 MR. HANAUER: I am still looking at Slide 6, the 21 one headed SRO Experience.

The sixth and seventh people on this chart, as has 23 now been explained to us in the most gruesome detail, are on 24 the staff of the operations supervisor. It one of their 25 duties is to fill in in shift work as appropriate and their 1 other duties can indeed be devolved on someone else or 2 postponed in order that this happen. They were hired for 3 this purpose. They have as you see operating experience and 4 also bachelor's degrees in engineering. They have convinced 5 us that this is satisfactory.

6 So that where as I said there were four available 7 for shift SRO last time, we now believe that seven are 8 available.

9 COMMISSIONER AHEARNE: In your last time's list it 10 is only the quality control engineer that is not on this 11 list.

12 MR. HANAUER: He has disappeared from this list. 13 I do not know whether his job has been redefined or whether 14 we had him in the wrong place.

15 COMMISSIONER GILINSKY: Moving the operations 16 engineers over does not conflict with any other requirements 17 on the licensee, does it?

18 MR. HANAUER: So we have been informed, and we 19 have explored this in some detail. They are not memehers of 20 the independent safety engineering group. They are not 21 members of the plant engineering staff, and they have 22 convinced us that that is true.

23 MR. DENTON: They meet all the requirements for 24 management and technical oversight with these individuals 25 assigned as shift workers as opposed to engineering duties.

1 Originally we thought that all of these people had essential 2 management dutues. Since we have met with you we have gone 3 into, as Steve said, the actual job requirements person by 4 person.

5 CHAIRMAN PALLADINO: Steve, we are not supposed to 6 get all of this from looking at this chart?

7 MR. HANAUER: That is correct. We put what we 8 thought was the right amount on the chart and will embellish 9 it in the discussion.

10 CHAIRMAN PALLADINO: I do not see what you are 11 telling me on this chart.

12 MR. DENTON: There used to be four on this chart 13 and we have added three.

14 MR. HANAUER: What we are telling you on this 15 chart is there are now seven people fully available for 16 shift senior duty.

17 KR. DENTON: That is based on previous 18 examinations and we have also listed on this chart their 19 previous experience and previous licenses just for 20 background information on their gualifications.

21 COMMISSIONER GILINSKY: Let me ask you, Steve. 22 You have a requirement for eight SEOs for Modes 1, 2, 3, 4. 23 Is that a requirement for routine operation of the plant?

24 MR. HANAUER: Yes, sir.

25 COMMISSIONER GILINSKY: Would it apply the first

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1 time you are turning the plant on?

2 MR. HANAUER: As a requirement, yes, it does 3 apply. They have also a startup crew of engineers, both 4 their own and contractors. But there are the licensed 5 people who are fully qualified in all aspects of the 6 operations: the board, the supervision of the board, the 7 monitoring of what is going on for plant safety.

8 COMMISSIONER GILINSKY: Not one of them has 9 previous operating experience as commercial PWR.

10 MR. HANAUER: That is correct.

One of the license conditions which we discussed 12 with you last time and which is at the end of this deck is 13 the proposed license condition requiring the use of 14 experienced people which they have contracted for who are 15 experienced in operation of large pressurized water reactors.

16 COMMISSIONER AHEARNE: I gather that is what you 17 call startup crew.

18 MR. HANAUER: They are part of the startup crew. 19 There is a much larger startup crew to do the engineering 20 and data analysis required during the startup tests. They 21 are called startup engineers.

COMMISSIONER AHEARNE: There is an additional 23 complement that is hired by the company or provided by the 24 'endor, whatever it is, during this startup.

MR. HANAUER: Yes.

25

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1 CHAIRMAN PALLADINC: Is that to do the reactor 2 operation?

3 MR. HANAUER: They do not put their hands on the 4 board. They are not licensed, but they are to be fully 5 available on shift to the operating crew to provide the 6 experience with this kind of large reactor that the present 7 operating crew does not have. We have had this problem in a 8 substantial number of plants where the crews are fully 9 qualified in every way that we test but lack what we 10 consider to be an essential experience component. We have 11 required the provision of such people on all shifts in 12 several other plants.

13 COMMISSIONER AHEARNE: How long do they stay? 14 MR. HANAUER: It varies. We now require them to 15 go to 100 percent power. I have a chronology here that 16 shows you when that happens.

MR. DENTON: It is the same sort of approach we 18 used on Sequoyah.

19 COMMISSIONER GILINSKY: I know you did. I asked 20 the Sequoyah people how that worked out and it was not clear 21 that it had worked out that well. They subsequently got 22 some help from INPO that they were very happy with.

23 MR. DENTON: I thought this was an interesting 24 chart to see the amount of experience they did have in 25 pre-ops and hot functional testing. That is not the same as

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1 running a plant at power but it does give them the 2 familiarity with the systems.

3 CHAIRMAN PALLADINO: I would like to make sure I 4 understand one point. We had four before that were 5 available and we had four from the management people that we 6 said were available. Did we get from four to seven by just 7 taking some of the management people and moving them over 8 and saying you are now an SRO and you are not a management 9 person?

10 MR. HANAUER: It could be described that way. 11 There is a way we hope is a better way to describe it. They 12 all have SROs.

13 CHAIRMAN PALLADINC: I understand that.

14 MR. HANAUER: What we did was they have now 15 convinced us that for three of those people we were wrong in 16 characterizing them as management people.

17 CHAIRMAN PALLADINO: It was not that they are now 18 leaving some management function that is either unattended 19 or is attended by someone who might be less well qualified.

20 MR. HANAUER: No, sir. We explored that at some 21 considerable depth and they satisfied us.

MR. DENTON: That was exactly our concern. Anyone 23 who had a job title other than SRO we thought should not be 24 assigned on shift. Then when we actually looked we found 25 that they title people engineer, not necessarily because 1 they have a management job per se but just to differentiate 2 between job functions in the plant.

3 These three people that we have allowed to be 4 counted as normal will not impair their ability to do their 5 normal management technical oversight of operations. That 6 still leaves us a number of management people holding SROs 7 who do not play any role in this chart.

8 CHAIRMAN PALLADINO: Where did they get the eighth 9 one?

10 MR. HANAUER: They have a problem getting the 11 eighth one. The short story is they have proposed to use 12 the operations supervisor for the eighth one. We are 13 unwilling to allow this except for short times in some kind 14 of an emergency, and they will have to get the eighth one 15 from the additional candidates. Therefore they will not be 16 able to go into these operating modes until they get more 17 people. That is as we have proposed.

18 CHAIRMAN PALLADINO: Do they have people in 19 training now?

20 MR. DENTON: Go back one slide from this one to 21 Slide 5 perhaps.

22 MR. HANAUER: Either way; if you will go back to 23 Slide 1 please you will see that the rumber of people 24 available increases with time because there are a 25 substantial number of people in the pipeline. The first

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1 number, the number we allowed today is seven. However there
2 is an exam going on next week, originally scheduled for this
3 week, and another exam later on. If you will look at Slide
4 No. 5 you will see more details on this pipeline.

5 Next week we will examine six SRO candidates and 6 eight RO candidates. What I have assumed in order to be 7 conservative is that half of these people pass. They did 8 somewhat better than this last time and they have shined up 9 their training program. So with good furtune we will do 10 better than this.

11 CHAIRMAN PALLADING: That is the question I would 12 like to explore a little further. I understand that at the 13 last exam -- and I do not know when it was given -- there 14 were 13 shift people that took the exam, and out of that 15 only four passed.

16 MR. HANAUER: That is correct.

17 CHAIRMAN PALLADINO: Now you are expecting 1850 percent to pass. That is less than 50 percent.

19 MR. HANAUER: Yes, sir, it is.

20 CHAIRMAN PALLADINO: The way the record looked 21 better was because the management people did so much better, 22 so-called. They had nine out of ten pass.

23 MR. HANAUER: That is right. Of the ten who 24 failed, they are putting up six to retake all or part, as 25 required, of the exam this time. The other four they feel

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1 need further work and they are not putting them up for 2 senior exams.

3 You are quite right. They did very poorly on the 4 previous exam. If they do poorly again they have a problem 5 but we have to examine them properly and if they do not pass 6 they have a problem.

7 CCMMISSIONER AHEARNE: Have they made any 8 indication to try to go out and hire additional people?

9 MR. HANAUER: Yes, they have a hiring program. 10 But they cannot help themselves in the short term by hiring 11 people. It takes a substantial number of months at the very 12 least for a new hire to learn the plant well enough to pass 13 our examination, even if they are very well up on the more 14 generic parts or our requirements.

15 COMMISSIONER AHEARNE: So that all of the people 16 on the test that is coming next week are people who failed 17 last time.

18 MR. HANAUER: Yes, sir.

19 CHAIRMAN PALLADINO: Have they had additional 20 training?

21 MR. HANAUER: Yes, they have. That is one of the 22 reasons they asked to postpone the exam a week. They 23 decided to lay on yet another week of thermodynamics heat 24 transfer and fluid flow for the six candidates. 25 COMMISSIONER AHEARNE: Maybe this is going too far

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> > .

1 but did they barely fail?

MR. HANAUER: I do not know.
MR. DENTON: There is another group in December as
4 the slide indicates, another group of 16 that are candidates.
MR. HANAUER: Some are those who failed earlier
6 and most are new.

7 COMMISSIONER AHEARNE: Are these more shift people?
 8 MR. HANAUER: Three of the 16 are staff and 13 are
 9 shift.

1 COMMISSIONER GILINSKY: What are the restrictions 11 in retaking an exam?

12 MR. HANAUER: They may apply for reexamination 13 after two months if they fail. If they fail a second time, 14 they may apply after six months. That is the last chance we 15 give them.

16 COMMISSIONER GILINSKY: When will we have the 17 results of the August-September exam?

18 MR. HANAUER: We have promised them by two weeks 19 after the exam. That is going to be hard to do but we are 20 going to do it. We want to review them properly as well as 21 grade them.

22 COMMISSIONER GILINSKY: So it will be around 23 September 20th?

24 MR. HANAUER: It will be something like that.
25 The orals are being given next week also for these

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1 six candidates and also for the ROs.

2 CHAIRMAN PALLADINO: Do you mean for these six 3 that are on the slide?

MR. HANAUER: Yes.

5 CHAIRMAN PALLADINO: Do you give the orals before 6 the written?

7 MR. HANAUER: Not usually; if you look at Slide 4 8 you will see exactly what they have to take. Five of them 9 passed the oral the first time and only one has to retake. 10 Five of them have to take all or in one case part of the 11 written exam over. So there is only one SRO oral to give 12 next week.

13 COMMISSIONER AHEARNE: You say one only has to 14 take one portion?

MR. HANAUER: If they fail a single category and 16 their overall grade is acceptable, then we give the single 17 category. If they fail two categories or the overall grade 18 is not satisfactory, they have to take the whole thing.

MR. DENTON: The other aspect of timing is shown 20 on Slide 8, if we could move to that one called Initial 21 Schedule which is the Applicant's projected schedule of the 22 time frames for the various operations. You might indicate, 23 Steve, which ones are which modes.

24 MR. HANAUER: The Applicant proposes to go into 25 Mode 5, fuel load, for two weeks and then to stay in Mode 5

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1 as I understand it for the next two months while he 2 assembles the rest of the reactor internals, puts on the 3 head, hydros the primary system and does other assembly and 4 test tasks. So he does not propose to go into Mode 4 as I 5 understand it until Day 76.

6 I have a more detailed schedule here. But in this 7 area it does not say. I am sorry. He proposed to start 8 heatup on Day 60 which would go into Mode 4. So on Day 60 9 he would need his full complement. This is his schedule.

COMMISSIONER GILINSKY: What kind of heatup?

MR. HANAUER: It would be heatup with power from
12 the pumps. This plant routinely heats up nonnuclearly.
COMMISSIONER GILINSKY: And at what point does he
project criticality?

MR. HANAUER: He projects criticality on Day 76. MR. DENTON: So based on past experience, there made these kinds of schedules. So it indicates to me that there is a schedules. So it indicates to me that there is a schedule likelihood that these tests can be conducted out of by the time he needs additional SROs there will be a large group that have been tested.

22 CHAIRMAN PALLADINO: So are you saying it is on 23 Day 60 he needs eight SROs?

24 MR. HANAUER: Yes.

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25 CHAIRMAN PALLADINO: What is SS again?

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MR. HANAUER: That is shift supervisor.

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2 CHAIRMAN PALLADINO: Then you will probably get it 3 because you have roughly ten.

4 MR. HANAUER: Yes, with any kind of reasonable 5 results from the exam he will make it easily.

6 COMMISSIONER AHEARNE: On your numbers that you 7 require him to have, is eight the permanent level?

8 MR. HANAUER: No, sir. The permanent level is two 9 per shift. As soon as they go into their long-term mode, 10 they will go to five or six shifts to allow for vacations, 11 illness and retraining.

12 The last two sheets in your handouts are two 13 proposed license conditions. The first one relates to just 14 this point of using management personnel routinely on shift 15 during the initial startup period and requires that before 16 the plant has attained 100 percent power level they may not 17 use the operations supervisor or other management or plant 18 staff personnel to satisfy the minimum staffing requirements.

I have to say that there is always an escape 20 clause for a flu epidemic or something, and that is provided 21 for in the tech specs. We will have to shape up this 22 language a little bit to give the same escape so that the 23 plant can be managed and maintained safely in some kind of a 24 special situation.

COMMISSIONER GILINSKY: Why is it ckay if there is

ALDERSON REPORTING COMPANY, INC. 400 VIRGINIA AVE., S.W., WASHINGTON, D.C. 20024 (202) 553-2345 1 a flu epidemic but not okay if there is none?

2 MR. dANAUER: You cannot walk away from the 3 plant. Qualified people have to operate the plant even if 4 there is a flu epidemic. If the numbers get too small, they 5 will have to shut down. If somebody is out for two or three 6 days, then it is acceptable for one of these management 7 people to move in for that period.

8 COMMISSIONER GILINSKY: You are talking about a 9 later period?

10 MR. HANAUER: Even during this initial startup if 11 somebody is sick for a small number of days, we allow this 12 kind of emergency substitution on some kind of showing that 13 they have enough people to do the work, including the 14 management work. We allow overtime under exceptional 15 circumstances for the same reason.

16 COMMISSIONER GILINSKY: Why would you not allow 17 them to start with seven but you will allow them in effect 18 to operate with seven if someone got sick a couple of weeks 19 later?

20 MR. HANAUER: We would not want to go into 21 especially a new operation shorthanded. But once having 22 started and acquired some experience and got into a 23 situation where operation was proceeding, we would allow 24 some irregularity in this respect so long as they comply 25 with the tech specs which they always have to do.

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Remember, these other people have licenses really for two reasons. One is we want the plant management to know how to run this plant, to understand operation and to 4 do some occasional operation.

5 COMMISSIONER GILINSKY: Are there not also 6 requirements on the managerial staff which would then not be 7 met?

8 MR. HANAUER: Look at Bart. I do not think there 9 are any tech spec requirements although we have reviewed as 10 part of our licensing review their management capability and 11 their staffing. To lose one or two members of management 12 for a small number of days we think is acceptable.

MR. DENTON: There are several periods. We were the trying to deal here with the period before the operators to have acquired a lot of experience. Once the operators are to experienced in operating at full power, I do not find it to have a member of management who holds a valid to occasionally work a shift.

19 COMMISSIONER GILINSKY: I think that Steve is 20 applying that to the earlier period too.

21 MR. DENTON: We are trying to cover all 22 contingencies. I hope they do not get the flu. If they do 23 we will deal with it when it happens. I think that is a 24 side issue. The intent is not to have management work 25 shifts.

1 COMMISSIONER GILINSKY: I guess the question is --2 at the time the plant is starting up is a pretty important 3 time in the life of a plant and everyone is learning 4 together -- whether one wants to move with a skeleton crew 5 so to speak.

6 MR. HANAUER: No, sir, one does not and to move 7 with a skeleton crew. But if they are in the middle of an 8 evolution it may not be possible to simply shut the thiny 9 down without another considerable evolution which might also 10 tax the group.

11 One has to decide on the basis of what is going on 12 and who is sick and who is available and make some decision 13 based on the facts, not all of which come before the scene.

14 COMMISSIONER GILINSKY: I realize in an emergency 15 someone may have to pitch in. I gather that is not what we 16 are talking about.

MR. HANAUER: Yes, sir. If you put an ironclad 18 license requirement in without an escape clause for 19 emergency, you find yourself mandating something which is in 20 fact passe.

21 COMMISSIONER GILINSKY: Wait a minute. The idea 22 is you are supposed to have enough backup and enough of a 23 safety factor, enough fat so you do not get into that 24 situation.

25 CHAIRMAN PALLADINO: Mr. Gilinsky's question was

1 why start with only eight; if you are going to anticipate. 2 some possible emergency conditions why not start with 3 perhaps nine.

4 MR. HANAUER: We are not going to let them start --5 MR. DENTON: I was concerned that we brought the 6 staff in order to not have to grant exemptions in the dark 7 of night on Sundays as we occasionally do and suggested that 8 we provide some just on the basis of contingency. It is a 9 lot cleaner to me not to grant the contingency because we do 10 not anticipate these things happening. If they do, we will 11 deal with them. I do not want to see this issue of illness 12 get --

13 CHAIRMAN PALLADINO: I do not think he was 14 focusing on the fact that you should not allow for emergency 15 conditions. But he says in order to allow for them, why not 16 start with the bigger crew.

17 MR. HANAUER: That is what we want the people to 18 do. These people are in the situation they are in. They 19 have 60 days of shutdown work to do and we think they will 20 have enough people when they need them. If they do not, 21 they should not start.

22 COMMISSIONER AHEARNE: You say "if they," but I 23 think the difference is how many people there would be.

24 MR. HANAUER: To load fuel and do their 60 days 25 cold shutdown work four is enough and seven is plenty. To

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1 go then into hot standby and begin the heatup we believe 2 they should have surely eight and they ought to have one or 3 two more. However these management people who are fully 4 qualified are in fact the fat, the surplus for extraordinary 5 situations.

6 CHAIRMAN PALLADINO: I just do not like to hear 7 management called "fat."

8 (Laughter.)

9 MR. HANAUER: It was somebody else's term I hope. 10 MR. DENTON: There is one other consideration in 11 this area. We have been trying to encourage members of 12 management to halt SROs and to have operator experience so 13 we wrote something that completely barred them from ever 14 exercising their SRO. They would have no incentive to 15 maintain it and keep it up. So it is trying to write a spec 16 which is as pure as Ivory soap with a little bit of margin 17 in case we need it at some time.

18 There is another important tech spec we wanted to 19 impose and maybe we should cover that. This would complete 20 our presentation.

21 CHAIRMAN PALLADINO: You are putting a clause so 22 that they can make adjustments when people are out sick?

23 MR. HANAUER: Yes, sir.

24 CHAIRMAN PALLADINC: And you are aiming toward 25 trying to get more than just a minimum and so is the company.

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MR. HANAWER: That is correct.

2 CHAIRMAN PALLADINO: By October you hope to have 3 at least on the order of ten.

MR. HANAUER: Yes, sir.

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5 MR. DENTON: We should not say "we are aiming." 6 The company is aiming and it is likely that the company will 7 have them.

8 MR. HANAUER: If there were no October class we 9 would feel differently.

10 MR. DENTON: The way to handle the issue is if you 11 really want them to have nine before starting, we should put 12 that in the tech spec. If you want to guarantee it, we can 13 put a number in that they must have X number before doing 14 beginning fuel loading. We are proposing that they meet the 15 standard requirements for fuel loading, but the way to 16 assure margin is to require it.

17 CHAIRMAN PALLADINO: I had an original concern 18 that we were using management people to do the job that was 19 before the company. At least you are pushing toward a full 20 complement. I would not object to having some additional, 21 although I want at least a full complement. That is what 22 you are writing.

23 MR. DENTON: Yes, at least a full complement for 24 each mode. They are in a position now for Modes 5 and 6, 25 and I think it is likely they will be in that position for

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1 other modes based on the experience of many utilities during 2 startup and the time it takes.

3 COMMISSIONER GILINSKY: How did the company get 4 itself into this fix? Did they misjudge the number of 5 operators who would pass the exam?

6 MR. HANAUER: Two things happened. One is we 7 increased the number that were required as a result of Three 8 Mile Island. The other is it took much longer to license 9 this plant and people got discouraged and left the company.

10 MR. YOUNG: I would like to say and it has not 11 come out here that most of the applicants who are going to 12 take the test next week have taken the test formerly and 13 passed the test. It is the post-TMI test that gave them 14 problems.

15 COMMISSIONER AHEARNE: I can interpret that two 16 ways.

17 MR. YOUNG: The test is tougher now.

18 CHAIRMAN PALLADINO: When you say "post-TMI test" 19 you mean the test on items related to --

20 MR. YOUNG: The test that NRC is giving now is 21 tougher than ones that were before TMI.

22 COMMISSIONER GILINSKY: It is the test that we are 23 giving now.

24 MR. YOUNG. That is correct.

25 COMMISSIONER BRADFORD: I think there is really

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1 only one way of looking at it when you look at it a little 2 longer.

3 MR. HANAUER: The last sheet in your handout is the proposed license condition to make sure that the 5 experienced startup engineers are provided and requires that 6 on each shift an individual experienced in comparable sized 7 pressurized water reactor operation be provided and defines 8 what that is. That is an individual with at least one year 9 of experience in pressurized water operation or has 10 participated in the startup of at least three pressurized 11 water reactors.

12 COMMISSIONER GILINSKY: He is not licensed or 13 necessarily formerly licensed.

14 MR. HANAUER: No, sir.

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15 COMMISSIONER GILINSKY: What if he has experience 16 in the operation of pressurized water reactors?

17 MR. HANAUER: The company proposes these people. 18 Many of them have been licensed. Some of them are startup 19 engineers who do not these days get licensed but have 20 extensive experience in the engineering and operation of 21 reactors during startup. In turnkey days we used to 22 actually license such people because the vendor had 23 responsibility for the operation but that is not customary 24 NOW.

CHAIRMAN PALLADINC: So startup is largely by

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1 people who are not members of the regular operating crew?

2 MR. HANAUER: No, sir. The licensed people, which 3 are four on each shift and the shift technical adviser, are 4 members of the regular operating crew participating in the 5 startup but of course in this case also getting their 6 experience. The extra engineering crew that comes in on all 7 reactors will not in general stay there. Although the plant 8 staff which will stay is also working on the startup crew, 5 the plant engineering staff and some of those people will 10 stay and will provide that experience in the engineering 11 part of the plant operation.

12 COMMISSIONER GILINSKY: What is the experience 13 level among the ROs? Have some of them been operators on 14 PWRs?

15 MR. DENTON: Many of these operators in general 16 were operators on Humbolt Bay which was a small PWR.

17 MR. HANAUER: I am sorry. I have their names but 18 not who they are.

19 COMMISSIONER GILINSKY: Is anybody in the entire 20 operating complement within the commercial PWR?

21 MR. HANAUER: I do not think so but I would not 22 swear to it.

23 MR. YOUNG: There were none licensed on the PWR. 24 A few have spent time at Ginna and also H. P. Robinson doing 25 the operations. All of the startup engineers have gone to

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1 three or four NTOLs and have watched them perform their 2 startup operations.

3 MR. HANAUER: Mr. Murley has just given me a table 4 that shows that two of the ROs at Diablo have observation 5 experience at two PWRs but if I am reading this correctly do 6 not have licensed experience.

MR. DENTON: This concludes our presentation.
 CHAIRMAN PALLADINO: Are there any questions?
 COMMISSIONER AHEARNE: Mr. Gilinsky mentioned some
 problems at Sequoyah which I guess had this kind of contract
 support. Are you familiar with that?

12 MR. DENTON: Yes.

13 COMMISSIONER AHEARNE: Could you expand on that?

14 MR. DENTON: Sequoyah was one of the first plants 15 that we licensed after TMI and they did not have anyone at 16 the plant with PWR experience as I recall and we did require 17 that they supplement it by hiring temporarily people who had 18 had experience. The company indicated very early in the 19 startup that they did not think that the people they had 20 hired were that useful and knew as much as the plant people.

I think that is a question of making the wrong 22 kind of arrangements. We pushed them into it very fast and 23 apparently it just did not work out. In theory there is no 24 reason why it could not work out if the company gets the 25 right kind of people.

1 COMMISSIONER AHEARNE: We're those individuals that 2 TVA hired specifically as opposed to people that they hired 3 from the vendor?

4 COMMISSIONER GILINSKY: They contracted with a 5 company, I do not know who, and they were provided by that 6 contractor.

7 MR. DENTON: I knew that the TVA licensee did not 8 think that it provided all that additional benefit to them. 9 COMMISSIONER GILINSKY: That was the impression I

10 got from them.

11 MR. DENTON: I guess I still think that if done 12 with some judgment and the right people are found to augment 13 the staff that it has potential benefit.

14 COMMISSIONER AHEARNE: My understanding is in this 15 case they were getting them from the vendor.

16 MR. BUCKLEY: As a matter of fact they are getting 17 help from two different contractors. I believe one is 18 Westinghouse and one is Bechtel.

19 CHAIRMAN PALLADINO: Do you feel with these 20 requirements that the personnel available to start up and 21 do the early testing will be adequate?

22 MR. HANAUER: Yes, sir.

MR. DENTON: And the license contains the specific 24 numbers that were shown on the first chart as requirements. 25 They presently meet the requirements for Modes 5 and 6. I

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1 think we have tried to project the schedules to show that it 2 is likely they will meet the requirements for higher modes 3 but that is conjecture.

4 COMMISSIONER AHEARNE: Of course we are some time 5 from being at the stage where they might have the 6 opportunity to go to those higher modes.

7 MR. DENTON: Yes.

8 CHAIRMAN PALLADINO: But following shortly on this 9-- I do not know by how many months or weeks -- is Diablo 10 II. Is the problem going to be similar or worse or for some 11 reason better?

12 MR. HANAUER: We looked a little bit at Diablo 13 II. There are new classes of people coming along intended 14 for Diablo II who of course we have not looked at yet. The 15 operating crew at the plant will be by that time experienced 16 in the operation of Diablo I and presumably, based on the 17 experience at other plants, some of those people will move 18 over to Diablo II.

19 The numbers are not possible to predict except the 20 Applicant has stated there are plenty in the pipeline.

21 MR. BUCKLEY: We do not expect Unit II to be 22 completed until the second quarter of next year in terms of 23 construction.

24 CHAIRMAN PALLADINO: Is the utility taking 25 advantage of the time to make sure they have people trained,

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1 ready and gualified? I think this a common problem.

MR. HANAUER: They have told us they are.

3 CHAIRMAN PALLADINO: I think this problem of 4 having adequate personnel is a rather large problem 5 throughout the industry. But yet it has to be solved on a 6 case-by-case basis. I think one of the reasons that some of 7 the utilities have gotten into trouble is because they did 8 not anticipate the training problem, the magnitude of the 9 training problem and the depth to which the people had to be 10 trained early enough so they had adequate people when they 11 are ready to start.

12 I gather the Diablo Canyon personnel are aware of 13 the problem and are doing something about it.

MR. DENTON: I think once we began to discover 15 these type problems, we made a point to raise this issue 16 with all the other plants in the pipeline who are further 17 down in time and have a chance to get started earlier. So 18 we may see this kind of problem temporarily here this year 19 but hopefully plants further off in 1982 and 1983 have 20 recognized it and have hired up for it.

21 CHAIRMAN PALLADINO: Are there any further 22 questions on this matter?

23 (No response.)

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24 CHAIRMAN PALLADINO: We have completed the item we 25 asked you to discuss with us.

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COMMISSIONER AHEARNE: Grade them carefully.

2 MR. HANAUER: I might say one more thing, Mr. 3 Chairman. We have gone back and looked at the exams we have 4 already given at Diablo. We had three examiners on the site 5 and the written examination was fully proctored. We have 6 reviewed in an audit way, but rather a substantial audit, 7 the examination papers from the written examination and no 8 evidence whatever of the kind of problem we had on another 9 recent case was evident in a considerable review.

10 CHAIRMAN PALLADINO: Before we close this, we have 11 a half hour before we are due for affirmation. We could 12 either proceed now to close this meeting or use the 13 intervening time for any meeting we need on affirmation. 14 What do you recommend?

15 Why don't we recess for a couple of minutes while 16 those individuals who are not participating in the closed 17 meeting can leave and then we will go to the closed meeting. 18 (Thereupon, at 3:05 p.m., the Commission adjourned 19 to other business.)

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NUCLEAR REGULATORY COMMISSION

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

in the matter of: PUBLIC MEETING - DISCUSSION OF DIABLO CANYON LOW-POWER OPERATING LICENSE · Date of Proceeding: August 27, 1981

Docket Number:

12

Place of Proceeding: Washington, D. C.

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

Judith F. Richard

Official Reporter (Typed)

ficial Reporter (Signature)

SHIFT STAFFING - 4 SHIFTS

	REQUIRED			AVAILABLE		
	MODES 1,2,3,4	MODES 5,6*	TODAY	<u>OCT. 81</u>	<u>82</u>	
SS (SRO) SRO	8	4	7	∼10	~17	
RO	8	4	13	₩17	~24	
STA	4	0	5	5	~9	

*EXTRA SRC NEEDED WHILE ACTUALLY MOVING FUEL

OPERATIONAL MODES

	MODE	REACTIVITY	POWER	AVG. TEMP.
1.	POWER	≥ C.99	> 5%	≥ 350 F
2.	STARTUP	= 0.99	≤ 5%	≥ 350
3.	HOT STANDBY	< 0.99	0	≥350
4.	HOT SHUTDOWN	< 0.99	0	200-350
5.	COLD SHUTDOWN	< 0.99	0	≤ 200
6.	REFUELING	≤ 0.95	0	≤140
				HEAD OFF

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LICENSE EXAM RESULTS

FEB-MAR 1981

- SRO CANDIDATES	PASSED	FAILED SRO BUT PASSED RO	FAILED
23	13 (56%)	5 (22%)	• 5 (22%)
CANDIDATES	PASSED		FAILED
12	8 (67%)		4 (33%)

SRO RE-EXAMINATION

AUG. 31 - SEPT. 4, 1981

- 4 COMPLETE SRO WRITTEN EXAM
- 1 SRO WRITTEN EXAM SINGLE CATEGORY
- 1 SRO ORAL EXAM ONLY -

4

LICENSING CANDIDATE PIPELINE

EXAM DATE	CANDIDATES
AUG. 31 - SEPT. 4, 1981	6 - SRO 8 - RO
DEC. 81	16 - SRO - 3 - STAFF 13 - SHIFT OPS 1 - RO
MAY 82	12-15 - RO

SRO EXPERIENCE

POSITION	PREVIOUS LICENSE	HOT FUNCTIONAL	DIABLO PRE-OP	
SHIFT SRO	BWR RO	119 DAYS	814 DAYS	
SHIFT SRO		165	758	
SHIFT SRO	영상 문화부분 가지 않는	165	750	
SHIFT SRO	USN RO	0	149	
SHIFT SRO	BWR RO	148	716	
SR OP ENGR.	N REACTOR SRO	0	135	
OP ENGR.	(USN RO) (BWR SRO)	0	110	
OF SUPERVISOR	BWR RO	16	400	

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HOT FUNCTIONAL TESTS

NOV. 75 - FEB. 76
 MAR. 77 - MAY. 77
 FEB. 79 - MAR. 79

INITIAL SCHEDULE

DAYS

FUEL LOAD ASSEMBLE, TEST ZERO POWER PHYSICS TESTS LOW POWER TESTS POWER ESCALATION 100% FIRST TIME COMMERCIAL

License Condition Diablo Canyon

Before the plant has attained a 100% power level, licensed personnel who are not regularly assigned members of the shift staff, including but not limited to the Operations Supervisor, shall not be assigned shift duties to satisfy the minimum staffing requirements for operation in Modes 1, 2, 3, 4. Such persons may be used, if necessary, during the period of initial fuel loading. Exceptions to this requirement may be made only after prior consultation with and approval by the NRC.

8/25/81

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License Condition Diablo Canyon

The Pacific Gas and Electric Company shall augment the plant staff to provide on each shift an individual experienced in comparable size pressurized water reactor operation. These individuals shall have at least one year of experience in PWR operation or shall have participated in the startup of at least three pressurized water reactors. At least one such experienced individual shall be on duty on each shift during the initial fuel loading and through the startup test program whenever the reactor is not in a cold shutdown condition for at least the first year of operation or until the plant has attained a nominal 100% power level, whichever occurs first.

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17 The Public Document Room

DATE:

August 28, 1981

Attached are the PDR 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 possible.

 Transcript of Commission meeting: Discussion of Diablo Canyon Low-Power Operating License, August 27, 1981 (1 copy)

a. Vugraphs presented at above meeting: Diablo Canyon

jake brown Office of the Secretary