

ORIGINAL

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PROCEEDINGS BEFORE

NUCLEAR REGULATORY COMMISSION

COMMISSION MEETING

PUBLIC MEETING

DKT/CASE NO.

TITLE DISCUSSION AND POSSIBLE VOTE ON PROPOSED  
SAFETY GOALS AND STAFF EVALUATION PLAN

PLACE WASHINGTON, D. C.

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(202) 628-9300  
440 FIRST STREET, N.W.  
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1 UNITED STATES OF AMERICA  
2 NUCLEAR REGULATORY COMMISSION

3 DISCUSSION AND POSSIBLE VOTE ON PROPOSED SAFETY GOALS  
4 AND STAFF EVALUATION PLAN

5 PUBLIC MEETING

6 Nuclear Regulatory Commission  
7 Room 1130  
8 1717 H Street, N. W.  
9 Washington, D. C.

Monday, January 10, 1983

10 The Commission convened, pursuant to notice, at  
11 1:35 p.m.

12 COMMISSIONERS PRESENT:

- 13 NUNZIO PALLADINO, Chairman of the Commission
- 14 VICTOR GILINSKY, Commissioner
- 15 JOHN AHEARNE, Commissioner
- 16 THOMAS ROBERTS, Commissioner
- 17 JAMES ASSELSTINE, Commissioner

18 STAFF AND PRESENTERS SEATED AT COMMISSIONER TABLE:

- 19 S. CHILK
- 20 J. HOYLE
- 21 L. SLAGGIE
- 22 J. ZERBE
- 23 D. RATHBUN
- 24 V. STELLO
- 25 T. MURLEY
- W. DIRCKS
- H. DENTON

AUDIENCE SPEAKERS:

- B. BERNERO
- R. FRALEY

\* \* \*



DISCLAIMER

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1 Commissioners to these ACRS comments.

2           With respect to the Federal Register notice, I  
3 suggest that comments be submitted in writing and left  
4 for a notation vote or discussion at a subsequent  
5 meeting.

6           Unless there are other Commissioner comments  
7 at this point, I would ask Mr. Dircks to walk us through  
8 the main elements of the evaluation program plan.

9           COMMISSIONER GILINSKY: Well, I do have a  
10 thought, Joe, and that is that in view of these ACRS  
11 letters -- one on the proposed safety goal policy  
12 statement and an advance copy of a letter on a related  
13 document, Proposed Commission Policy Statement on Severe  
14 Accident, which is in place of where the safety goal  
15 would get applied -- and in view of the Committee's  
16 rather critical comments I think we ought to put off  
17 taking action today on the documents before us.

18           I do think discussion would be very useful,  
19 but I do not think we ought to go forward until we have  
20 discussed the Committee's views, and, I would say, with  
21 the Committee.

22           CHAIRMAN PALLADINO: Well, I was not intending  
23 to call for a vote until we have discussed the ACRS  
24 comments or Commissioner reactions to them. Whether or  
25 not that will be done today, I guess, depends on how



1 much time we spend on the evaluation plan.

2 But I do expect that we are going to need  
3 another meeting because I would be surprised if we buy  
4 the evaluation plan completely as it is issued now. So  
5 I can be guided by the Commission on this.

6 I was going to suggest let's go through the  
7 evaluation plan because I have a feeling there are going  
8 to be some revisions necessary. Then the Staff could go  
9 off and do these between now and the subsequent  
10 meeting. And then we would take up the ACRS comments  
11 and if we settle them all today, fine. If we do not,  
12 then we would leave that for a subsequent meeting.

13 COMMISSIONER GILINSKY: Is there any sentiment  
14 for sitting down with the ACRS and discussing them with  
15 the Committee?

16 COMMISSIONER AHEARNE: I have no problem with  
17 Joe's proposal as far as the safety goal approach goes.  
18 The severe accident policy statement is quite a  
19 different thing.

20 CHAIRMAN PALLADINO: Oh, yes. I was referring  
21 only to the ACRS --

22 COMMISSIONER AHEARNE: On the ACRS letter on  
23 the safety goal, I think that they are bringing up some  
24 points that they have thought of before and, in  
25 addition, they proposed some wording that they would

1 suggest being added in.

2 I think that we can more readily address those  
3 than on the severe accident policy approach, where I  
4 think they said something about a seriously flawed or  
5 flawed approach. They are much more critical on that.

6 CHAIRMAN PALLADINO: My comments were with  
7 regard to the safety goal.

8 COMMISSIONER GILINSKY: The reason I bring it  
9 up, even though that one -- the one to which they  
10 referred being seriously flawed -- is not immediately  
11 before us, it is a related document and it is a place  
12 where the safety goal and the associated probabilistic  
13 risk assessments would get applied and, in fact, is  
14 probably the most prominent place where it will get  
15 applied.

16 And if they have such severe criticisms of  
17 that, it seems to me we ought not to move forward with  
18 the matters at hand until we at least understand what  
19 their concerns are.

20 COMMISSIONER AHEARNE: Well, I guess I -- they  
21 did not connect them that way and I do not connect them  
22 that way. I certainly agree --

23 COMMISSIONER ASSELSTINE: There is a  
24 connection.

25 COMMISSIONER GILINSKY: Of course there is.

1           COMMISSIONER ASSELSTINE: No, in the severe  
2 accident letter -- letter on the severe accident policy  
3 statement -- they do, at least in one of their comments,  
4 it seems to me, call into question the workability of  
5 the safety goal with present results from PRAs.

6           COMMISSIONER GILINSKY: Well, they connected  
7 them also in this sense, in that they sent us an advance  
8 copy over the weekend with a note that says "The  
9 attached may be of interest with respect to Monday's  
10 meeting on quantitative safety goals."

11          COMMISSIONER AHEARNE: Sure.

12          CHAIRMAN PALLADINO: But actually I know we  
13 are not discussing the severe accident rule, but the  
14 severe accident rule, I think, could work with or  
15 without the safety goals. So I think there is a degree  
16 of independence here such that we could act on the  
17 safety goals and treat the severe accident rulemaking as  
18 a separate issue.

19          COMMISSIONER GILINSKY: Well, I was making the  
20 opposite point, which is that they have severe  
21 criticisms on the severe accident approach. It seems to  
22 me it calls into question the fundamentals of the safety  
23 goal policy statement and the plan to evaluate it.

24          CHAIRMAN PALLADINO: If they had had such a  
25 comment, I think they would have made it. I think --



1           COMMISSIONER GILINSKY: Well, they did make it  
2 in sending it up to us. They could have said this can  
3 await your future meeting on severe accidents, but they  
4 sent it up specifically for this meeting.

5           CHAIRMAN PALLADINO: Yes, but in their  
6 comments on the safety goal they did not say the safety  
7 goal is flawed such that it has to await integration  
8 with the severe accident rulemaking.

9           Well, I think we can only deal with one thing  
10 at a time. Let me still suggest we proceed with the  
11 discussion of the evaluation plan. Then let's take up  
12 the ACRS comments on the safety goals, and then we can  
13 see where we go from there.

14          COMMISSIONER ASSELSTINE: That is fine with  
15 me.

16          CHAIRMAN PALLADINO: Any other comments?

17          Well, Bill, would you proceed then to  
18 highlight the evaluation plan for us and see what  
19 comments we have?

20          MR. DIRCKS: What we had done is on the basis  
21 of our interpretation of the comments on the meeting  
22 last week revised the evaluation plan, and I sent you a  
23 copy of that revision on the 7th.

24          I have underlined the parts that have been  
25 changed, through line-in/line-out. I think rather than

1 just hit the highlights of those changes, it might be  
2 worthwhile to go through the plan page-by-page and we  
3 can pick up any additional comments and make any  
4 corrections that you want to make through this method.

5 I have asked Tom Murley to be ready to do  
6 that, if you want to proceed that way. As we go  
7 through, we will pick up the changes that were suggested  
8 and requested, and we have a couple of, I think, at  
9 least one additional change that we want to emphasize,  
10 which goes with the implementation plan.

11 CHAIRMAN PALLADINO: Any objection to going  
12 through it page by page?

13 COMMISSIONER AHEARNE: No, but I would raise a  
14 question with you, Joe. I have a number of questions on  
15 the implementation plan and I am not sure how you  
16 would --

17 CHAIRMAN PALLADINO: On the evaluation plan?

18 COMMISSIONER AHEARNE: On the evaluation  
19 plan. I am not sure how you would -- if you want us to  
20 raise them on each page as we come across them?

21 CHAIRMAN PALLADINO: I thought that would be  
22 appropriate.

23 COMMISSIONER AHEARNE: Okay. Why don't I  
24 just, to assist in that, give you the copies of what I  
25 have raised and that will perhaps make it easier.

1 MR. MURLEY: Do you want me to proceed?

2 CHAIRMAN PALLADINO: Yes.

3 MR. MURLEY: I think as you can see from the  
4 underlining and strikeouts, there is two major themes to  
5 the revision. One is to give it a clear flavor of an  
6 evaluation plan and an evaluation period as opposed to  
7 an implementation plan and implementation period. So  
8 those are pretty general comments that apply throughout  
9 the document.

10 The second is to incorporate the Commission's  
11 specific comments, as we understood them, at least, from  
12 last week's meeting. It adds a public comment period  
13 and it adds the notion of a study of risks of competing  
14 technologies.

15 The table of contents, of course, is pretty  
16 clear. The first page deals with the purpose of the  
17 document. Here, the intent was to outline just exactly  
18 what this document -- that is, the evaluation plan -- is  
19 intended to do: discuss the scope of the issues to be  
20 assessed using safety goals; and how the Staff would  
21 approach that assessment; a description of how the goals  
22 would be evaluated, as one of the factors.

23 COMMISSIONER AHEARNE: And the changes that I  
24 had proposed in that first paragraph were, first, I do  
25 not think that we are here outlining the scope of issues



1 that will be assessed using safety goals because we are  
2 not really assessing any issues using the safety goals.  
3 We have got a trial period and so there are some things  
4 we are using in this trial, and that is why I struck  
5 number one.

6 MR. MURLEY: Could I respond to that,  
7 Commissioner?

8 COMMISSIONER AHEARNE: Sure.

9 MR. MURLEY: When we were looking at the old  
10 evaluation plan last summer, one of the recurring themes  
11 that came through is how are you going to use this in  
12 the licensing process or how aren't you. So we thought  
13 that we ought to spell out where it will not be used but  
14 also give examples of where it will. And that is kind  
15 of why.

16 COMMISSIONER AHEARNE: And I thought that was  
17 covered by your -- a description of how the safety goals  
18 will be evaluated as a factor in arriving at regulatory  
19 decisions. That seemed to me to encompass what you just  
20 described.

21 MR. MURLEY: Okay. It could be, yes.

22 CHAIRMAN PALLADINO: How about the others?

23 COMMISSIONER AHEARNE: Well, on the others, I  
24 was changing "needed to make the assessments and to  
25 improve the usefulness of the safety goals." I thought

1 the purpose of this trial period was to evaluate the  
2 usefulness of the safety goals.

3 MR. MURLEY: Yes.

4 COMMISSIONER AHEARNE: And that is why I did  
5 that.

6 MR. MURLEY: I think that is consistent with  
7 the flavor here of what we are trying to do.

8 Now, the second paragraph is all new.

9 CHAIRMAN PALLADINO: Before you leave the  
10 first paragraph, I have some comments.

11 MR. MURLEY: Yes.

12 CHAIRMAN PALLADINO: I am not sure that even  
13 after I read the revised scope that we have made very  
14 explicit the fact that one of the results or one of the  
15 purposes of this whole period is the development of an  
16 implementation plan at the conclusion of the evaluation  
17 period, and that the evaluation program will include  
18 efforts to develop any revisions to the provisional  
19 safety goals and design objectives that are shown to be  
20 necessary during the evaluation period.

21 It is implied, but I think those are two major  
22 objectives or two major purposes that ought to be  
23 included -- that at the end of the period we are going  
24 to come up with an implementation plan --

25 MR. MURLEY: Okay. So we should say, then, up

1 front that the purpose of this evaluation plan is to  
2 outline how we are going to develop an implementation  
3 plan at the end of the period.

4           CHAIRMAN PALLADINO: Well, I was thinking  
5 after you have the first paragraph, to put some words in  
6 that from the evaluation period we will expect an  
7 implementation plan for further use, and any revisions  
8 to the provisional goals and design objectives that are  
9 shown to be necessary.

10           MR. MURLEY: Sure.

11           CHAIRMAN PALLADINO: Those would be two  
12 results. That is not necessarily our purpose, but those  
13 should be the results.

14           MR. MURLEY: Okay. Fine.

15           The next paragraph I believe I need some  
16 guidance on because I notice it is different from the  
17 Federal Register notice.

18           CHAIRMAN PALLADINO: Which one? Are we  
19 talking about the underscored one?

20           MR. MURLEY: Yes. It says here "the first  
21 phase of the evaluation period will begin with the  
22 publication of the proposed plan for public comment for  
23 a 90-day period." That was my understanding of what you  
24 wanted from last week.

25           But the draft Federal Register notice says



1 that the "evaluation period will begin at the conclusion  
2 of the public comment period."

3 CHAIRMAN PALLADINO: No.

4 MR. MURLEY: My own recommendation would make  
5 it at the beginning, as soon as you put it out for  
6 public comment.

7 CHAIRMAN PALLADINO: In other words, as soon  
8 as we put it this out, it would start the -- well, then,  
9 you have 90 days in which you cannot do anything until  
10 you have got the comment. I envisioned we would put it  
11 out for 90 days comment period, and at the close of the  
12 comment period then you start the two-year evaluation  
13 and the first phase of the evaluation would be to review  
14 the comments.

15 MR. MURLEY: Well, we could do that. My only  
16 thought was there will be issues, for example, coming in  
17 front of the Committee to Review Generic Requirements  
18 like ATWS and so forth, and I thought we ought not to  
19 blind ourselves to this safety goal as one element.

20 CHAIRMAN PALLADINO: I am open. I am not  
21 wedded too strongly to the way I wrote it in the Federal  
22 Register notice. That is why I want to put the Federal  
23 Register notice off until we make all the decisions.

24 COMMISSIONER AHEARNE: I would end up going at  
25 it, I would accept Tom's.

1           CHAIRMAN PALLADINO: So what we would do would  
2 release this for comment and start the evaluation period  
3 at the same time.

4           COMMISSIONER AHEARNE: Yes.

5           CHAIRMAN PALLADINO: I would have no problem  
6 with that. I would prefer it the other way, but only  
7 like the difference between two pieces of pie.

8           COMMISSIONER AHEARNE: It depends on whether  
9 you are allergic to one of them.

10          MR. MURLEY: We noticed that at the end of the  
11 public comment period we will assess the comments as  
12 well as the impact of new source term information which  
13 we have scheduled to become available during the same  
14 period and then prepare a report to the Commission.

15          COMMISSIONER GILINSKY: You are referring to  
16 the last sentence now?

17          MR. MURLEY: No, I am in the middle of that  
18 paragraph at this time.

19          COMMISSIONER GILINSKY: I see.

20          COMMISSIONER AHEARNE: At the end of the  
21 public comment period.

22          COMMISSIONER GILINSKY: Right.

23          MR. MURLEY: And we expect that this overall  
24 first phase will be about six months -- that is, three  
25 months for public comments and then three months to

1 analyze it and report back to the Commission.

2 We will then start the second phase of the  
3 evaluation period, to last 18 months, so an overall  
4 total of two years. During this second phase, we expect  
5 that source term information will continue to become  
6 available and we will take that into consideration in  
7 the evaluation.

8 COMMISSIONER GILINSKY: Now, since it is  
9 possible that there may be a substantial change in the  
10 estimates of the amount of radioactivity coming out of a  
11 plant, which is what you are talking about here --

12 MR. MURLEY: Yes.

13 COMMISSIONER GILINSKY: -- and if one were to  
14 accept those could lead to changes in the way we view  
15 the importance of various kinds of safety protection,  
16 does this envisage making the change with Commission  
17 approval or what do you have in mind?

18 MR. MURLEY: Well, I do not anticipate that,  
19 of course, we would change the safety goals or anything  
20 during this evaluation period, or even request it. It  
21 is just that it could very well be that our perception  
22 of risks will change, maybe change substantially. We do  
23 not know yet.

24 COMMISSIONER AHEARNE: But any change in the  
25 safety goal --

1           COMMISSIONER GILINSKY: It may or may not, and  
2 it remains to be seen. It needs to be looked at  
3 carefully. A lot of people think it will, but it seems  
4 to me that --

5           COMMISSIONER AHEARNE: The Holy Grail was  
6 never found either.

7           COMMISSIONER GILINSKY: Well, in dealing with  
8 something which has this potential impact, I would think  
9 you would want to come here to get it blessed.

10          MR. DIRCKS: We will. We will treat this  
11 thing very carefully and we will come back frequently  
12 with any --

13          COMMISSIONER AHEARNE: Can't you just say that  
14 you will not make any changes without Commission  
15 approval?

16          MR. DIRCKS: We will not make any changes,  
17 right, not to the safety goal at all.

18          COMMISSIONER GILINSKY: Well, it is not to the  
19 safety goal. It is in the way it is applied and if you  
20 are going to factor in different source terms, which are  
21 not formally in the nature of -- they are not  
22 incorporated in regulations but they are certainly  
23 incorporated in some of the backup to regulations --

24          MR. STELLO: Some of them are incorporated  
25 indirectly into the regulations and reg guides. We sent

1 you an implementation program of how we intend to  
2 develop the information related to the source term, and  
3 the various points on which we are are back to the  
4 Commission before we would make any changes.

5           And those various times we are back to the  
6 Commission will span from in the next couple of months  
7 through about the end of this calendar year. So there  
8 will be several times we will be back to the Commission  
9 on that issue.

10           COMMISSIONER GILINSKY: Well, I must say I  
11 would not like to see any major changes take place here  
12 without Commission approval.

13           MR. DIRCKS: No changes will be made.

14           CHAIRMAN PALLADINO: No changes in what?

15           MR. DIRCKS: In how we -- any developments in  
16 the source term are going to be brought to the  
17 Commission and we will keep you informed and wait for  
18 your views on that. Any relationship of any new source  
19 terms, even after we brief the Commission on them, will  
20 not be factored into anything we are doing here unless  
21 we come back to the Commission.

22           CHAIRMAN PALLADINO: But you might want to  
23 make some calculations showing --

24           COMMISSIONER GILINSKY: Calculations are  
25 fine. Recommendations are --



1           MR. DIRCKS: But significant or insignificant,  
2 we will be coming back to the Commission at frequently  
3 intervals with this information.

4           COMMISSIONER GILINSKY: Let me ask you  
5 something else which is related. Suppose you end up  
6 with a result that sharply diminishes the estimates of  
7 prompt fatalities but still leaves a fair number of  
8 possible delayed fatalities in the event of an accident.  
9 Where does that leave you? That is not covered by the  
10 safety goal, at least as far as individual risk is  
11 concerned. I guess that is one of the points the ACRS  
12 makes.

13           You are frowning.

14           MR. STELLO: I do not understand the  
15 assumptions you are making. Are you believing that the  
16 source term changes will be of such magnitude?

17           COMMISSIONER GILINSKY: Well, I just do not  
18 know.

19           MR. STELLO: Well, neither do I.

20           COMMISSIONER GILINSKY: Well, you know, since  
21 we are sort of leaning forward here and talking about  
22 incorporating changes in source terms which it seems to  
23 me raises questions about how delayed fatalities are  
24 covered in this scheme --

25           COMMISSIONER AHEARNE: Can I ask another

1 question that is related to that?

2 COMMISSIONER GILINSKY: Sure.

3 COMMISSIONER AHEARNE: Vic, can you explain  
4 something to me which I am really missing something and  
5 I do not understand? The safety goals that we are  
6 talking about have to do with a comparison of the chance  
7 of getting killed quickly with accidents and the chance  
8 of getting killed over a long period of time with  
9 respect to cancer, and then core melts and preventive  
10 dollars and so forth.

11 Where with respect to those first two -- the  
12 chances of dying quickly or dying from cancer -- what  
13 difference to the goal does it make what the source term  
14 is? I can see how it makes a difference on whether a  
15 particular plant meets a goal, but what difference does  
16 it make to the goal?

17 COMMISSIONER GILINSKY: It does not.

18 MR. STELLO: The calculation that one has to  
19 make to decide whether or not you meet it --

20 COMMISSIONER AHEARNE: Yes, I know. But as  
21 far as -- the philosophy of the goal, I thought, was to  
22 try to say here is an appropriate level of risk from  
23 nuclear power, and it is, for example, that there you  
24 will have no greater chance than a tenth of a percent of  
25 getting killed immediately from a nuclear -- the

1 operation of a nuclear power plant than you would from  
2 accidents.

3 Now that, if the source term were to increase,  
4 it would make it harder for plants to meet it, and if  
5 the source term were to decrease, it would make it  
6 easier for plants to meet it. But the philosophical  
7 comparison is independent of the source term, isn't it?

8 MR. STELLO: Well, that is true.

9 COMMISSIONER AHEARNE: Well, then I am not  
10 sure why the big emphasis in the implementation plan on  
11 the fact that there is a new source term coming out. It  
12 seems to carry with it underlying it the concept that  
13 you might be changing the safety goal depending upon  
14 changes in the source term.

15 MR. STELLO: Well, I was going to get to where  
16 I thought the most direct question of compliance, and  
17 that is what \$1,000 per person rem --

18 COMMISSIONER AHEARNE: Yes, that I can  
19 understand.

20 MR. STELLO: So if the person-rem goes down,  
21 then the number of changes that could be justified on  
22 the basis of the consequences of the accident clearly  
23 will diminish as the source term goes down.

24 COMMISSIONER AHEARNE: Sure.

25 MR. STELLO: And, likewise, it would increase

1 if it went up.

2           COMMISSIONER AHEARNE: Of course, it is not  
3 obvious that if you have chosen -- and I recognize all  
4 the argument about what the dollar number should be, but  
5 once you have chosen the dollar number, that is exactly  
6 as it should be.

7           COMMISSIONER GILINSKY: Well, I gather,  
8 though, that in our last conversation that -- in fact, I  
9 thought you were making this point, Vic -- that the goal  
10 on the frequency of core melt might be changed if the  
11 source term got reduced, and that is why that goal -- I  
12 gather that is why the Commission put that as a  
13 subordinate goal, which I do not think it should have  
14 been.

15           But it seemed to me that there was a provision  
16 made.

17           COMMISSIONER AHEARNE: I can see a link  
18 there. It was in this first two that I could not see  
19 the link.

20           CHAIRMAN PALLADINO: Well, they have changed  
21 this now so that they are talking about it is  
22 anticipated that additional information on radiological  
23 source term will become available during the second  
24 phase and this new information will be factored into the  
25 Staff's evaluation.

1           COMMISSIONER GILINSKY: It was the one in  
2 10,000 per year chance of the core melt that the plants  
3 were having the most difficulty in meeting, and I  
4 gathered there was some sentiment for relaxing that if  
5 the radioactivity output given a core melt would come  
6 down.

7           MR. DIRCKS: I think I was saying that at the  
8 last meeting, but, getting back here, we are not -- we  
9 are not going to make any changes in the safety goal and  
10 we will not certainly make any changes in any regulatory  
11 activities until we get back to you and tell you what is  
12 going on with the source term. So if there is any  
13 confusion there, we can eliminate it.

14           COMMISSIONER GILINSKY: But the point I was  
15 trying to make and, it seems to me, that the ACRS was  
16 saying was that in the individual risk goal there was  
17 nothing about delayed deaths and if the number of prompt  
18 deaths go down sharply and are no longer an indication  
19 of the associated delayed deaths, you are left with  
20 essentially no goal on individual risk.

21           MR. STELLO: Well, I think the ACRS comment,  
22 as I read it, really related to an issue of what numbers  
23 do you use to protect against what and I think  
24 translated it at the 50-mile limit for calculating  
25 latent cancers.



1           COMMISSIONER GILINSKY: That is another one;  
2 that is the other goal we are talking about. That is a  
3 separate issue.

4           CHAIRMAN PALLADINO: But if you put a limit on  
5 the individual risk with regard to delayed cancers, you  
6 basically brought that 50-mile limit all the way down  
7 to, let's say, within one mile and then once you have  
8 done that you have deleted the need for a societal goal,  
9 and I thought the Commission had said it wanted a  
10 societal goal.

11           COMMISSIONER AHEARNE: And we did.

12           COMMISSIONER GILINSKY: Well, it seems to me  
13 to begin with you want some of both. But you do want to  
14 cover all the relevant individual risks and this only  
15 deals with prompt fatalities.

16           COMMISSIONER AHEARNE: One of the goals does.

17           COMMISSIONER GILINSKY: The individual goal  
18 risk only deals with prompt fatalities. The collective  
19 goal deals with all cancer deaths.

20           COMMISSIONER AHEARNE: That is right.

21           COMMISSIONER GILINSKY: But the way that one  
22 is set up, it takes a circle which is so large that the  
23 denominator -- I mean, it is the comparison of cancer  
24 deaths with an accident to total cancer deaths within  
25 that area, which is within a 50-mile radius. By taking

1 a radius so large that the denominator is such a large  
2 number that every one of these plants is going to easily  
3 make it.

4 This is the problem you got into last time  
5 with Peter Bradford when he said if you are going to  
6 take your goal literally, you are accepting, you know, X  
7 thousand deaths. And everybody said no, no, that is not  
8 what we mean. And I do not think that has ever been  
9 satisfactorily solved.

10 But, in any case, that is the societal  
11 aspect. That is the large-scale aspect of an accident.  
12 These goals do not cover part of the individual risk, in  
13 fact, the majority of the individual risk in that  
14 delayed deaths seem to be larger than prompt deaths.

15 COMMISSIONER AHEARNE: But they do directly  
16 address the large number of individual risks in the  
17 societal goal.

18 MR. RATHBUN: Let me just say, Commissioner,  
19 we proposed in our July 12 paper which the Commission  
20 discussed on the 14th of July, dropping the societal  
21 risk limiter altogether. It had from the 0880 the  
22 integraton to 50 miles.

23 In fact, the original 0880 had in it one  
24 guideline for prompt -- risk of prompt fatality and one  
25 for risk of delayed or cancer death. And both of those

1 guidelines had individual and population contained  
2 within them. When we proposed dropping the societal  
3 risk, the Commission's response to the questions that we  
4 sent up was that you wanted a societal risk limiter.

5           What we did then was to propose two  
6 guidelines, one on individuals close in -- that is, risk  
7 of prompt death -- and one for societal or delayed  
8 death.

9           COMMISSIONER GILINSKY: Is that the end of it?

10          MR. RATHBUN: That is the end of it.

11          COMMISSIONER GILINSKY: I tell you, what I am  
12 coming to here is that since you are implementing the  
13 goals, this evaluation plan is to evaluate goals, I do  
14 not think you can deal with it until you are pretty  
15 confident on the goals that you have picked.

16                 I think we ought to deal with the ACRS  
17 comments on the goals before we get into this document.

18          COMMISSIONER AHEARNE: Well --

19          CHAIRMAN PALLADINO: We can do it either way.

20          COMMISSIONER AHEARNE: But, Vic, part of the  
21 difficulty I have with that kind of an approach is that  
22 it views this not as a trial period but as an absolute.  
23 You know, it really seems to be saying that we are now  
24 going to turn on the regulatory process. We are going  
25 through the same thing as if this were a final rule.

1           We are trying to put into place on a trial  
2 basis something -- I know of no other regulatory agency  
3 that does this explicitly. This is really a novel  
4 concept -- a bold, new step. And so it is not going to  
5 be a very perfectly designed approach. Part of the idea  
6 of doing it on a trial basis is to recognize that there  
7 will be a lot of blunt edges to it. There are a lot of  
8 weaknesses that with even more work would get perhaps  
9 honed out.

10           But it has now been a year and half going  
11 through this kind of a struggle, trying to get something  
12 to at least put in place on a trial basis. And so if  
13 there are weaknesses and there are some logic flaws in  
14 it, my opinion is that we ought to nevertheless accept  
15 it and go ahead and go through this trial period,  
16 recognizing it is just a trial. It is not going to be  
17 used to make any regulatory decisions.

18           COMMISSIONER GILINSKY: Well, I guess I have  
19 two comments on that. One is that I think we,  
20 recognizing everything you have said -- and I think you  
21 have described it accurately -- still we ought to try  
22 and get the thing as straight as we can and as  
23 reasonable as we can, and I think the ACRS has got some  
24 very, very pertinent comments.

25           The other point is that there are certain

1 bureaucratic realities here. There is a big train  
2 leaving the station and whether or not you call it an  
3 evaluation period or not, just a lot of things are going  
4 to get going and you are going to create a lot of  
5 momentum in this direction, and it is going to be very  
6 hard to slow down.

7           COMMISSIONER AHEARNE: Creating a lot of  
8 momentum in any one direction.

9           COMMISSIONER GILINSKY: Well, that is all very  
10 well to say. The fact is that this serves a lot of  
11 bureaucratic conveniences and there are a lot of reasons  
12 for people to want to latch on to this.

13           CHAIRMAN PALLADINO: It is also quite a bit of  
14 inertia, though, to even get the train started.

15           COMMISSIONER GILINSKY: Well, but it has been  
16 going on for a long time, starting with, you know, the  
17 Rasmussen study, and there is -- you are starting this  
18 effort which, however you may call it an evaluation, is  
19 going to be the trendy thing in the organization.

20           And you have got the high command here that  
21 are going to be devoted to it, and it is going to get  
22 applied.

23           CHAIRMAN PALLADINO: But, Vic, let's go  
24 through the evaluation program plan, unless the  
25 Commission wants to vote to do otherwise, so that we can



1 at least get the comments of Commissioners on the plan  
2 and then come back to the ACRS comments.

3           COMMISSIONER ASSELSTINE: I am willing to do  
4 that, but I guess I do agree with Vic that there are  
5 some fundamental questions raised by the ACRS letter and  
6 I am not at least convinced in my own mind that some of  
7 those questions would get answered by the evaluation  
8 period. I think the time to answer some of those is  
9 now, but I am willing to go through the evaluation plan  
10 first.

11           COMMISSIONER GILINSKY: I will get out of your  
12 way, Joe, but let me read one sentence which I just  
13 showed you a moment ago which pertains to the question  
14 of the relevance of the ACRS' other letter to this  
15 subject.

16           CHAIRMAN PALLADINO: And that comes out of  
17 the, what, 1(b) letter?

18           COMMISSIONER GILINSKY: This comes out of the  
19 severe accident plan -- letter. "It appears to us that  
20 because of the close relationship that must exist among  
21 a safety goal, the policy on severe accidents, and a  
22 siting policy, a much more integrated approach is  
23 needed." So they do see these things as --

24           CHAIRMAN PALLADINO: Yes, but they did not say  
25 that in the safety goal. They just said that when you

1 do the severe accident you ought to coordinate.

2           COMMISSIONER GILINSKY: Well, you know, here  
3 is a Committee that usually talks in the most muffled  
4 tones. It is terribly careful about its choice of  
5 language.

6           (Laughter.)

7           COMMISSIONER AHEARNE: Read the last sentence  
8 of that letter.

9           COMMISSIONER GILINSKY: "We understand that  
10 the task is difficult" --

11           COMMISSIONER AHEARNE: No, no. The last  
12 sentence of the letter -- that I speak in muffled  
13 tones.

14           COMMISSIONER GILINSKY: Well, that is what I  
15 was reading.

16           COMMISSIONER AHEARNE: That is the last  
17 sentence of the letter?

18           COMMISSIONER GILINSKY: We understand that the  
19 task is -- oh, I see. "We nevertheless considered  
20 82-8-1B to be seriously flawed."

21           COMMISSIONER AHEARNE: Right.

22           COMMISSIONER GILINSKY: Well, which is exactly  
23 my point. Here --

24           COMMISSIONER AHEARNE: That is not very  
25 muffled.

1           COMMISSIONER GILINSKY: Well, it is  
2 unprecedented, practically, and they sent this thing up  
3 to us on the weekend to alert us and while it is banging  
4 us on the head, and people are saying well, you know,  
5 this is not all that --

6           COMMISSIONER AHEARNE: We are saying that on  
7 the one that they said was seriously flawed I agree that  
8 is one that we have to, before we go forward on the cost  
9 statement we ought to hear them out.

10          COMMISSIONER GILINSKY: Which they said --

11          COMMISSIONER AHEARNE: On the former, the  
12 safety goal one, the points are ones that -- a lot of  
13 these issues that we are talking about now and the  
14 issues that they raised are ones that were raised back  
15 in the workshops, they were raised in the public comment  
16 period, the ACRS has raised them. I am not saying in  
17 any way that we have got a solution such that everyone  
18 or even the bulk of people will say okay, now that is  
19 about right.

20          What I am saying is that there are issues they  
21 have been through several times. We have not gotten a  
22 satisfactory answer to them, and I think the main reason  
23 is nobody has ever been able to spend much time trying  
24 to put into practice any of these approaches, and I  
25 suspect that is what is really lacking. And for myself

1 I think that we ought to move beyond the discussion of  
2 the sterile and actually try to get some experience with  
3 how does it work in practice.

4 COMMISSIONER GILINSKY: Well, the sterile is  
5 the goals themselves, which would seem to me to be  
6 fundamental.

7 CHAIRMAN PALLADINO: I still propose we go on  
8 with the evaluation program plan and the come back to  
9 revisit the ACRS comments on the safety goals.

10 I believe we were on page one. Any more on  
11 page one?

12 COMMISSIONER ROBERTS: Is the consensus on  
13 John's proposed --

14 CHAIRMAN PALLADINO: Oh, yes. I found no  
15 problem with that.

16 MR. MURLEY: Then we will add a sentence that  
17 the Chairman had mentioned at the end of the first  
18 paragraph.

19 COMMISSIONER GILINSKY: Well, let's see. If  
20 you are going to come back to the Commission, are you  
21 going to add something that this information will be  
22 factored into the Staff's evaluation after a rule by the  
23 Commission?

24 CHAIRMAN PALLADINO: Where do you want that,  
25 Vic?

1           COMMISSIONER GILINSKY: Well, I would just put  
2 it at the end.

3           COMMISSIONER AHEARNE: Fine.

4           CHAIRMAN PALLADINO: And what are you going to  
5 say?

6           MR. MURLEY: For approval by the Commission.  
7 He would add --

8           CHAIRMAN PALLADINO: What is going to be  
9 approved by the Commission?

10          COMMISSIONER GILINSKY: What is going to be  
11 factored in?

12          COMMISSIONER AHEARNE: It says: "This new  
13 information will be factored into the Staff's  
14 evaluation." That is the new information on the source  
15 term. And I think Vic wants to add "after approval by  
16 the Commission".

17                 In other words, the new information on the  
18 source term will be factored in after approved by the  
19 Commission. That seems to be reasonable to me.

20          COMMISSIONER ASSELSTINE: Yes, I agree with  
21 that.

22          CHAIRMAN PALLADINO: Well, I just want to make  
23 sure because that would say they cannot make any  
24 calculations until they come back and get approval by  
25 the Commission that that is something the Commission



1 wants to have calculated.

2 MR. MURLEY: Well, I think the intent is --  
3 here is what the Staff would intend, is that we would  
4 not unilaterally drop the iodine release fractions by a  
5 factor of ten in our calculations without coming back --  
6 or 100 or whatever -- without coming back to the  
7 Commission and saying here is what we have learned; here  
8 is what we are doing.

9 In any case, we will continue to carry out the  
10 old source terms, as well as any new information.

11 COMMISSIONER AHEARNE: I would guess that  
12 given how the description of the new source term -- I  
13 used the previous phrase semi-facetiously -- but it  
14 really sounds like the Holy Grail and I would think that  
15 if it is going to be really that significant that the  
16 Commission ought to see it.

17 CHAIRMAN PALLADINO: I think if we are going  
18 to use it in the official evaluation it should be with  
19 Commission-approved numbers. During the evaluation  
20 period, we do not want to tie our hands.

21 Well, I gather we have three who say "with  
22 Commission approval"?

23 COMMISSIONER ASSELSTINE: I would agree with  
24 that, yes.

25 CHAIRMAN PALLADINO: Let's go on.

1           MR. MURLEY: Okay. We are on the second page  
2 now. The first paragraph of the scope of the document  
3 was intended to make it quite clear that the safety goal  
4 evaluations will not be used in any individual plant  
5 licensing process but there will be some generic uses of  
6 it -- generic evaluations, I should say.

7           COMMISSIONER AHEARNE: The concern I had was  
8 that I think I probably agree with what you wrote, but  
9 it could be misinterpreted. I felt that what was  
10 important during this trial period is to do with the  
11 safety goal what you would be doing were it actually  
12 part of the regulatory process, with the exception you  
13 would not use it and the actual decision would not be  
14 based on it.

15           When you say it will not be used in any  
16 individual plant licensing process, I was afraid that  
17 people might focus on it would not be used in any  
18 individual plant and as a consequence, even on a trial  
19 basis, you would never look at any individual plant.

20           And that would not help develop an  
21 understanding of how it should or should not be used.

22           COMMISSIONER GILINSKY: Well, you see, John,  
23 do you see a parallel process going on?

24           COMMISSIONER AHEARNE: Yes. That is what I  
25 view as a trial.

1           COMMISSIONER GILINSKY: Well, you are going to  
2 have to double the Staff.

3           COMMISSIONER AHEARNE: Not necessarily, no. I  
4 do not see it. But that is what a pilot program, a  
5 trial, is -- exactly that. It is a parallel process.

6           CHAIRMAN PALLADINO: I think you helped  
7 correct something that I had a concern on also. I think  
8 Tom had --

9           COMMISSIONER ROBERTS: Yes. I hear your  
10 statement about your intent and no criticism. I prefer  
11 John's markup.

12          MR. MURLEY: You nail the door closed, I  
13 think, perhaps more tightly than we did, and that is  
14 fine.

15          CHAIRMAN PALLADINO: We double-latched it.

16          MR. MURLEY: There is a list there. I presume  
17 that you generally agree with the types of areas where  
18 it will be looked at, namely looking at existing  
19 regulatory requirements, those proposed new regulatory  
20 requirements such as, for example, the CRGR reviews,  
21 research priorities and prioritization of generic  
22 issues.

23          COMMISSIONER AHEARNE: Now the change I  
24 proposed there, and I used a phrase, "hands-on", which  
25 probably is not appropriate in this kind of a --

1 pencil-on, or something would be more appropriate -- but  
2 the point I was trying to get across was that what I  
3 thought we would be proposing is that the safety goal  
4 approach would be evaluating using these issues, but  
5 that the safety goal would not be involved in the  
6 resolution of the issues.

7 CHAIRMAN PALLADINO: During this trial,  
8 evaluation period. I think it would be appropriate to  
9 put, it would be helpful to put "during this evaluation  
10 period" down here.

11 MR. STELLO: Did we skip the sentence that is  
12 on the top of your markup, Commissioner Ahearne?

13 CHAIRMAN PALLADINO: What is that?

14 MR. STELLO: I want to make sure that I do not  
15 misunderstand it. I could read that sentence on the top  
16 to say that we are going to require certain plants,  
17 selected plants, to do a PRA.

18 COMMISSIONER AHEARNE: Oh, no, I was not --

19 MR. STELLO: You mean if one is available, but  
20 to not require?

21 COMMISSIONER AHEARNE: Right.

22 MR. STELLO: Would you object to us making  
23 that clear?

24 CHAIRMAN PALLADINO: Where are you?

25 MR. STELLO: The sentence on the top of page

1 two leaves one with the impression that there will be  
2 certain plant selected which will be required to do a  
3 PRA.

4 COMMISSIONER AHEARNE: No.

5 MR. STELLO: We will clarify it.

6 COMMISSIONER AHEARNE: Sure, sure.

7 MR. MURLEY: I think I understand the  
8 concept. I am struggling with how it is going to work  
9 in practice, though, Commissioner Ahearne. If we do  
10 analyses and then we say -- do we throw them away? Do  
11 we lock them in a closet, or how do we -- or do we -- it  
12 is hard, as Vic said last week, to unknow something once  
13 you have done it.

14 COMMISSIONER AHEARNE: That is correct.

15 MR. MURLEY: So we can say --

16 COMMISSIONER AHEARNE: So as I suggested, for  
17 example, you put on an addendum to your report and say  
18 that you also looked at it this way and here is how that  
19 came out. But your decision ought not to be based on  
20 that.

21 And the reason the decision ought not be based  
22 on that is we have not reached -- the Commission has not  
23 reached a conclusion that yes, these are the safety  
24 goals that ought to be put into practice. So, for  
25 example, when you say it hard to unknow something, the

1 analysis that you are going through to find out what are  
2 the consequences of an accident or what is the effect of  
3 this change, that is independent of the safety goal.

4           The safety goal only tells you that after you  
5 have gone through that, what is a criterion against  
6 which to compare, a benchmark. Well, what if the  
7 Commission said instead of a tenth of a percent it said  
8 we believe nuclear power is so valuable that ten percent  
9 of the risk is a good number? Or what if we were to  
10 conclude that nuclear power really has to meet a much  
11 higher standard so it is one-one-hundredth of a percent?

12           Now that does not affect the analysis that you  
13 have gone through; it only affects the benchmark.

14           MR. STELLO: I would view us doing what we do  
15 today using available PRAs, if they are available,  
16 arriving at some decision as best we can on the basis of  
17 our judgments, and then, when we are finished, then to  
18 ask the question: Now had we used the safety goal, what  
19 decision would you have reached had you used it?

20           COMMISSIONER AHEARNE: Sure.

21           MR. STELLO: When we are finished.

22           COMMISSIONER AHEARNE: Fine. But that does  
23 not affect your decision.

24           MR. STELLO: Well, the part that is harder to  
25 deal with as affecting the decision is everyone on the



1 Staff will have read the safety goal. Now, when they  
2 are going about making their judgments, will they or  
3 won't they? I just do not know of any way in which you  
4 can.

5 COMMISSIONER AHEARNE: Of course not, but, as  
6 we have tried to make clear in this document, it is a  
7 trial basis and the numbers are trial numbers,  
8 consequently.

9 MR. STELLO: But I think that exists today.  
10 People have seen drafts of safety goals. To the extent  
11 they have been influenced, they have been influenced.

12 COMMISSIONER AHEARNE: Of course.

13 COMMISSIONER GILINSKY: It sounds like another  
14 reason to try and get the safety goal straight or right  
15 or more reasonable.

16 COMMISSIONER AHEARNE: I think it is another  
17 reason to make sure we get it tried. We have been  
18 trying for two years to get it right.

19 COMMISSIONER GILINSKY: We don't want to just  
20 try anything.

21 COMMISSIONER AHEARNE: This is not just  
22 anything. This is something that has been --

23 CHAIRMAN PALLADINO: The safety goals will  
24 have done one important thing. It will have caused us  
25 to try to get a consistent basis for making comparisons

1 and get a consistent methodology, and I think in itself  
2 that will be valuable. But I do agree with Commissioner  
3 Ahearne during the trial period we should not base our  
4 decision on that it did or did not meet a safety goal.

5           You will have done all the work necessary for  
6 your normal decision.

7           MR. STELLO: And what I have outlined is the  
8 way I would think we would try it, is to just go through  
9 the process, make the decision on the regulatory  
10 decision that is to be made, and then, when finished,  
11 then go back and ask had you prepared this with the  
12 safety goal.

13           CHAIRMAN PALLADINO: And you may learn enough  
14 to where you want to make a recommendation to the  
15 Commission on whatever it may be. It may be change the  
16 safety goal. It may be do something else. But I think  
17 if we do not go on the basis that during this trial  
18 period we want to be not encumbered in this process of  
19 making decisions -- if we do not go without this  
20 approach, I think we will never get anything evaluated  
21 on the basis of a safety goal.

22           COMMISSIONER AHEARNE: And I do not really see  
23 that as being much of a difficulty, frankly, because,  
24 for example, let's suppose that you uncovered an  
25 accident sequence and it led to the conclusion that the

1 probability of core melt in a certain class of plants  
2 was one in 100.

3           At that stage I suspect that you would, the  
4 Staff, would be very concerned and would want to take  
5 some action, and it would not be based on the fact that  
6 the safety goal said it should not be any greater than  
7  $10^{-4}$  . It would be on the fact that it is  $10^{-2}$  ,  
8 which is an unacceptably large number.

9           CHAIRMAN PALLADINO: Also, it says that we  
10 have got some hole in the regulations that ought not to  
11 have been there.

12           COMMISSIONER AHEARNE: That is right,  
13 independent of anything else in the safety goal.

14           CHAIRMAN PALLADINO: And then you ought to fix  
15 it up independent of the safety goal.

16           MR. STELLO: Our regulations clearly are  
17 inadequate.

18           CHAIRMAN PALLADINO: But you would come to the  
19 Commission with that as a separate presentation.

20           COMMISSIONER AHEARNE: Sure. But my point is  
21 I do not think it would reflect the safety goal.

22           MR. STELLO: Yes. We would come back and say  
23 based on doing what we have done we found there to be a  
24 major problem in the regulations and we ought to change  
25 them.

1           COMMISSIONER GILINSKY: Let me ask you. I  
2 assume this is going to be done on a spot basis or do  
3 you envisage everthing getting done in this way too?

4           MR. STELLO: No. What we have tried to do is  
5 list specifically at the bottom of this page those kinds  
6 of activities which we would try to include in making a  
7 comparison.

8           Now to the extent we can make the list bigger,  
9 we would try to, but I would not want to put down much  
10 more here until we know a lot more than we know today,  
11 before we would want to add anything.

12           COMMISSIONER AHEARNE: Everything is not going  
13 to be directly translatabe into it.

14           MR. STELLO: No. But even aside from that, I  
15 am not sure the amount of work it is going to take to  
16 really try and do that anyway, and until we have had  
17 that experience --

18           COMMISSIONER AHEARNE: That is another  
19 advantage of a trial, is you do not have to do it.

20           MR. STELLO: True. And I do not feel a  
21 problem that if we do not make one of these and we had  
22 to drop it off, I would not feel the least bit concerned  
23 if the workload turned out to be such that we had to.

24           CHAIRMAN PALLADINO: Well, I think subject to  
25 the possible correction of the meaning of the word

1 "selected", I certainly would have no problem with this.

2 COMMISSIONER AHEARNE: I would not either.

3 MR. MURLEY: On the third page --

4 CHAIRMAN PALLADINO: Are there any other  
5 points on page two that anybody has?

6 COMMISSIONER AHEARNE: No.

7 CHAIRMAN PALLADINO: Okay.

8 MR. MURLEY: On the third page, the top  
9 paragraph was intended to mention that we will also be  
10 looking selectively backwards in some existing  
11 requirements, trying to give a couple of examples that  
12 might or which may be reexamined. One was the criteria  
13 for auxiliary feedwater system reliability for  
14 pressurized water reactors. And that, by the way, does  
15 now exist in NRR's standard review plan. There is a  
16 reliability criterion.

17 And another possible example was the  
18 requirement to combine seismic and LOCA loads in the  
19 design of structural-mechanical components. Here the  
20 thought is what is important rather than the examples, I  
21 think, that there will be some selective  
22 backward-looking.

23 COMMISSIONER AHEARNE: And my insert is just  
24 consistent with the approach I have taken all along.

25 MR. MURLEY: Thirty days?

1           COMMISSIONER AHEARNE: Oh, no, that is the  
2 next one. I am talking about the insert at the top of  
3 the page.

4           CHAIRMAN PALLADINO: Oh, I thought you meant  
5 the other insert.

6           COMMISSIONER ROBERTS: The addition on the top  
7 of the paragraph.

8           COMMISSIONER AHEARNE: That is the next. It  
9 is put after this.

10          MR. MURLEY: Oh, dear.

11          (Laughter.)

12          MR. MURLEY: In response to Commissioner  
13 Ahearne's pointing out last time that we needed to  
14 address this question of comparing risks from nuclear  
15 power plant operation to the risks of alternate energy  
16 sources, we put in the notion that the Staff will  
17 discuss with other organizations and government  
18 agencies -- other organizations being possibly  
19 non-government agencies, of course -- their interest in  
20 conducting such a comparative study.

21                 And we would intend to report back to the  
22 Commission at the end of the first phase, which would be  
23 approximately six months from now, presuming this were  
24 published now.

25          COMMISSIONER AHEARNE: I have an alternative



1 solution.

2 (Laughter.)

3 CHAIRMAN PALLADINO: One of the problems we  
4 have with your thirty days, we will not have even gotten  
5 the comments back on this point on the evaluation plan.

6 COMMISSIONER AHEARNE: This was a separate  
7 question. This has to do with trying to develop.

8 CHAIRMAN PALLADINO: And this is the plan for  
9 developing it.

10 COMMISSIONER AHEARNE: But actually the Staff  
11 had been asked to go ahead and do that even before the  
12 implementation plan.

13 COMMISSIONER ASSELSTINE: I think it is pretty  
14 clear, though, that the practical effect of this is that  
15 we are going to get embroiled in having to do a major  
16 comparative study.

17 COMMISSIONER AHEARNE: Or fund it, or help  
18 fund it, or, for example, one thing we might, if we are  
19 willing to, I gather from Bill's point that the problem  
20 with the CONAES was that they essentially are saying  
21 they are not going to put any resources to complete  
22 that, and it might be the appropriate thing to do is  
23 find out how much those resources are and maybe we  
24 should put that up.

25 But I believe that if there is going to be a

1 comparative study done that we are going to have to prod  
2 that to be done, and I do not think we ought -- that is,  
3 I do not think the NRC Staff ought -- to do it.

4 COMMISSIONER ASSELSTINE: I agree with that.

5 COMMISSIONER GILINSKY: I agree.

6 (Laughter.)

7 MR. STELLO: But thirty days. You know, I  
8 cannot visualize going to any government organization  
9 and asking them any question and expect to get any  
10 answer in thirty days.

11 (Laughter.)

12 COMMISSIONER AHEARNE: The theory, Vic, the  
13 Staff has been asking that question for a couple of  
14 months now.

15 MR. STELLO: But you have got to get them to  
16 say yes or no.

17 MR. DIRCKS: A couple of years, actually,  
18 because this had been looked at in 1976, I think. We  
19 went at this question and in fact, I guess, Harold, you  
20 did factor in some of these things in your --

21 COMMISSIONER AHEARNE: What I am trying to  
22 suggest is that I do not believe that unless we now move  
23 ahead and take action that we are going to get anything,  
24 and I think we will find at the end of six months that  
25 well, they have not found anything and that it may be

1 time to consider deciding to propose or look at a study,  
2 possibly funded by some organization yet to be named.  
3 At the end of two years, we may or may not even have an  
4 RFP.

5 MR. DIRCKS: I do not think the safety goal  
6 even in its current limitations is suitable to look at  
7 this and compare it with competing alternative  
8 technologies. I do not think -- it excludes a lot of  
9 the other impacts of the other technologies.

10 COMMISSIONER AHEARNE: Nevertheless, the  
11 CONAES risk study did have a lot of that.

12 COMMISSIONER GILINSKY: What did you say?  
13 That is excludes the impacts of coal, for example?

14 MR. DIRCKS: It excludes mining. It excludes  
15 transportation.

16 MR. DENTON: The issue really was not funding,  
17 as I understood it from talking to Dr. Crowe, the  
18 Chairman of the CONAES study.

19 COMMISSIONER AHEARNE: That was just based on  
20 the letter that Bill sent out. I got the implication  
21 that it was resources.

22 MR. DENTON: That did play a role in it, but  
23 apparently there was divided technical opinion about  
24 whether or not there was a threshold level on coal  
25 pollutants, and if you consider there was a threshold,

1 you have got one estimate of health effects from burning  
2 coal. If you assume a linear relationship, you have got  
3 another effect.

4 He tried to bring the experts together and was  
5 unable to. So I think it was a technical fact, maybe  
6 that is why the funding dropped, rather than if it were  
7 soluble they would have brought it to a conclusion.

8 COMMISSIONER AHEARNE: Well, that might be  
9 useful, then, if we could fund just getting that  
10 information published.

11 COMMISSIONER GILINSKY: Well, let me ask you.  
12 When you think of viable competing technologies, are you  
13 thinking of only coal? We discussed this a little bit  
14 last time, and I gathered viable did not include solar  
15 energy, and then we asked about gas-fired boilers and  
16 somebody said yes; someone else said no.

17 Our version ended up saying "particularly  
18 coal". Is it only coal?

19 MR. DIRCKS: Well, if you look at the safety  
20 goal and you are saying look at it on a plant-by-plant  
21 basis, I think you, to the extent you have done that,  
22 you have restricted it to coal. So if you look at solar  
23 power, what are you going to look at -- the solar  
24 generating station, or are you going to look at the  
25 fabrication, are you going to look at --

1                   COMMISSIONER GILINSKY: Well, I am sure John  
2 would look at biomass.

3                   (Laughter.)  
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1           COMMISSIONER GILINSKY: What I am really  
2 trying to get straight is whether you are talking only  
3 about coal plants?

4           MR. DIRCKS: I think coal is probably the ---

5           COMMISSIONER GILINSKY: I mean if you are  
6 thinking about a plant-by-plant basis, then I am not  
7 sure what you get into. You may be talking about  
8 conservation or God knows what.

9           MR. DIRCKS: The issue here of what do you  
10 mean when you compare it ---

11           COMMISSIONER AHEARNE: Well, you could at a  
12 minimum look at coal and nuclear. If you want to go  
13 beyond that you could easily also look at coal, oil, gas  
14 and hydropower.

15           MR. DIRCKS: But even if you look at coal and  
16 nuclear, when you look at the impacts of coal you look  
17 at the environmental impact, you look at miner  
18 occupational exposures and you look at transportation  
19 which, from what I gather ---

20           COMMISSIONER ASSELSTINE: They are significant  
21 contributors.

22           MR. DIRCKS: --- they become the significant  
23 contributors. If the goal here is plant by plant, do we  
24 give you a recommendation based on the fuel cycle?

25           COMMISSIONER AHEARNE: Bill, at the moment



1 what we have as a situation is that people use a large  
2 amount of hand-waving to discuss what are the relative  
3 risks and we are attempting here to set a safety goal  
4 which has something to do with a comparison of risk, but  
5 at the moment we are talking about accidents and cancer.

6 We do also talk about less than other  
7 alternative technologies. Now that phrase was put in,  
8 since Vic was bringing up the ACRS, that was an ACRS  
9 recommendation to keep that in which we discussed and  
10 kept in.

11 I think it is important and I don't get a  
12 really good understanding of why it is that we don't  
13 want to try to force a study as long as we keep our  
14 hands off who does it. It is just let the chips fall  
15 where they may. It is not going to be a totally  
16 complete study and it is not going to be the final  
17 answer. It is going to be another step. We are trying  
18 to get a better understanding.

19 MR. DIRCKS: I think what the problem is,  
20 though, is we are confused, we don't know what the  
21 objective of it all is, how you would like it done.  
22 It's really, even apart from this, it's a major  
23 undertaking, and I think it would be good if we got some  
24 clearer direction from you.

25 COMMISSIONER AHEARNE: This kind of a

1 discussion is the reason I didn't want to wait for 6  
2 months, because my sense is that it will never get done.

3 MR. STELLO: Well, what I was trying to do was  
4 to suggest a way to get out of this problem. But it's  
5 clear that whatever is going to be in the study will be  
6 a function of the interests of other agencies, and that  
7 could in some way affect. I am sure they would have a  
8 view as well.

9 That was the intent of the way we had it  
10 structured to begin with is to go out and try to do a  
11 good job of finding out who is interested and then have  
12 this discussion with the Commission at some later time  
13 to really decide if there are other agencies who may be  
14 interested, hypothetically at least, who may only be  
15 interested if there are certain conditions and certain  
16 understandings of the limitations of the study or what  
17 viable does or doesn't mean. And this whole discussion  
18 would be best had when you had the input as well. But  
19 30 days, if you keep 30 days, we aren't going to have  
20 any more than we have today.

21 COMMISSIONER AHEARNE: Vic, that sounds fine.  
22 But I suspect if we wait 6 months we won't have much  
23 more either, because my recollection is that several  
24 months ago the EDO was asked to check with the National  
25 Academy of Sciences and the National Academy of

1 Engineering or interest in doing this kind of a study.  
2 At that time we didn't get a lot of objections about we  
3 don't know what you want, we don't know what you mean,  
4 we don't know what to put in, we don't know what to put  
5 out.

6 What we instead got was the National Academy  
7 of Sciences had a CONAES risk study that was finished --

8 MR. DIRCKS: Well, that's true. That was a  
9 bad statement there.

10 COMMISSIONER AHEARNE: Bill, wait a minute.

11 MR. DIRCKS: It was their statement of a few  
12 weeks ago.

13 COMMISSIONER AHEARNE: Just wait a minute  
14 now. You were asked to look at having two groups do the  
15 study. You didn't come up with a lot of objections as  
16 to you didn't even know what kind of a study to ask  
17 for. Instead we got the answer that the CONAES study  
18 might be completed by the end of December and would meet  
19 these needs.

20 MR. DIRCKS: Well, that's true.

21 COMMISSIONER AHEARNE: It turns out the CONAES  
22 study isn't going to be finished. So now we find that  
23 there are a lot of objections that we didn't even know  
24 what to ask for.

25 MR. DIRCKS: My objections on this have been

1 known for years.

2 COMMISSIONER AHEARNE: My point, Vic, is that  
3 it is not at all clear that we're going to get anything.

4 CHAIRMAN PALLADINO: May I make a suggestion?  
5 I think there is some pertinence to what Victor has  
6 said. We can discuss this because the Commission is to  
7 be kept informed. I would also propose that 30 days go  
8 to 60 days.

9 COMMISSIONER AHEARNE: Fine.

10 CHAIRMAN PALLADINO: Then add, let's see, no  
11 agency. The staff within, I guess we'd give them  
12 another 60 days for the second one, adjust the days.

13 COMMISSIONER AHEARNE: Fine.

14 CHAIRMAN PALLADINO: Give them 60 days for the  
15 first one. So then I guess no agencies. The staff  
16 within a total of 120 days will issue a request for  
17 proposal --

18 COMMISSIONER AHEARNE: Fine.

19 CHAIRMAN PALLADINO: -- to complete such a  
20 study with the objective of contract issuance -- I think  
21 what we're trying to get is a sense of some degree of  
22 urgency.

23 COMMISSIONER AHEARNE: Fine.

24 CHAIRMAN PALLADINO: And reasonable urgency.

25 COMMISSIONER GILINSKY: This would still be

1 talking about viable competing technologies -- plural.

2 CHAIRMAN PALLADINO: Well, part of their  
3 comeback would be what they found and then what they  
4 think ought to be proposed in the way of further studies.

5 COMMISSIONER AHEARNE: Okay.

6 CHAIRMAN PALLADINO: And they'd come back and  
7 say we think we ought to do coal and only coal and  
8 nuclear.

9 COMMISSIONER GILINSKY: But what does the  
10 Commission have in mind? And what standard do you want?

11 COMMISSIONER ASSELSTINE: Just coal.

12 CHAIRMAN PALLADINO: Just nuclear, coal.

13 COMMISSIONER GILINSKY: You just want to have  
14 nuclear and coal?

15 CHAIRMAN PALLADINO: We would put in hydro,  
16 but I do not think it is as pertinent as nuclear and  
17 coal.

18 COMMISSIONER GILINSKY: And since the way the  
19 coal is stated is in terms of prompt deaths, do you want  
20 to just talk in terms of prompt deaths for coal or  
21 include delayed effects, health effects, in the case of  
22 coal, which probably --

23 COMMISSIONER AHEARNE: Delayed effects for all  
24 effects.

25 COMMISSIONER GILINSKY: Well, but you don't

1 have that in your individual risk, though.

2 COMMISSIONER AHEARNE: No, but you do have  
3 societal risks.

4 COMMISSIONER GILINSKY: All right.

5 CHAIRMAN PALLADINO: That is why it was  
6 tending to throw in hydro because there you do have some  
7 prompt to compare against.

8 COMMISSIONER AHEARNE: How about fuel cycle  
9 considerations? Do you include fuel cycle  
10 considerations, including nuclear waste disposal, mill  
11 tailings disposal?

12 CHAIRMAN PALLADINO: Must we settle that all  
13 now?

14 COMMISSIONER AHEARNE: It is certainly true  
15 one can raise enough issues so the question will never  
16 get addressed. That is what has happened for years, and  
17 that is absolutely true because there are enough  
18 details. It would be very difficult to get anybody --  
19 or it has been very difficult to get anybody -- to  
20 address the issue, to try to do an objective comparative  
21 analysis. And I think that there are a number of  
22 pieces, so that even if it gets done by a credible,  
23 objective organization, there will still be a lot of  
24 pieces hanging out on the edges, but it will be a first  
25 step.



1 MR. DENTON: Credibility has always been the  
2 answer. There have been a lot of studies, and we have  
3 adjudicated this, and are adjudicating it today in  
4 several proceedings.

5 COMMISSIONER AHEARNE: Right.

6 MR. DENTON: And that is why I think we had  
7 hoped that the Academy of Science would be the forum to  
8 resolve the issue, not that we did not want to go out  
9 and do more, but we figured we could not bring any more  
10 science to bear than NSA was bringing in the people they  
11 had on the project.

12 CHAIRMAN PALLADINO: Well, I do not think we  
13 have to settle all the questions that have been raised  
14 here. We can all have opinions. I do think, if I were  
15 asked my opinion, it would be coal, nuclear, and hydro  
16 because they have no other basis to compare prompt.

17 COMMISSIONER GILINSKY: Would you include  
18 conservation techniques of all kinds or increased  
19 efficiencies?

20 CHAIRMAN PALLADINO: I have got to assume that  
21 that is available to all of them, and I would compare  
22 them on whatever basis we want to use regarding  
23 conservation. In other words, if conservation works for  
24 one, it works for the other. So I think they are  
25 comparable.

1           Let's go on. Would the Commission agree to  
2 this substantive paragraph with 60 days in place of 30,  
3 120 in place of 60, and 180 of 120?

4           COMMISSIONER AHEARNE: I would.

5           COMMISSIONER ROBERTS: I would.

6           COMMISSIONER ASSELSTINE: I think doing the  
7 comparison is a bad idea, so I won't take a position on  
8 the paragraph one way or the other.

9           CHAIRMAN PALLADINO: So you would object to  
10 the whole paragraph?

11          COMMISSIONER ASSELSTINE: Yes.

12          CHAIRMAN PALLADINO: I am not sure where --

13          COMMISSIONER GILINSKY: I am going to pass on  
14 this.

15          CHAIRMAN PALLADINO: What is that?

16          COMMISSIONER GILINSKY: I am inclined to agree  
17 with Jim.

18          MR. DIRCKS: Do you have any budgetary  
19 guidance on this? How much of a study do you want?

20          CHAIRMAN PALLADINO: You will keep us fully  
21 informed.

22          (Laughter.)

23          CHAIRMAN PALLADINO: And then we will have to  
24 make those decisions. If we try to make all the  
25 decisions, we will never get --

1 MR. DIRCKS: Okay.

2 MR. MURLEY: Certainly, before a scope  
3 document or a request for proposal, I am sure we would  
4 have to check with you that we have got it right.

5 COMMISSIONER ASSELSTINE: Does anybody know  
6 how much has been spent on the CONAES study so far?

7 COMMISSIONER AHEARNE: But as we both know,  
8 the CONAES study had a lot more than just this piece of  
9 it. It tried to cover the whole world. It started out,  
10 I think, at \$4 million, or \$3 million or \$4 million, but  
11 I am sure the Academy stuck in a bunch of their own too.

12 CHAIRMAN PALLADINO: All right.

13 MR. MURLEY: The bottom of page 3 is intended  
14 to start the discussion on the general approach that the  
15 staff will use during this period. The first paragraph  
16 lays out what we understood to be the Commission's  
17 general guidelines with regard to risks from normal  
18 operation, routine emissions, that while it is included  
19 in the safety goal, the Commission did not intend for us  
20 to do a large number of calculations of low-level  
21 emissions to demonstrate conformance.

22 COMMISSIONER AHEARNE: The bottom has not been  
23 changed.

24 MR. MURLEY: Yes. But we did not go through  
25 it page by page last time, so I am just highlighting the

1 points. Therefore, we will focus on accidents where  
2 there is a potential for releases, large releases; and  
3 mainly those are core melt accidents.

4 An early step in implementing, or I should  
5 say, evaluating the safety goals will be to prepare a  
6 reference document. This will be done by the Office of  
7 Research. And the whole page discusses generally what  
8 should be in that reference document. Namely, it is to,  
9 the way I characterize it, make sure all the staff is  
10 singing from the same songsheet with regard to what do  
11 we know about risks, what are dominant sequences for  
12 this class of plants, that class of plants, and so  
13 forth. I think it is an essential step if the staff is  
14 going to use this wisely.

15 COMMISSIONER AHEARNE: Where is this found?

16 MR. MURLEY: This is at the middle, or all of  
17 page 4 really discusses the concept of a reference  
18 document.

19 There is a work under way that the Office of  
20 Research under Bob Bernero's division has ongoing with  
21 Sandia that with a slight modification I think will meet  
22 this intent of preparing this reference document.

23 COMMISSIONER GILINSKY: How do you plan to  
24 stay in touch with the Commission on this subject?

25 MR. MURLEY: Well, with regard to the

1 reference document specifically, we had not, I don't  
2 think, made specific plans. But we are saying that we  
3 will prepare periodic reports on this overall effort,  
4 the whole safety goal evaluation effort. I don't know  
5 if we said quarterly, but that is what our thinking was.

6 MR. STELLO: Well, the answer is on page A.1,  
7 item 3, where it indicates there will be appropriate  
8 reports to the Commission, and it gives you examples of  
9 the reports that we expect to generate and to come back  
10 to the Commission.

11 MR. MURLEY: Yes. I think that we could make  
12 that more explicit, if you would like, and say that when  
13 the reference document is prepared, we will report back  
14 to the Commissioners.

15 MR. STELLO: It says that.

16 CHAIRMAN PALLADINO: What page is that?

17 COMMISSIONER AHEARNE: A.1.

18 MR. MURLEY: It is back at A.1.

19 MR. STELLO: Item 3 on A.1 gives the types of  
20 reports that will come to the Commission.

21 MR. MURLEY: Turning back then to page 5, we  
22 talk about --

23 COMMISSIONER GILINSKY: Let me just take that  
24 point up again because I have to say, as I think I made  
25 clear last time, I am more than a little disturbed that

1 we did not get the information on the compendium of risk  
2 assessments that the staff had and the comparison with  
3 the safety goal and that we did not get that before the  
4 previous meeting. When was that intended to come to the  
5 Commission?

6 MR. DIRCKS: Let's go into that point because  
7 we have done a little more research on it, and we  
8 understand this was one of the series of tables, but the  
9 earlier versions, I believe, according to Bob Bernero,  
10 had been in one way or another circulated either through  
11 OPE to the Commission or given out to Commissioner  
12 assistants at the various workshops.

13 So, Bob, would you want to mention --

14 MR. BERNERO: There are a number of versions  
15 of that table. We started out in 1981 when we were  
16 working with the Commission staff and the safety goal  
17 workshops. And the first one was presented at a  
18 briefing that Matt Taylor, who at that time worked for  
19 me, and I gave at the safety goal workshop at Harpers  
20 Ferry. And that version of the table, which in essence  
21 said that from the best available information we have on  
22 risk in U.S. plants today, they have an average risk  
23 level essentially the same as the safety goal being  
24 discussed.

25 And that was submitted as Appendix C to an



1 October 1st memorandum that Forrest Remick sent to all  
2 of you. And it was a discussion paper of the safety  
3 goal after the workshops, the various aspects of it.  
4 And that whole appendix spoke of the current risk  
5 perspective.

6           And then from time to time, as we have gone  
7 along with alternative formulations of the safety goal,  
8 the average within 1 mile or the average within 50 miles  
9 or the average of within 3 miles we have talked about at  
10 one time, we have recalculated things and tried to work  
11 through the Commission staff to keep these things up to  
12 date so that ratios could be understood.

13           And that edition of the table that became a  
14 public memorandum I think on the 6th, last week, just  
15 happens to be the latest written-up version of it.

16           COMMISSIONER GILINSKY: Listen, Bob, you guys  
17 put this stuff together because you thought it was  
18 relevant to the subject.

19           MR. BERNERO: Yes. That's why we sent it to  
20 the Commission.

21           COMMISSIONER GILINSKY: But you did not send  
22 it until I asked for it.

23           MR. BERNERO: October 1, 1981, Mr. Gilinsky.

24           COMMISSIONER GILINSKY: That table was sent to  
25 us?

1 MR. BERNERO: Yes. I have the memo here if  
2 you would like to see it.

3 COMMISSIONER GILINSKY: Is that the 15?

4 MR. BERNERO: No, no. That data didn't  
5 exist. We sent the then-extant information.

6 COMMISSIONER GILINSKY: Okay. But you had a  
7 compendium right before our meeting last time, which you  
8 put together because you thought it was relevant. And I  
9 would have found it interesting. I found it interesting  
10 when I finally got it.

11 Now, it seemed to me that was something that  
12 should have been here on the table when we had our  
13 meeting. In fact, I would have thought you would want  
14 to present it. And I was very much disturbed to learn  
15 that it had been shown to others and not shown to me.

16 COMMISSIONER AHEARNE: Bill, to start out, I  
17 had not seen it before, so I was not one of those others  
18 it was shown to.

19 (Laughter.)

20 COMMISSIONER AHEARNE: And I did find it  
21 interesting, but I did not find it something that I was  
22 either very perturbed in not having had before that  
23 meeting because I still thought we were trying to focus  
24 upon the philosophy of the safety goal, we were trying  
25 to get a sense of what it is that is appropriate to go

1 through on this trial basis for use to guide the NRC in  
2 its approach to determining are plants safe enough or  
3 how safe should they be or how safe are they?

4           And the comparison, our current best estimate  
5 comparison of how do current plants meet it, I am not  
6 sure if that is something that should be driving what  
7 the safety goal we set is.

8           COMMISSIONER GILINSKY: No, but as this  
9 discussion has shown, we have rather different points of  
10 view on this. But, you know, if we were dealing with a  
11 licensee, we would say this is material, that it is a  
12 matter which we would take into account. Now, you  
13 thought it was material because you put it together. I  
14 think it is material, and it should have been here.

15           And I wasn't going to pursue it at this  
16 level. I wasn't going to raise my voice about this  
17 again. But I was merely going to ask when it was  
18 intended for that to come to us, because I gather a  
19 so-called contexting document was being put together and  
20 it was then going to come to us. And I was trying to  
21 make sure that this sort of thing didn't happen in the  
22 future and that we would have a regular way of being  
23 informed.

24           CHAIRMAN PALLADINO: Bob, how many plants were  
25 in the one you referred to earlier, the 1981?

1 MR. BERNERO: The first one --

2 COMMISSIONER AHEARNE: Dennis, you had --

3 MR. RATHBUN: I think it was seven, but I am  
4 not positive.

5 MR. BERNERO: The first one we gave to the  
6 Commission, '81, had one, two, three, four, five, six,  
7 seven, eight plants, including the German Biblos plant.  
8 But of those, we have the footnote, a number of them we  
9 were as yet unpublished. We were forecasting in NRC  
10 sponsored risk analyses what the outcome looked like it  
11 was going to be.

12 And then we ended up presenting to you an  
13 average which we said was risk expectations from a  
14 population of LWR designs and existing U.S. sites. And  
15 that was presented as basically an estimate of what we  
16 thought the average U.S. reactor or typical U.S. reactor  
17 would be, and by comparison to the safety goal one could  
18 see that we were -- the discussions were selecting a  
19 safety goal that wasn't some real high umbrella that  
20 everybody can easily meet but it was a tight one,  
21 something down where it is going to hold the level of  
22 risk or reduce the level of risk.

23 CHAIRMAN PALLADINO: Bob, you referred to the  
24 later issuances. Do you have any information on the  
25 later issuances?

1 MR. BERNERO: Oh. Well, we have. I ducked  
2 through the file. We have done a lot of background  
3 calculations and curves and alternate formulations, and  
4 there have been some other versions of the thing.  
5 Tables, well, for instance, I have got a very crude  
6 version of a --

7 COMMISSIONER GILINSKY: And where was that?

8 MR. BERNERO: Just in internal notes as we  
9 went along working on this development of safety goal.  
10 Here is another version of it.

11 COMMISSIONER GILINSKY: I think the chairman  
12 is asking whether we would have seen that.

13 CHAIRMAN PALLADINO: Yes.

14 MR. BERNERO: Well, we were trying to be  
15 prepared that if you asked for some perspective, some  
16 further perspective beyond what we had furnished in '81  
17 -- for instance, we tried to graph it. Now, this is too  
18 hard for --

19 COMMISSIONER GILINSKY: But, look, you had the  
20 thing before the previous meeting. Obviously, you  
21 thought there was useful additional information beyond  
22 what you had before, because you have put together a new  
23 compendium, you thought it was time to collect the  
24 stuff. You were writing an introductory document to  
25 explain it. It's relevant. It's precisely on point

1 here to the subject we are talking about. Why didn't  
2 you bring it to us?

3 MR. BERNERO: I was prepared to, if asked.

4 MR. DIRCKS: But at what point do you bring  
5 all these things?

6 COMMISSIONER GILINSKY: Look, don't go into  
7 this business about sending us every bit of paper. The  
8 fact is this is a very important item. This is not a  
9 trivial matter.

10 MR. DIRCKS: At what point in your decision  
11 process?

12 MR. BERNERO: Well --

13 MR. DIRCKS: I mean we could -- you know,  
14 we've sent material up. Sometimes there is a reaction  
15 to it. Sometimes the reaction is why have we got so  
16 much material? I think it is a matter of looking at the  
17 safety goal, which we weren't even involved in  
18 formulating at this point, that you have to realize the  
19 staff did not get involved in the safety goal  
20 formulation.

21 You have asked question after question as if  
22 we are in a position of taking a position on the safety  
23 goal. The Commission said we are to stay out of it,  
24 that was OPE's function. You asked us to pull together  
25 the evaluation plan. That we were coming down to



1 discuss with you. You asked us to come back and report  
2 to the Commission from time to time as the evaluation  
3 plan went ahead. I think we were collecting information  
4 to come back to the Commission and report to you on the  
5 evaluation plan.

6 But in no case have we ever said the goal  
7 should be such-and-such an amount or the societal goal  
8 should be this or that or the other thing. Now, if you  
9 are saying everytime Bob Bernero drafts up another list  
10 of plants you should have it, we will do it. I mean --

11 COMMISSIONER GILINSKY: I agree with you that  
12 there are gray areas where it is unclear and there are a  
13 lot of things that don't have to be rushed up here. But  
14 the fact is we are talking specifically on this subject.

15 The Commission might have voted the last time  
16 and agreed to it all. And it seemed to me, and I must  
17 say I think it would seem to most people, that the  
18 calculations, the available calculations in comparison  
19 with the goals the Commissioners pick are relevant to  
20 that. And that is material that should have been  
21 brought up here. And if it wasn't quite ready, then I  
22 think we should have been told it isn't quite ready, why  
23 don't you put off your meeting or here is some material  
24 that you might want to think about.

25 MR. DIRCKS: I don't know what bearing that

1 had on your deliberations last week.

2 CHAIRMAN PALLADINO: Were you really going to  
3 change the safety goal if you found more plants met it  
4 or fewer?

5 COMMISSIONER GILINSKY: Would you accept that  
6 answer from a licensee?

7 CHAIRMAN PALLADINO: Oh, I don't know. It's a  
8 question that I have.

9 COMMISSIONER GILINSKY: I think we ought to  
10 set the same standards here.

11 MR. DIRCKS: I guess I am finding out how a  
12 licensee reacts to a --

13 (Laughter.)

14 COMMISSIONER GILINSKY: Well, fine.

15 (Laughter.)

16 CHAIRMAN PALLADINO: Well, we take note of the  
17 fact that you felt that would have been information that  
18 would have been helpful to you. And let's see what we  
19 can do to make sure that we keep you apprised of the  
20 things you feel you need to know.

21 COMMISSIONER AHEARNE: Can we get back to what  
22 I think is the fundamental point Vic started with on the  
23 reference document. I think the question was is it  
24 going to be brought up here and when.

25 COMMISSIONER GILINSKY: Well, and just

1 generally the results of the calculations and the  
2 comparisons.

3 MR. STELLO: But let me go hasten to add that  
4 we have identified specific reports if there is another  
5 table or another chart like that, it would not be  
6 intended to have them come up here in an interim basis  
7 aside from these reports. So if that was serving as an  
8 example of documents that you would like to have in the  
9 interim, we did not mean that by Item 3 on page A.1.

10 COMMISSIONER GILINSKY: Well, let me ask you  
11 then, since you pursue it that way, is it your view that  
12 there was no need to bring that material to the  
13 Commission's attention last time?

14 MR. STELLO: It is my view that that  
15 information should not have been brought to the  
16 Commission at that time because licensee still had not  
17 had those numbers. There are plants out there that had  
18 not seen those number nor yet even today understand how  
19 those numbers were estimated by the staff.

20 COMMISSIONER GILINSKY: Well, let me tell you  
21 --

22 MR. STELLO: And there ought to be some  
23 documents which we could have, and if we had a different  
24 agency, perhaps we could, where we could work up some  
25 very preliminary estimates. Unfortunately, everything

1 we do has a way of finding a path out of this agency.

2 COMMISSIONER GILINSKY: Well --

3 MR. STELLO: But those were very crude, very  
4 rough estimates, not plant-specific, not site-specific  
5 numbers. And they have an awful lot of questions about  
6 them. So with respect to --

7 COMMISSIONER GILINSKY: Let me tell you what  
8 we ought to do is -- it is the obligation of the  
9 chairman and the executive director under the law to  
10 present that material to the Commission --

11 MR. STELLO: Well, I was --

12 COMMISSIONER GILINSKY: -- when we have a  
13 meeting of the sort the last time.

14 MR. STELLO: Well, I was speaking to the  
15 nature and the status and the preliminary nature of the  
16 information. Those numbers, and I say again, I think  
17 this agency ought not to be putting out documents about  
18 the performance of a particular plant and licensee  
19 without that licensee having some notion of those  
20 numbers and how they were generated.

21 COMMISSIONER GILINSKY: When you say this  
22 agency, you're treating the Commissioners as if they are  
23 external to the agency.

24 MR. STELLO: No, no.

25 COMMISSIONER GILINSKY: We're talking about

1 having the Commission having this material available to  
2 it --

3 MR. STELLO: Yes.

4 COMMISSIONER GILINSKY: -- so that it can  
5 deliberate on it.

6 MR. STELLO: Yes, but I was speaking to the  
7 next broader issue.

8 COMMISSIONER GILINSKY: I know but --

9 MR. STELLO: That was the meeting --

10 COMMISSIONER GILINSKY: -- the issue was  
11 whether the Commission should have it.

12 MR. STELLO: I know.

13 COMMISSIONER GILINSKY: And you are treating  
14 the Commission as if it is external to the agency.

15 MR. STELLO: Vic, the Commission can have  
16 anything it wants. These papers, I don't even see half  
17 the time. If you want to give us some guidance on  
18 everytime Bernero or somebody else does some rough  
19 calculations on a piece of paper, you can have them. I  
20 mean I do not want to make this a big issue of depriving  
21 the Commission of information. If you want it, you can  
22 have it.

23 But you know as well as I do lots of  
24 calculations are going on down there, especially out of  
25 the risk people. They're always doing calculations. If

1 you want access to their documents, you can have it.

2 But, you know, I just sort of find it a little  
3 bit difficult to be in the position here of saying that  
4 we have deprived you of information. Half this stuff  
5 that you want, I don't even see it or maybe even Harold  
6 doesn't even see it. But if you want to get down into  
7 that level and get it, you can have it. We do not want  
8 to make a big issue of it.

9 CHAIRMAN PALLADINO: I wonder if I could step  
10 in for a minute. There was information that  
11 Commissioner Gilinsky feels should have been brought to  
12 his attention. And I think he certainly has a right to  
13 say it should have been brought to his attention.

14 There was a contexting document being  
15 developed and that is a matter of record. I think that  
16 a suggestion that he made to me earlier that when we get  
17 to situations where there are numbers being developed  
18 that are sensitive that require such a contexting  
19 document, that at least the Commission be told and be  
20 given the option to say, well, look, I would like to see  
21 it now before you get that because it is pertinent to  
22 the decision, or, okay, I will go ahead but let's delay  
23 a decision until I see it.

24 I think that is a reasonable comment. And I  
25 would say I accept it. Now, how it affects this, I am



1 not clear. But apparently, it leads to a desire to put  
2 some keynote marks on here so that we know when it is to  
3 go back to the Commission or not. I gather that was the  
4 point, at least one of the points, that you were trying  
5 to get at.

6 COMMISSIONER GILINSKY: When I started out, I  
7 did not have a specific proposal. I was merely asking  
8 that they stay in touch with the Commission on this  
9 subject.

10 CHAIRMAN PALLADINO: All right. Now give the  
11 answer.

12 MR. STELLO: Well, that is what I was trying  
13 to get at, and it's unfortunate to go back to that table  
14 to do that. But I will attempt to do that with Item 3  
15 on page A.1. If the Commission wants more, and then I  
16 used that table as an example, I would not bet more than  
17 a nickle that someone else is not generating some more  
18 information that would be on that table or already has.  
19 And if information of that general type is expected that  
20 we get that down here different than in this context, it  
21 would be helpful for us to know it if this is not an  
22 appropriate description of the kinds of reports to the  
23 Commission on the subject.

24 CHAIRMAN PALLADINO: I wonder if, Bob, you  
25 could not develop, in response to the comment raised, if

1 you could not develop a statement about the Commission  
2 being informed at various key points along the way?

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1           COMMISSIONER GILINSKY: I would throw in  
2 something like significant developments or significant  
3 new information and you just have to use your judgment  
4 and we are all reasonable people.

5           CHAIRMAN PALLADINO: I think it is also  
6 important to have periodic reports on the progress we  
7 have made in the development of reference documents and  
8 the problems being faced.

9           MR. MURLEY: Okay, sure.

10          CHAIRMAN PALLADINO: Have you got it?

11          (Laughter.)

12          CHAIRMAN PALLADINO: Okay, shall we try page 5  
13 again.

14          MR. MURLEY: Moving on to page 5 --

15          COMMISSIONER AHEARNE: I guess my comment on  
16 Page 5 is that you are going into a lot of detail on a  
17 specific application and comparing it to the reliability  
18 criterion, and I could capture the general concept if  
19 you are saying you evaluate the safety goal in the area  
20 of reliability of systems as opposed to -- it almost  
21 sounded like as I read through this as that you were  
22 going to directly now start using it, and I didn't know  
23 whether that's what you had in mind, but I felt I would  
24 be a lot more comfortable --

25          MR. MURLEY: I do not disagree. The material

1 there, it is verbose, a bit verbose, and it was an  
2 attempt to just clarify what we meant by assess the  
3 reliability of systems and components. I don't think it  
4 adds a lot.

5           COMMISSIONER AHEARNE: It was not implying to  
6 me that this was an area where we are going to start  
7 using a safety goal right now to make decisions. I  
8 could not see what it was adding, and that is why I  
9 raised it.

10           MR. MURLEY: If that is what the Commission  
11 likes --

12           (Pause.)

13           CHAIRMAN PALLADINO: I am trying to see  
14 whether he has resolved a problem that I had. One of  
15 the problems I had was an implication on desegregating  
16 the safety goals of the various components.

17           MR. MURLEY: Yes, I think if we take that  
18 out --

19           CHAIRMAN PALLADINO: The only thing I see left  
20 is the next paragraph, that says, "Care will have to be  
21 taken with regard to any apportionment of the design  
22 objectives between external or other internal  
23 accidents." Maybe that is general enough. I would hate  
24 to prejudge that we are going to segregate this into a  
25 lot of components and say, well, if you meet this one at



1                   CHAIRMAN PALLADINO: Incidentally, I presume  
2 all Commissioners will jump in when they -- any  
3 Commissioner will jump in when they have a comment.

4                   MR. MURLEY: The bottom paragraph of 5 and top  
5 of Page 6 deals with the question, has particularly to  
6 do with the core melt probability should one apportion a  
7 certain amount of the 10<sup>-4</sup> goal to human errors and  
8 equipment failures versus external events like floods or  
9 earthquakes or perhaps even fires, and the point to make  
10 is that we think that should be approached with caution,  
11 and we don't have any guidelines for doing it, but I  
12 think it is to highlight that we may in fact in certain  
13 cases step back a bit from 10<sup>-4th</sup> when we are looking  
14 at safety goals and say that the human factors and the  
15 equipment failures may -- we may use a number somewhat  
16 less to allow for external events.

17                   I guess the final paragraph in that section  
18 deals with --

19                   CHAIRMAN PALLADINO: What page are you on?

20                   MR. MURLEY: I am on Page 6. We are talking  
21 about how to -- more or less general statements about  
22 making uniform assumptions, treating phenomena  
23 consistently. I think this will be handled when we have  
24 the IREP handbook and the results of the ANS IEEE INREP  
25 guidebook. Again, the point is really just to make the



1 point that we should use wherever possible consistent  
2 data sources, consistent treatments.

3           COMMISSIONER AHEARNE: There is one thing that  
4 I put in in the bottom of Page 6 which I picked up on  
5 Page 7. It seemed to me that in your description of  
6 proposed use in relation to the regulatory decision  
7 process there was a distinction between what you were  
8 doing in the evaluation period and what might you do  
9 afterwards, and that is why I put in, for example, the  
10 weight to be given the safety goal after the evaluation  
11 period for consideration.

12           MR. MURLEY: We have to say that to be  
13 consistent with your earlier comments.

14           COMMISSIONER AHEARNE: I pick that same point  
15 up then on Page 7.

16           MR. MURLEY: On the top of Page 7, there is  
17 the notion that we bring in peer review, and the fact  
18 that we do expect these probabilistic risk assessments  
19 to be given scrutiny not only by the staff but by  
20 industry and the ACRS as well. We view this as a  
21 valuable aspect of validating the PRA results.

22           Again, the middle of Page 7, we caution about  
23 using PRA's in making absolute comparisons between a  
24 risk estimate for a plant and what are the safety goal  
25 objectives.

1           COMMISSIONER GILINSKY: Let me ask a question  
2 about these comparisons. Are you going to -- Which of  
3 these goals are you going to be keying on?

4           MR. MURLEY: Well, all three. We expect based  
5 on past performance that we'll trigger the core melt  
6 goal first. That is, a plant --

7           CHAIRMAN PALLADINO: You are talking about the  
8 design objectives?

9           MR. MURLEY: Yes, the design objectives of  
10 <sup>-4</sup> 10 . We tend to see that triggered first, and then  
11 perhaps the prompt fatality guideline next.

12           COMMISSIONER GILINSKY: You see --  
13 calculations all the way to doses to the population?

14           MR. MURLEY: We won't do --

15           COMMISSIONER GILINSKY: Somebody is shaking  
16 his head back there. You are saying yes. He is saying  
17 no.

18           MR. MURLEY: We won't do it as a requirement  
19 of this document. In fact, it is explicitly said that  
20 we won't require PRA's, but where they exist --

21           COMMISSIONER GILINSKY: No, I mean for the  
22 calculations that you will perform in order to evaluate  
23 the process.

24           MR. STELLO: The Sandia study takes each and  
25 every site, and analyzes consequences with certain

1 assumptions, and then did a number of sensitivity  
2 studies, so they would provide a first cut basis of  
3 trying to use that information to assist and to help  
4 make the judgments, but I think that the answer is, you  
5 are going to have to make the judgment, if the  
6 information is available.

7 COMMISSIONER GILINSKY: What judgment?

8 MR. STELLO: As to whether or not you need to  
9 do further calculations.

10 COMMISSIONER GILINSKY: Beyond what?

11 MR. STELLO: Beyond the core melt frequency.  
12 Getting the health effects. The answer could very well  
13 be no. If you were analyzing a generic issue such as  
14 ATWS, that clearly would be impossible. You couldn't do  
15 a consequence analysis for all of the plants for which  
16 you didn't have a PRA, which is most of them. You would  
17 have to make some judgments about how they apply in a  
18 generic sense. So I don't think there's any one answer  
19 to the question. If it became one of the selected  
20 plants that we identified on Page 2, then I suspect in  
21 that case, yes, those calculations in fact would have  
22 been carried all the way through to the consequences.  
23 For the generic issues, I suspect that in most  
24 cases the answer will be no, because it is just too  
25 awesome a task to do it.

1           COMMISSIONER GILINSKY: So you just fix on the  
2 core melt probability.

3           MR. STELLO: If that's available. That isn't  
4 available for most plants also.

5           COMMISSIONER GILINSKY: Well, let's see. When  
6 you talk about evaluations, what sort of evaluations are  
7 you talking about?

8           MR. STELLO: That is what the reference  
9 document will take, all of the PRA's that exist, and  
10 allow you to use them generically by classes of plants.  
11 The consequences have been evaluated for certain  
12 assumptions for all sites in the country, and you use  
13 that information without the need for requiring  
14 additional PRA's to make the judgments.

15           COMMISSIONER GILINSKY: I am not sure I  
16 understand what you are saying. The safety goal we talk  
17 about, the overall risk, and we are not talking about  
18 some systems or application of PRA to parts of the  
19 plant. We are talking about the whole schmere, so to  
20 speak. Now, I assume that NRC would be performing  
21 calculations, estimating the effect of various steps or  
22 on the overall risk or the overall core melt  
23 probability.

24           MR. BERNERO: Excuse me. If you look at the  
25 three elements of a risk analysis, the core melt

1 probability, the containment events, and the off-site  
2 consequences, if you look at them backwards, we have  
3 already calculated and have published conditional  
4 consequence probabilities for every site in the country  
5 for different release sizes or different release  
6 categories, so that for any safety issue, if someone can  
7 provide for a plant, for a set of plants, a type of  
8 release that might ensue from a safety issue, you have  
9 already precalculated and published the off-site  
10 consequences.

11           When you look at containment events, they lend  
12 themselves to generic treatment, large, dry  
13 containments, how the core melts, how the fission  
14 products transport. In general, what you find is most  
15 plant specific and most in need of specific plant  
16 address is the core melt frequency or core melt  
17 probability, because it is so dependent on  
18 plant-specific configuration, operating procedures, and  
19 the like.

20           The TMI action plan for three years now has  
21 had a presumption that there would be an INREP program  
22 which would have a strategy of looking not beyond core  
23 melt but just looking at core melt, the plant-specific  
24 part, and leave to generic considerations the add-on  
25 suffixes, you might say, for containment events and

1 off-site consequences.

2 So, there will be a tendency when we look at  
3 safety problems, how do they contribute to core melt and  
4 what category, and the rest is sort of precalculated.

5 COMMISSIONER GILINSKY: And you would use the  
6 results of licensee calculations, or you would make the  
7 calculations?

8 MR. BERNERO: Or -- staff calculations, staff  
9 peer review of licensee calculations, a whole number of  
10 things. But in general, the focus would be on system  
11 success or system failure, and it is much more reliable  
12 -- no pun intended -- much more accurate to look at the  
13 core melt probability than it is to look at the  
14 off-site. We were talking -- You were talking about  
15 that the other day yourself. The uncertainty grows as  
16 you multiply probability times probability all the way  
17 out to the health effects.

18 COMMISSIONER GILINSKY: That is something we  
19 can agree on.

20 (General laughter.)

21 MR. BERNERO: So the general attention is  
22 toward the more certain part of the analysis, which is  
23 system reliability.

24 COMMISSIONER GILINSKY: But even core melt  
25 probability was something at least in connection with



1 WASH-1400. We said that it was sufficiently reliable  
2 for regulatory use, to paraphrase it. What has changed  
3 in the meantime? What has happened to the  
4 uncertainties?

5 MR. BERNERO: The uncertainties, I think  
6 Harold Denton needles us about it all the time. We got  
7 so smart we widened the uncertainty band rather than  
8 narrowing it.

9 COMMISSIONER GILINSKY: So where does this  
10 leave us in applying that goal?

11 MR. BERNERO: That is why we are in a trial  
12 period. We would be derelict if we said we now know  
13 enough about core melt probability calculations to  
14 vigorously apply them in safety and regulatory  
15 decisions.

16 COMMISSIONER GILINSKY: That is why the ACRS,  
17 and I must say these are my sentiments, too, says, at  
18 least as I understand them, one ought to collect this  
19 type of intelligence or experience or the results of  
20 these calculations, come up with performance criteria  
21 for the various elements of your system, in this case  
22 containments.

23 MR. STELLO: We do do that.

24 MR. BERNERO: We seem to be heading in the  
25 other direction of putting it all in one bag and looking

1 for the overall answer. I will tell you another thing  
2 that disturbs me about this. It takes the entire  
3 subject off into some dark room where very few people  
4 can follow it.

5 CHAIRMAN PALLADINO: Which subject?

6 COMMISSIONER GILINSKY: The safety of these  
7 plants.

8 MR. BERNERO: Let me just cite one example.  
9 Right after Three Mile Island, when we did the now well  
10 known specific analysis of all auxiliary feedwater  
11 systems in all PWR's, that was a reliability or  
12 probability analysis, and it wasn't used directly that  
13 your auxiliary feedwater system must meet this goal.  
14 What was done is, the performance criteria, and a  
15 dramatic one, AC alternating current power dependencies  
16 on steam-driven auxiliaries were identified as a  
17 principal source of unreliability, and the criterion was  
18 put down, thou shalt not have AC dependencies in those  
19 non-AC systems, and the probability analysis was used as  
20 a source of insight to generate performance criteria of  
21 a more conventional or deterministic type, and this is  
22 done all the time.

23 COMMISSIONER GILINSKY: That appears to me  
24 sensible, but that is not the way I understand things  
25 are moving.

1           CHAIRMAN PALLADINO: I think Roger Mattson  
2 pointed that out the other day, that there are sequences  
3 that are identified only because we went through the PRA  
4 techniques, and he was referring not so much to the  
5 numbers but to the identification of these various  
6 events and what could lead to significant consequences.

7           COMMISSIONER GILINSKY: If I could jump to the  
8 severe accident issue, there, everything is getting  
9 lumped into one container, so to speak, and we are not  
10 going in the direction of --

11          CHAIRMAN PALLADINO: And we want to change  
12 that.

13          MR. STELLO: No, no, the severe accident, I  
14 thought we made it very clear, we could go forward with  
15 that program if the Commission decided to stop the  
16 safety goal immediately. There is no need for a safety  
17 goal to go through the severe accident proposal.

18          COMMISSIONER GILINSKY: This gets us a little  
19 far afield.

20          CHAIRMAN PALLADINO: What I was going to  
21 suggest is, first, let me find out if the Commissioners  
22 would be willing after a break to continue to go through  
23 this document, and then spend some time on the ACRS  
24 comments.

25          Let me suggest a ten-minute break, and I would

1 suggest we try to finish this within the next half-hour,  
2 and then go to the ACRS comments. So we will take a  
3 ten-minute break.

4 (Whereupon, a brief recess was taken.)

5 COMMISSIONER AHEARNE: The Chairman asked me  
6 to go ahead and start the meeting, and I apologize. He  
7 will be here shortly. He suggested that we could  
8 continue going through the implementation plan on the  
9 page by page basis. I think we are on Page 7.

10 MR. MURLEY: Yes. To summarize my  
11 understanding of the discussion on Page 7, the  
12 Commission has accepted Commissioner Ahearne's idea to  
13 put in the notion of after the evaluation period, which  
14 I think is consistent with the other discussions.

15 Beginning at the bottom of Page 7 and the top  
16 of Page 8, we had again mentioned that we are going to  
17 use -- the focus will be on the core melt frequency for  
18 all the reasons that have been discussed, and  
19 Commissioner Ahearne has an insert.

20 COMMISSIONER AHEARNE: My insert, and let me  
21 explain what it means. I am not saying that on every  
22 time that you ought to do the estimate of public risk.  
23 My concern was that since this really is a trial period,  
24 there ought to be some times that even if you went  
25 through -- your core melt said you shouldn't have to go

1 any farther, you should still go farther, because you  
2 are trying to see how these pieces fit together and how  
3 do you work this process, and I was afraid the way you  
4 were writing it was the type of action you might take  
5 once you have this formally in effect, but during the  
6 trial period I thought you do the estimates of the  
7 public risk in some cases even if the core melt  
8 objective --

9 MR. MURLEY: Fine. I have no problem with  
10 that.

11 MR. STELLO: Wait a minute. Do you mean risks  
12 or do you mean the \$1,000 per person rem too? Because  
13 if you meet everything that becomes the unbalanced --

14 COMMISSIONER AHEARNE: I only meant risk.

15 MR. STELLO: All right. No problem with that.

16 COMMISSIONER ASSELSTINE: Except isn't that  
17 the practical effect of, John, your next proposal, which  
18 is to knock out the first full paragraph on Page 8?

19 COMMISSIONER AHEARNE: I was just leaving that  
20 open. What I am concerned with is, at the end of the  
21 trial period, the staff and the Commission can look at,  
22 that we have gone through a number of situations where  
23 we could have applied this, and here are the problems  
24 with applying it here, and here are the kind of results  
25 that would come from applying it, and doing that to go

1 through some cases which you would expect that once you  
2 were formally using it you wouldn't bother with it.

3 COMMISSIONER ASSELSTINE: Yes.

4 COMMISSIONER AHEARNE: But just as, as Vic had  
5 already pointed out earlier, you don't do every case  
6 that you would have done. You also do some cases that  
7 you wouldn't have done. You are just trying to get a  
8 full set of examples of its trial use. And I didn't  
9 want to preclude anything at the moment. I would leave  
10 it up more at this stage to the staff to use their  
11 judgment. In some cases they are going to do some, in  
12 others not.

13 COMMISSIONER ASSELSTINE: So in some instances  
14 if the core melt objective was satisfied, that would be  
15 it.

16 COMMISSIONER AHEARNE: Right.

17 COMMISSIONER ASSELSTINE: In other instances,  
18 they might well go on to do the other risk  
19 calculations. In still other instances, they might go  
20 on to do the cost benefit calculations to give the full  
21 range of experience.

22 COMMISSIONER AHEARNE: That's right.

23 Exactly. That's my concept of the trial.

24 MR. STELLO: Then you do want the \$1,000 per  
25 person rem number used --



1 COMMISSIONER AHEARNE: Occasionally.

2 MR. STELLO: -- occasionally, and that is why  
3 you crossed that out.

4 COMMISSIONER AHEARNE: That's right.

5 MR. STELLO: It would allow some flexibility.

6 COMMISSIONER AHEARNE: That's right.

7 MR. STELLO: But you would not require the  
8 use.

9 COMMISSIONER ASSELSTINE: In every case.

10 MR. STELLO: That is no problem.

11 CHAIRMAN PALLADINO: That fixes up a comment  
12 that I had with regard to core melt frequency being the  
13 only thing you are going to look at during this period.

14 COMMISSIONER ASSELSTINE: I have a question  
15 about the middle paragraph on Page 8. I guess the first  
16 question I have where you talk about occupational  
17 exposures, would you also include in that category  
18 occupational exposures that might be averted by taking  
19 action that would prevent an accident, occupational  
20 exposures due to cleanup of an accident?

21 MR. STELLO: Let me, since everybody is  
22 thinking, I gave it some thought, and it was not  
23 intended to do that across the board, but in light of  
24 the previous conversations in the spirit of suggesting  
25 that we ought to learn as much as one can learn during

1 this period, it would seem, since that is a question  
2 that will probably be revisited at the conclusion of the  
3 trial period, it might be useful at least in a case or  
4 so to look at that issue to the extent we don't have to  
5 engage in an extensive program to do that.

6           COMMISSIONER ASSELSTINE: For myself, I think  
7 it would be useful to look at it on a case by case basis  
8 to decide whether there are cases when that might be a  
9 significant factor, and to consider it at that point.  
10 You do give some examples of occupational exposures that  
11 you would include. That was not one of the ones  
12 listed.

13           MR. STELLO: That was specifically excluded, I  
14 would think, the way we have written it, but I -- you  
15 know, in the spirit of what we have just talked about a  
16 moment ago, I don't see any difficulty with taking at  
17 least one case to deal with that issue. As I said  
18 before, my judgment is, though, that the person rem  
19 exposure on the basis of the extended release is much  
20 larger than the person rem associated with cleanup,  
21 because I remember numbers associated with that Sandia  
22 study.

23           MR. MURLEY: You have to be a little careful,  
24 because for very serious accidents, the so-called SST1,  
25 that is true, you do get large off-site releases, but

1 they are perhaps one or two orders of magnitude lower  
2 probability than the TMI type.

3 COMMISSIONER ASSELSTINE: That's exactly  
4 right.

5 MR. MURLEY: It takes probably as much man rem  
6 to clean up the TMI type, just clean the reactor up and  
7 so forth, as it would be a core melt accident. It  
8 depends. I mean, we don't know.

9 COMMISSIONER AHEARNE: That is one of the  
10 reasons it is worthwhile looking at it.

11 MR. STELLO: We could do it.

12 CHAIRMAN PALLADINO: Is it clear in the middle  
13 of Page 8 that they are going to --

14 COMMISSIONER ASSELSTINE: No, it is not clear  
15 that that would be one that they would include.

16 CHAIRMAN PALLADINO: Do you have a  
17 suggestion?

18 MR. STELLO: Well, what I would suggest is we  
19 would just add a sentence that says in at least one case  
20 we would examine the issue.

21 COMMISSIONER ROBERTS: That is different from  
22 case by case.

23 MR. STELLO: I said at least in one case, we  
24 would examine the issue of averted cleanup costs.

25 COMMISSIONER AHEARNE: Jim, when you said case

1 by case, did you mean every time?

2 COMMISSIONER ASSELSTINE: No, I did not mean  
3 every time.

4 MR. STELLO: What I was committing to is at  
5 least one, and then try to rate it that way to get the  
6 flexibility to get the type accident Tom was talking  
7 about, a TMI where you don't have the severe core melt,  
8 and then to include perhaps at least one where we would  
9 have a very substantial -- an SST1, a very, very bad  
10 release, and you include consideration of perhaps in one  
11 particular instance both extremes, so you could see it.

12 COMMISSIONER ASSELSTINE: Okay, that would be  
13 fine. The situation that I am concerned about is the  
14 TMI type accident, where your off-site releases may be  
15 fairly limited, and the dominant factor might well be  
16 your occupational exposures due to cleanup that would  
17 otherwise be averted if the accident had not occurred.

18 COMMISSIONER GILINSKY: Let's see. Where does  
19 that get factored in? Is that in the \$1,000 per man rem?

20 MR. MURLEY: No. In all fairness, suppose we  
21 were considering a requirement that had to do with  
22 examining pipes that may have cracks in them. The  
23 proposal as you take into consideration the man rem of  
24 workers that it costs you to do those inspections, so in  
25 all fairness, if you are treating it as a cost, then you

1 ought to put on the other side of the balance the  
2 benefit, because by doing those inspections you are  
3 reducing the likelihood of an accident.

4 COMMISSIONER ASSELSTINE: That is right.

5 MR. MURLEY: And another set of workers will  
6 have to come in and clean that accident up.

7 COMMISSIONER ASSELSTINE: That's right.

8 COMMISSIONER GILINSKY: How are you treating  
9 the worker person rems?

10 MR. MURLEY: Just exactly how I said.

11 COMMISSIONER GILINSKY: Just balancing them?

12 MR. MURLEY: Yes. I do not know that we have  
13 ever done that particular balancing before.

14 COMMISSIONER GILINSKY: The safety goals don't  
15 deal with occupational exposure.

16 MR. MURLEY: That's right.

17 CHAIRMAN PALLADINO: Jim is suggesting that  
18 they take at least one case, and I am not sure what one  
19 case means, but at least one case to examine the averted  
20 worker exposure.

21 MR. STELLO: For cleanup.

22 CHAIRMAN PALLADINO: Yes.

23 COMMISSIONER GILINSKY: What are you going to  
24 do with it? I do not understand. We have an estimate  
25 for cleanup at TMI, for example.

1           MR. STELLO: I understood Commissioner  
2 Asselstine's question to be directed toward when using a  
3 \$1,000 per person man rem, that when you are making that  
4 overall judgment using that part of the -- that aspect  
5 of the safety goal, that you at least in one case  
6 include that spectrum of consideration to determine  
7 whether or not that could have influenced one way or the  
8 other the outcome.

9           COMMISSIONER ASSELSTINE: That's right.

10          MR. STELLO: You have it with, and then you  
11 would have it without.

12          COMMISSIONER ASSELSTINE: Right.

13          MR. STELLO: That is the way I understood the  
14 intent.

15          COMMISSIONER ASSELSTINE: Yes. For example, a  
16 benefit of a proposed change may well be that you avert  
17 a certain type of accident that would incur if that  
18 accident occurred person rem exposures of a specified  
19 amount in order to clean up the accident. If you can  
20 avert those, then you ought to count those in as a  
21 benefit in figuring the \$1,000 per man rem, and not just  
22 public exposures if the accident were to occur.

23          COMMISSIONER GILINSKY: Well, let's see. Are  
24 you counting those man rems then?

25          MR. STELLO: In that case yes.



1 COMMISSIONER GILINSKY: On the person rem side?

2 COMMISSIONER ASSELSTINE: Yes, that's right.

3 COMMISSIONER GILINSKY: So you are counting  
4 occupational person reme one for one?

5 MR. STELLO: As a consequence of the accident.

6 COMMISSIONER ASSELSTINE: As a consequence of  
7 the accident. That is right.

8 COMMISSIONER GILINSKY: Is that what the  
9 Commission intended in the \$1,000 per person rem?

10 MR. STELLO: No, but this would be in at least  
11 one case while gaining the experience. Commissioner  
12 Asselstine said he would like to have some insight as to  
13 what would happen so that if he wanted to revisit this  
14 issue after the trial period, you would have some data  
15 and information to do so, and on that basis, I don't see  
16 it as a --

17 COMMISSIONER ASSELSTINE: Obviously, I would  
18 prefer to have it included in the cost benefit  
19 consideration, but we have been around that track  
20 before, so I will settle for at least one case.

21 (General laughter.)

22 CHAIRMAN PALLADINO: And the assessment of  
23 that one case may be so interesting --

24 COMMISSIONER ASSELSTINE: That's right. I  
25 hope it is an appropriate case.

1 (General laughter.)

2 CHAIRMAN PALLADINO: -- that we might do a  
3 second case.

4 COMMISSIONER ASSELSTINE: That's right.

5 MR. STELLO: You might want to change the  
6 safety goal after you are finished. That is possible.

7 (General laughter.)

8 CHAIRMAN PALLADINO: All right. You are going  
9 to put a sentence in there?

10 MR. STELLO: Yes.

11 COMMISSIONER ASSELSTINE: I guess I had one  
12 more question on the last two sentences in that  
13 paragraph. You say, "However, it is not clear whether  
14 occupational exposures would be given the same weight in  
15 decisions as with public exposures. One consideration  
16 that is important is that the occupational exposure  
17 incurred as a result of any imposed new requirement is a  
18 real impact with a small uncertainty band, whereas  
19 averted public exposures are calculated probabilistic  
20 numbers with large uncertainty bands."

21 Does that mean you give more weight to  
22 occupational exposures? I guess I do not understand  
23 what you had in mind with those two sentences.

24 MR. MURLEY: The thought behind that statement  
25 -- it is perhaps a little awkwardly worded -- again,

1 back to my example of a decision that one has to make on  
2 whether to require inspections of pipes that may have  
3 cracks in them. We know that for certain that that is  
4 going to lead to exposure of workers, and we know that  
5 the uncertainty on that is quite small because of the  
6 measurement techniques. They wear badges and so forth.

7           On the other hand, if you are balancing the  
8 benefits to be gained by that, you are talking about the  
9 aversion of some public -- some off-site releases, man  
10 rems to the public, and those have -- carry with it all  
11 the uncertainties of the core melt calculation and the  
12 consequence calculation.

13           So that was the thought behind it, and it was  
14 meant to convey the idea we are not sure how we would  
15 weigh these. Maybe a man rem is a man rem, or a person  
16 rem is a person rem. Maybe that's the best way to do  
17 it.

18           COMMISSIONER AHEARNE: Which leads to the  
19 additional sentence that I proposed putting in.

20           CHAIRMAN PALLADINO: Which leads to what?

21           COMMISSIONER AHEARNE: The additional sentence  
22 I proposed to put in.

23           MR. MURLEY: Commissioner's Ahearne's sentence  
24 is, we will assess these things.

25           COMMISSIONER ASSELSTINE: But there aren't any

1 preconceived notions on how that cuts one way or the  
2 other.

3 MR. MURLEY: The final paragraph --

4 MR. STELLO: Wait. Was there agreement on  
5 Commissioner Ahearne's sentence?

6 COMMISSIONER ASSELSTINE: I am in agreement  
7 with that.

8 CHAIRMAN PALLADINO: Both on Commissioner  
9 Ahearne's sentence and Commissioner Asselstine's  
10 sentence. And I presume there is agreement.

11 COMMISSIONER AHEARNE: Yes.

12 MR. MURLEY: The last paragraph is meant to be  
13 precautionary. I think it is self-explanatory. We  
14 ought to avoid what is termed the bottom line risk  
15 syndrome, namely, to take --

16 COMMISSIONER GILINSKY: I have a question  
17 about that.

18 MR. MURLEY: Yes.

19 COMMISSIONER GILINSKY: You say here one must  
20 be sensitive to the bottom line risk syndrome, and I  
21 guess you put it more clearly, one must avoid the bottom  
22 line risk syndrome. Isn't that what this whole exercise  
23 is all about? Safety goal and evaluating against it?

24 MR. MURLEY: I hope it does not turn out that  
25 it is just a rote comparison of one number versus a

1 goal, because I personally don't -- I think by far the  
2 greatest benefit to come out of these risk assessments  
3 is the insights and understanding you get from the  
4 safety of the plants.

5 COMMISSIONER GILINSKY: That is separate. It  
6 is interesting --

7 MR. MURLEY: That is what this is meant to say.

8 COMMISSIONER GILINSKY: -- and useful use of  
9 probabilistic risk assessment, but this exercise has to  
10 do with the bottom line risk syndrome.

11 COMMISSIONER AHEARNE: Vic's right.  
12 Eventually it does. It is essentially a test to see  
13 whether or not one can set up a set of a few easily  
14 understood in concept, perhaps difficult to apply,  
15 numbers, goals, and I read, when they say you have to be  
16 sensitive to the bottom line risk syndrome, it has to be  
17 very sensitive. For example, taking a set of PRA  
18 numbers and saying that such and such a plant has this  
19 probability of core melt, or that here there are 96,000  
20 deaths that are going to occur from an accident at that  
21 plant, and then going -- saying that we now have  
22 calculated some specific numbers, and we know this is  
23 the case, or this is what it absolutely means. We are a  
24 long way from there, and we've got to be very sensitive  
25 on how we use them.

1           COMMISSIONER GILINSKY: Of course, Tom said we  
2 must avoid the bottom line risk syndrome.

3           COMMISSIONER AHEARNE: Yes, but that is not  
4 what this says. It says you must be sensitive.

5           COMMISSIONER GILINSKY: It says you must be  
6 sensitive to the bottom line syndrome.

7           COMMISSIONER AHEARNE: It could actually be  
8 something different, too.

9           MR. STELLO: I think the Commission's  
10 statement of the goals themselves have that same note of  
11 caution in them, which says, don't take 10<sup>-4</sup> or .1  
12 percent and assume that that is the cliff, and when you  
13 are there, that there is a need of a precipitous action.  
14 I think what it says is that -- certainly in this case  
15 we are only going to put these into a trial use, and we  
16 aren't going to be making any decisions at all, none,  
17 zero, on the basis of these comparisons to these  
18 numbers.

19           But in the long run, the kinds of comparisons  
20 that you make and how you use these numbers in your  
21 judgment is yet to be decided, and I would assume would  
22 not be decided until after this trial period.

23           COMMISSIONER GILINSKY: You know, it is  
24 interesting that you say that if the risks -- if the  
25 guidelines are exceeded, that isn't reason to rush off



1 and do something and pose a new requirement. One seldom  
2 hears it the other way, which is that if the numbers  
3 come out lower, and if they are highly uncertain, that  
4 may not be reason to be entirely pleased either.

5 MR. STELLO: Well, I think the facts of the  
6 regulatory process more than adequately demonstrate that  
7 to be the case. Every plant that meets all of the  
8 safety goals, we have obviously put forth a very large  
9 number of requirements, even though they do meet all  
10 aspects of the safety goal.

11 COMMISSIONER AHEARNE: Or many times a company  
12 that has objected to an action that we are proposing to  
13 take will come in and try to make the argument that this  
14 is a safe plant, and we have these numbers to show, we  
15 have done these calculations, and more or less to say it  
16 is interesting and we will certainly evaluate it, but in  
17 the meantime we think it is important to do these  
18 things.

19 COMMISSIONER GILINSKY: To get back to your  
20 point, we do not know if they met the safety goal or  
21 not.

22 MR. STELLO: No, no, no, we do -- of the  
23 plants that are listed in the table, there are some that  
24 in fact do.

25 COMMISSIONER AHEARNE: Within the bounds --

1           COMMISSIONER GILINSKY: That are listed in  
2 there as meeting them. There has been no hesitancy --

3           CHAIRMAN PALLADINO: You are not being  
4 sensitive to the bottom line syndrome.

5           COMMISSIONER GILINSKY: That is what I was  
6 trying to say.

7           (General laughter.)

8           MR. STELLO: I was trying to make the  
9 counterpoint that we ignored it and just went on and  
10 continued imposing requirements completely independent  
11 of it.

12           COMMISSIONER GILINSKY: But you know, we have  
13 gotten a lot of results up here of one kind or another,  
14 probabilistic results. The first time that I saw  
15 something come in with a big warning label, like a pack  
16 of cigarettes, was this compendium that showed a certain  
17 number of the plants didn't make at least one of the  
18 guidelines. I don't remember any warning statements on  
19 anything before. Do you, Bob?

20           MR. BERNERO: When we gave you the compendium  
21 on Indian Point in 1980, we washed our hands eight times  
22 on every page.

23           COMMISSIONER GILINSKY: I don't remember  
24 anything having capitals emblazoned across the top,  
25 Warning, these numbers may be dangerous. Well, it cuts

1 both ways, I guess is my point.

2 CHAIRMAN PALLADINO: I think the way it is  
3 said it leaves it to cut both ways.

4 MR. STELLO: Yes. I was trying to give the  
5 other side of the equation, independent of the safety  
6 goals, we have continued to issue new requirements.  
7 Now, whether they meet them or whether they don't, our  
8 judgment is, these requirements are necessary. There  
9 are plants that were in that table for which if you made  
10 the comparison they didn't come out to meeting certain  
11 of the numbers, and I was making the point that this  
12 statement would say, don't be precipitous, to cause us  
13 to do something more than we have already done, but I  
14 want to make sure it was clear and is clear that we are  
15 independent of even making that comparison, continuing  
16 to make and issue new requirements.

17 CHAIRMAN PALLADINO: Do you have any suggested  
18 changes that you want to make as a result of this?

19 COMMISSIONER GILINSKY: No, I just don't know  
20 if it is consistent with everything else that is being  
21 done here.

22 MR. MURLEY: Commissioner Ahearne has some  
23 comments or proposed changes which I believe are totally  
24 consistent with the others, thrust of his others, so I --

25 COMMISSIONER GILINSKY: Let me say I do agree

1 with the paragraph, but not with the rest of it.

2 (General laughter.)

3 MR. MURLEY: There is unanimous agreement on  
4 the last paragraph.

5 Page 9. Now we come to what we are going to  
6 do at the end of the evaluation period, and the point  
7 here is, I think, to give you an idea of how -- what we  
8 propose to take into consideration, and how well it  
9 worked, and any changes that we might have. Item 3, for  
10 example, deals specifically with the source term  
11 assumptions and what effect it might have on the safety  
12 goal, and the design objectives.

13 COMMISSIONER GILINSKY: The thought is what,  
14 that if the source term went down, you could afford to  
15 have core melt more frequently?

16 MR. MURLEY: No, it gets back to your question  
17 earlier, Commissioner Gilinsky, of suppose the source  
18 term came down in such a way that the prompt fatalities  
19 got to be really not a problem. That is, it was  
20 relatively easy to meet that part of the safety goal,  
21 but you are then left with only the 50 mile  
22 consideration with regard to occupational exposure.

23 COMMISSIONER GILINSKY: Not occupational,  
24 public.

25 MR. MURLEY: Excuse me, public.

1           COMMISSIONER GILINSKY: Which is a very loose  
2 standard.

3           MR. MURLEY: Public, yes. We will, of course,  
4 during this period also be looking at the near term  
5 latent exposures, and so we will have some guidance that  
6 may say, here is what we have learned, and you may want  
7 to impose, reimpose that, which was in the original  
8 draft.

9           COMMISSIONER GILINSKY: Why wouldn't you want  
10 to do that at the outset?

11          MR. MURLEY: I do not know.

12          MR. ZERBE: Do we want to address those  
13 questions now?

14          COMMISSIONER GILINSKY: I think the Chairman  
15 would like to take the ACRS letter up later. Others  
16 would like to discuss it, and I certainly would.

17          CHAIRMAN PALLADINO: I think we are almost  
18 done on this, and we are going to come back to it.

19          COMMISSIONER ASSELSTINE: Is that the only  
20 example that you can think of, Tom, where we want to  
21 factor in changes in source term assumptions in terms of  
22 actually changing the safety goal?

23          MR. MURLEY: No. Well, it is a general area.  
24 It could be that the source term turns out to be so much  
25 lower than it is today that nearly all if not all of the

1 goals are met for all of the plants, in our experience.

2 COMMISSIONER GILINSKY: Well, wait a minute.

3 Not necessarily the core melt probability, which has

4 nothing to do with the source term.

5 MR. MURLEY: No, that's right. Excuse me.

6 COMMISSIONER GILINSKY: What I was asking  
7 earlier is, do you have in mind relaxing that standard  
8 if the source term goes down, or is that sort of in the  
9 back of people's minds?

10 MR. DIRCKS: Which standard, the core melt?

11 COMMISSIONER GILINSKY: Core melt.

12 MR. DIRCKS: . Remember the other day we were  
13 talking about the two issues --

14 MR. STELLO: There has never been any  
15 discussion that I am aware of where there was any  
16 connection between the source term and changing the core  
17 melt frequency.

18 COMMISSIONER GILINSKY: I will tell you why I  
19 raise it, because I took that to be the sense of your  
20 suggestion the last time when you were anxious to keep  
21 that as a subordinate goal that the Commission in the  
22 end agreed to.

23 MR. DIRCKS: There is that aspect to it,  
24 because we talked about the core melt is also a heavy  
25 dose of protecting the investment in there. We went



1 through this exercise.

2 COMMISSIONER AHEARNE: And that was Bill's  
3 argument.

4 CHAIRMAN PALLADINO: You might want to tighten  
5 it up for future plants. There might be motivation to  
6 tighten up the core melt requirement.

7 COMMISSIONER GILINSKY: The other side of it  
8 is, it creates a terrible mess which is a public health  
9 and safety mess, too. I think Jim was referring to that  
10 a moment ago. If one is going to relax something, that  
11 wouldn't be my first candidate. Let me put it that  
12 way.

13 MR. DIRCKS: I think what we should try to do  
14 is to make sure we proceed along the two tracks, and we  
15 will keep going on this evaluation plan, but the issues  
16 that the source term will be presenting to the  
17 Commission are going to be pretty difficult issues, and  
18 I think our recommendation is for you to keep that on  
19 another track and pursue the resolution of the  
20 controversy that will be surrounding the source term  
21 information.

22 COMMISSIONER AHEARNE: I would think you are  
23 going to want to have that source term work scrubbed by  
24 -- if it turns out to have the kind of significance some  
25 people seem to imply it is going to have, I would guess

1 you would want to have some outside peer review group go  
2 through it, maybe the American Physical Society, or  
3 something like that, and make sure that before you make  
4 any big changes, that you've got those uncertainties  
5 down to where you are really pretty comfortable, because  
6 if you back off significantly across a wide spectrum,  
7 you ought to be very confident that you are doing it  
8 soundly.

9           COMMISSIONER ASSELSTINE: I agree, except for  
10 the instance that Tom mentioned. It wasn't readily  
11 apparent to me, though, even once you had done that,  
12 that you want to go back and make changes to the  
13 objectives in the safety goal, because again, that  
14 wasn't based so much, I think, on our present  
15 understanding of the source term as it was on the level,  
16 what we thought was the appropriate level.

17           MR. STELLO: Let me give you an example.  
18 First, the word "change" to me didn't connote  
19 relaxation or tightening up as much as it did change,  
20 adding, subtracting new things. If the source term is  
21 such that there is a significant change in terms of  
22 fission products that leave the facility, then it  
23 clearly must mean there are more fission products that  
24 are going to remain back, and it clearly can mean that  
25 the occupational problem is a different problem than the

1 one that we had perceived, and perhaps there is a need  
2 then to include, such as the issue that you raised  
3 earlier with respect to \$1,000 a person rem.

4 All of the kinds of changes that can come out  
5 in terms of the application of the source term are so  
6 highly speculative as to what it would or wouldn't mean,  
7 and that is why we prepared a separate document that  
8 outlined the various kinds of things associated with a  
9 source term that I think have more impact on what we do  
10 in terms of Appendix E, equipment qualification,  
11 regulatory guides that are used for the purpose of site  
12 evaluations, and so on, Part 100.

13 I think those are the more significant issues  
14 associated with the source term, and then they as a  
15 result of changes to them can have significant impact  
16 with respect to plants.

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1           CHAIRMAN PALLADINO: The way No. 3 is written  
2 it talks about the impacted changes in source term  
3 assumptions on a safety goal, including whether the  
4 design objectives should be changed. Maybe that is what  
5 you have been discussing all the while and maybe you  
6 could just give us an update. You put the emphasis on  
7 changing the design objectives.

8           COMMISSIONER ASSELSTINE: That is right.

9           MR. STELLO: Maybe we could broaden it and  
10 just say any changes.

11          CHAIRMAN PALLADINO: No, I am think that you  
12 might want to know what the impact of the changes are in  
13 meeting or not meeting the safety goals or the design  
14 objectives. Isn't that what you are talking about  
15 there, or you actually talking about going back and  
16 possibly changing the safety goals because of their  
17 source term?

18          MR. STELLO: I think that possibility exists.  
19 In fact, that was Bill's suggestion at the beginning  
20 that maybe we ought to assure ourselves that we have  
21 completely understood the implication of the source term  
22 before we took the step of the safety goals so we don't  
23 put ourselves in an apologetic posture in the event that  
24 they do indeed come down significantly and then it could  
25 be argued that there is a technological change that

1 prevented conformance to these objectives.

2 But clearly one could at least speculate that  
3 that is a possibility depending on the outcome of this  
4 source term.

5 COMMISSIONER ASSELSTINE: But at least from  
6 what Tom had said earlier what you are thinking in terms  
7 of is perhaps potential changes about adding an element  
8 in such as a latent fatality standard for individuals as  
9 opposed to something like what Commissioner Gilinsky had  
10 raised which is well, we could accept an increase in the  
11 number of large scale core melt accidents because all of  
12 the sudden we think the source term is lower.

13 MR. STELLO: I wouldn't think it would be  
14 beyond the realm of possibilities that the tenth of a  
15 percent, that someone might want to lower it. If you  
16 can meet a tenth of a percent with these someone might  
17 argue well, make them safer.

18 COMMISSIONER ASSELSTINE: Yes.

19 CHAIRMAN PALLADINO: But you may find that the  
20 societal goal is not as effective in achieving overall  
21 safety as perhaps individual risk on latent cancer.

22 COMMISSIONER GILINSKY: Well, let's see, that  
23 is not included.

24 CHAIRMAN PALLADINO: No, but he is opening  
25 that possibility by Item No. 3 on page 9.

1           MR. MURLEY: I don't have any preconceptions.  
2 It is just that that is the kind of thing that might  
3 turn out. Again, there are some changes that Ahearne  
4 made.

5           COMMISSIONER AHEARNE: Let me just ask you a  
6 question, and I guess I am not sure which is the  
7 collective wisdom there. This last discussion, when you  
8 say this assessment will include, is that meant to imply  
9 that it will not include, for example, an evaluation of  
10 perhaps whether an additional safety goal would be more  
11 appropriate than the one that was proposed?

12          MR. STELLO: Well, I don't think the  
13 evaluation plan ought to be trying to come up with the  
14 answer for that as much as to try to provide sufficient  
15 data to deal with that question.

16          COMMISSIONER AHEARNE: See, for example, at  
17 the end of the evaluation period would you think it  
18 appropriate or inappropriate for the staff to come in  
19 and say well, we have looked at the effect of using the  
20 safety goals as they are and here is our report and  
21 everything and we think, for example, that rather than  
22 the societal risk 50-mile comparison we think it would  
23 be much better to use 10 miles or we think it would be  
24 much better to use an individual latent risk as opposed  
25 to societal.



1 MR. STELLO: Oh, I think that the information  
2 you are asking about would be generated as to what kinds  
3 of calculations ---

4 COMMISSIONER AHEARNE: I am just asking do you  
5 think it would be inappropriate or would it be  
6 appropriate for the staff at the end of this  
7 implementation process to be making those evaluations?

8 MR. STELLO: At the end of the process I think  
9 the Commission as an agency will be faced with trying to  
10 come to grips with to keep its safety goal as is  
11 proposed for this trial use should there be changes.

12 COMMISSIONER AHEARNE: You think it would be  
13 consistent?

14 MR. STELLO: Stello.

15 COMMISSIONER AHEARNE: Fine.

16 CHAIRMAN PALLADINO: That was the first answer.

17 COMMISSIONER AHEARNE: Yes.

18 CHAIRMAN PALLADINO: So we got the second  
19 answer twice.

20 COMMISSIONER AHEARNE: What it was triggered  
21 by is that I thought the previous answer indicated it  
22 might not be.

23 MR. MURLEY: Most of these items deal with a  
24 specific comment that someone has raised at one time or  
25 another, the ACRS or whatever, and we felt that we

1 probably ought to speak to it at the end of the period.

2           CHAIRMAN PALLADINO: Before you turn the page  
3 can I go back to the top paragraph. It says "To make  
4 recommendations to the Commission regarding any changes  
5 in the safety goal and their use in regulation or  
6 licensing."

7           Maybe change is all right in both of cases,  
8 but I think there should be recommendations made to the  
9 Commission regarding the use of safety goals in  
10 regulation or licenses and any changes in the safety  
11 goals. It is a minor point, but I would like to clarify  
12 it.

13           COMMISSIONER AHEARNE: Yes.

14           COMMISSIONER ASSELSTINE: Right.

15           CHAIRMAN PALLADINO: Or we might say "and  
16 regarding their use," or anything that fixes this up.

17           MR. MURLEY: The final page, again the top of  
18 the page, item 9 I would point out is again one of the  
19 subjects that has been commented quite extensively. It  
20 has to do with whether a single monetary value is an  
21 appropriate way to implement the cost benefit guideline  
22 or if some other method that has been talked about might  
23 be appropriate. So we will be looking at both ways,  
24 including some of the ones that I guess the ACRS and  
25 Commissioner Asselstine had mentioned, costs and

1 benefits.

2           COMMISSIONER ASSELSTINE: That would include,  
3 for example, off-site economic losses, for example, as  
4 another possibility.

5           MR. MURLEY: We would expect to speak to that,  
6 yes.

7           COMMISSIONER ASSELSTINE: Good.

8           MR. MURLEY: The final at the bottom of page  
9 10, and I find I am working off of Commissioner  
10 Ahearne's copy here and it is clean.

11           (Laughter.)

12           MR. MURLEY: And I gather there are no  
13 comments.

14           (Laughter.)

15           MR. MURLEY: We will have tasks and milestones  
16 and we have done that in the appendix. We have  
17 contemplated establishing a steering group of management  
18 representatives to kind of steer this effort through the  
19 evaluation period.

20           CHAIRMAN PALLADINO: How about some external  
21 members. I know they are not excluded and maybe we  
22 don't want to address it.

23           MR. DIRCKS: It is the Advisory Committee and  
24 I don't know whether you may want to get into that or  
25 not.

1           COMMISSIONER AHEARNE: The Federal Advisory  
2 Committee Act ---

3           MR. MURLEY: You have to post meetings and so  
4 forth.

5           CHAIRMAN PALLADINO: Well, then we will have  
6 to involve the ACRS more.

7           MR. MURLEY: Oh, yes, we expect that maybe we  
8 should mention the ACRS.

9           CHAIRMAN PALLADINO: As a matter of fact, I  
10 think this is a very important point and I think we  
11 should have continued input from the ACRS.

12          MR. MURLEY: That is a very good point, yes.

13          Finally, appropriate reports to the Commission  
14 as highlighted in the appendix.

15          COMMISSIONER AHEARNE: The only thing that I  
16 do want in the appendix is just what we had requested  
17 earlier --(Inaudible).

18          MR. STELLO: It is the same impossible task  
19 that you assigned to us before.

20          MR. MURLEY: Okay. I will just leave that  
21 crossed out then.

22          CHAIRMAN PALLADINO: Oh, they changed it.  
23 Which one did we change?

24          COMMISSIONER AHEARNE: I just wished to pick  
25 up in the Appendix what we had -- (Inaudible).

1           CHAIRMAN PALLADINO: I was just looking at  
2 that. This is the attachment to A-1?

3           COMMISSIONER AHEARNE: Yes.

4           CHAIRMAN PALLADINO: I wonder for the purposes  
5 of scheduling at least we say that within 60 days make a  
6 survey and I think they ought to report back to the  
7 Commission because we ought to know what we face and  
8 then we can go on and say it is the Commission's  
9 intention if no agencies commit to -- (Inaudible.)

10          COMMISSIONER AHEARNE: Since I only had three  
11 votes to do it the other way and I realize now I don't  
12 have three votes ---

13          (Laughter.)

14          CHAIRMAN PALLADINO: I was saying let's get  
15 our hallmark points ---

16          COMMISSIONER AHEARNE: You see, the difference  
17 is that if you tell the staff they have to do "X" within  
18 60 days and "Y" within 60 days more when they pretty  
19 well know that "X" is going to turn out one way, then  
20 they start working on "Y". But your version means they  
21 won't even start, and I will assure you that when they  
22 come in in 60 days and say well here is where we are,  
23 and then if we were to say okay, now you should start  
24 this RFP, they would say, oh, it is going to take us 120  
25 days to develop it.

1           CHAIRMAN PALLADINO: That is what they are  
2 saying already.

3           (Laughter.)

4           COMMISSIONER AHEARNE: Right, and that is why  
5 you should get them started. If you write it the other  
6 way you had it written they will be able to meet the 120  
7 days.

8           CHAIRMAN PALLADINO: 180 I had down there, but  
9 that is all right. Why don't we agree to that.

10          MR. STELLO: If this stays in it may be  
11 helpful for the Commission to schedule a meeting for  
12 tomorrow to decide what the scope of the contract ought  
13 to be.

14          COMMISSIONER AHEARNE: It says six months from  
15 now we should write a letter of contract, and I think  
16 what we are being told is gee, that is impossible.

17          CHAIRMAN PALLADINO: What is the average time  
18 in which we could get a contract out after it is written?

19          MR. STELLO: For which the Commission has to  
20 approve the scope or not?

21          (Laughter.)

22          CHAIRMAN PALLADINO: Give it to me both ways.

23          MR. STELLO: Up to a year if the Commission  
24 has to approve the scope and it could be at least that  
25 long with the staff, but we have gotten them out in a



1 matter of weeks.

2 CHAIRMAN PALLADINO: So this is one that we  
3 are going to target for weeks.

4 (Laughter.)

5 MR. STELLO: Excuse me, understand that I  
6 wasn't being facetious. I assume the Commission will  
7 want to have input as to what the scope of that contract  
8 would be.

9 (Laughter.)

10 CHAIRMAN PALLADINO: That is why I thought it  
11 was important to come back to the Commission. You will  
12 have to come back to the Commission anyhow.

13 MR. STELLO: Yes.

14 CHAIRMAN PALLADINO: In an effort to get a  
15 consensus on getting this document out, I will go back  
16 to what I had ---

17 COMMISSIONER AHEARNE: Good, excellent.

18 COMMISSIONER ASSELSTINE: We could just leave  
19 it out.

20 (Laughter.)

21 MR. MURLEY: That concludes our presentation.

22 CHAIRMAN PALLADINO: Well, you are going to go  
23 back and give us a revised version.

24 MR. MURLEY: Yes.

25 COMMISSIONER AHEARNE: I would be willing to

1 go ahead and vote though. Assuming they fix it up as we  
2 have gone through it, I would be willing to go ahead and  
3 vote on it.

4 CHAIRMAN PALLADINO: Is that the desire of the  
5 other Commissioners?

6 COMMISSIONER GILINSKY: You haven't voted on  
7 the safety goal.

8 CHAIRMAN PALLADINO: No, I know we haven't  
9 voted on the safety goal yet. We have more discussion  
10 on the safety goal.

11 COMMISSIONER GILINSKY: But you would approve  
12 an implementation plan without having agreed to ---

13 COMMISSIONER AHEARNE: An evaluation plan not  
14 implementation.

15 COMMISSIONER GILINSKY: That seems to me the  
16 classic cart before the horse.

17 (Laughter.)

18 CHAIRMAN PALLADINO: We sometimes do that.

19 COMMISSIONER GILINSKY: I know that.

20 (Laughter.)

21 COMMISSIONER AHEARNE: I would just say if we  
22 do issue a safety here is how we want to evaluate it.

23 COMMISSIONER ASSELSTINE: I think it would be  
24 worthwhile to do the discussion of the goal first.

25 CHAIRMAN PALLADINO: I think we have a

1 consensus that we have got a document that is going to  
2 be approved and we may approve it yet before the  
3 afternoon is over if we get something on the ACRS  
4 comments.

5 COMMISSIONER AHEARNE: Yes.

6 CHAIRMAN PALLADINO: Okay, can we go to the  
7 ACRS comments and now we are on the safety goal.

8 COMMISSIONER AHEARNE: I guess just as an  
9 opening comment and I would appreciate it at some point,  
10 but I noticed the copy I got on Saturday did have ". . .  
11 recognition of the present policy," and I am quoting  
12 now, "the present policy of the Administration foregoing  
13 the reprocessing of spent fuel."

14 CHAIRMAN PALLADINO: They had revised that.

15 COMMISSIONER AHEARNE: I see. I was just  
16 asking for some insight into that.

17 CHAIRMAN PALLADINO: I don't know if anybody  
18 can provide it. It didn't sound even true. Well, I  
19 don't know.

20 (Laughter.)

21 CHAIRMAN PALLADINO: The premise was all that  
22 clear to me. They changed that.

23 COMMISSIONER ASSELSTINE: But in any event,  
24 there is a later letter, isn't there?

25 CHAIRMAN PALLADINO: Yes, there is a later

1 letter. We have a signed letter from Jeremiah Ray.

2 COMMISSIONER GILINSKY: Before you get away  
3 from the evaluation plan, the ACRS does say that few of  
4 their recommendations appear to be reflected in the  
5 revised statements.

6 CHAIRMAN PALLADINO: Are you talking about the  
7 severe accident rule?

8 COMMISSIONER GILINSKY: No. They wrote us a  
9 letter on September 15th on the then draft  
10 implementation plan.

11 CHAIRMAN PALLADINO: Well, it was  
12 interesting. I took that September 15th document, and I  
13 am not sure if I have it here with me, and I went  
14 through it step by step and I found a large fraction of  
15 their comments already factored into the program. I  
16 hate to say most, but I think it was most of their  
17 comments were already in there.

18 COMMISSIONER GILINSKY: Well, that may be.

19 CHAIRMAN PALLADINO: So I found that a little  
20 bit difficult to -- no, wait a minute. I am sorry,  
21 implementation plan.

22 MR. DIRCKS: That has changed completely.

23 CHAIRMAN PALLADINO: I thought you meant on  
24 the safety goals.

25 COMMISSIONER GILINSKY: Well, it seems to me

1 if they hold us due, whether it is right or wrong ---

2 MR. MURLEY: Excuse me. Commissioner  
3 Gilinsky, they switch sentences on you. They reiterate  
4 the comments made in the reports on the evaluation plan,  
5 but then they go on to say that few of our  
6 recommendations in the draft safety goal policy appear  
7 to have been reflected.

8 Then at the end of the letter they say they  
9 will report at a later time on the evaluation plan.

10 COMMISSIONER GILINSKY: They refer to  
11 statements rather than statement.

12 MR. MURLEY: Yes, and the evaluation plan has  
13 been so thoroughly revised.

14 COMMISSIONER GILINSKY: That may well be. My  
15 only suggestion, and I am not saying what they wrote is  
16 right or wrong, but I would think the Commission would  
17 want to sit down with the committee and understand their  
18 criticisms and decide whether it agrees with them or not.

19 CHAIRMAN PALLADINO: As a matter of fact, in a  
20 session with Jeremiah Ray and Mr. Ray Fraley I pointed  
21 out a number of these points on the September 15th  
22 document that seemed to be included in our safety goal.

23 COMMISSIONER GILINSKY: But, you know, here is  
24 our advisory committee and they seem to have strong  
25 views on this subject. They have spent a lot of time on

1 the subject, they have some people on there who are very  
2 expert at it and I don't think time is so pressing that  
3 we cannot sit down with the committee to discuss these.

4 CHAIRMAN PALLADINO: Well, at least here is  
5 one person who did.

6 MR. STELLO: Excuse me. They can't mean this  
7 evaluation plan because the first paragraph says that  
8 they did not have it and it was not available for their  
9 review prior to that meeting.

10 COMMISSIONER GILINSKY: Well, the current one.

11 MR. STELLO: This one they didn't have.

12 COMMISSIONER GILINSKY: Yes, the current one.

13 MR. STELLO: Right. So we don't have any  
14 comments on that. They cannot have said that this  
15 doesn't reflect their comments.

16 COMMISSIONER GILINSKY: Well, whatever they  
17 last had they felt it did not reflect their comments.

18 MR. STELLO: They had the draft back in  
19 September for which there is no comparison between that  
20 and this.

21 COMMISSIONER GILINSKY: Which means that there  
22 will be no review by the ACRS of this document?

23 MR. STELLO: No. They went on to say in here  
24 that they are going to review it.

25 CHAIRMAN PALLADINO: They are going to have



1 the same period at least ---

2 MR. MURLEY: Ninety days.

3 COMMISSIONER GILINSKY: You are going to  
4 include them in the public comment period?

5 MR. STELLO: Yes, they will be clearly within  
6 that period.

7 COMMISSIONER GILINSKY: I thought we ran  
8 things differently here.

9 COMMISSIONER AHEARNE: We have had comments  
10 from the ACRS and we have met with the ACRS on the  
11 safety goal once. I am not sure for you, but I know I  
12 have talked to many members of the ACRS on the safety  
13 goal and the policy. There have been some things in  
14 which they have disagreed with us fair consistently and  
15 there are some major changes in the current safety goal  
16 that is going on that reflect ACRS input into it.

17 CHAIRMAN PALLADINO: And we are about to give  
18 the ACRS input further consideration right now.

19 COMMISSIONER GILINSKY: Fine. My suggestion  
20 is to sit down with them, but I guess you don't want to  
21 do that.

22 CHAIRMAN PALLADINO: Well, we haven't excluded  
23 that, but we haven't explicitly stated we would yet.  
24 That is a motion you can make either now or later. I  
25 suggest we first go through the items.

1           The first one, as I understand it, is that  
2 they would like to retain the ALARA concept and that it  
3 should be applied for all future nuclear power plants.  
4 However, for existing nuclear power plants the use of  
5 ALARA for improvement when the safety goals appear to  
6 have been met should be limited to special situations.

7           My problem here with the ALARA concept  
8 open-ended is that it replaces the safety goal or it  
9 becomes the safety goal and the safety goal will be  
10 ALARA and not the specific items that we set forth in  
11 the meeting. I think we have been through this on  
12 earlier drafts and have voted on whether ALARA should be  
13 included or not. I wish I could get the September 15th  
14 document.

15           COMMISSIONER GILINSKY: Well, it is something  
16 I guess I don't remember us discussing at length with  
17 the ACRS and I certainly would like to hear their views  
18 on it but I guess I will have to do that privately.

19           CHAIRMAN PALLADINO: Well Ray Fraley is here  
20 or is there anyone else from ACRS?

21           Mr. Fraley.

22           MR. FRALEY: Well, let me help clarify one  
23 point if I may. I did not look at the new evaluation  
24 plan in writing this letter. It was based on the  
25 comments they had made in several previous reports on

1 the safety goals, the previous evaluation plan, the  
2 policy statement on severe accidents and the severe  
3 accident safety research program.

4           What they tried to do was pull together a set  
5 of comments from those documents that would reflect  
6 their thinking on this total subject. They did not, as  
7 I say here, review the new evaluation plan but that is  
8 to be scheduled as soon as we can get to it. The  
9 comments in this letter are based on the new policy  
10 statement.

11           Again, I was not authorized to speak for the  
12 committee, but I will do my best. I believe that the  
13 committee was endorsing an ALARA concept in addition to  
14 the criteria where the criteria or the guides would be  
15 the minimum that is acceptable and then one would go  
16 beyond that using ALARA concepts to improve safety as  
17 the technology develops and what-have-you. Otherwise  
18 there seems to be little incentive to improve anything  
19 once you amend the goals even if the technology improves.

20           COMMISSIONER ASSELSTINE: As I understand what  
21 we have discussed in the evaluation plan, given the fact  
22 that we are not going to use the safety goal as a basis  
23 for a decision, then at least during the next two-year  
24 period the ALARA concept would retain its vitality to  
25 the extent that it is already embodied in our regulatory

1 program.

2           Second, at least in some instances we are  
3 going to look at the impact that the benefit-cost  
4 comparisons would have even in those instances where we  
5 are satisfied that all of the other elements of the goal  
6 are met. So that at the end of the two-year period we  
7 should have a basis for deciding what changes would have  
8 been required that would not have been required by the  
9 three major elements of the goal by the cost-benefit or  
10 ALARA type of concept and hopefully we will also have a  
11 basis for deciding how great the uncertainties are when  
12 it comes to using a safety goal somewhat like this.

13           So I guess it seems to me that we will have a  
14 basis for deciding at the end of the two-year period  
15 whether to continue to use the ALARA concept or whether  
16 to at that point set it aside or replace it with the  
17 goal. I guess on that basis I am prepared to go ahead  
18 with the goal without the ALARA concept, although I  
19 guess for myself my judgment at the end of the two-year  
20 period is going to be based very heavily on the amount  
21 of uncertainties that we have with the goal, the  
22 information on the workability of the goal and the  
23 information on what changes would have resulted from,  
24 one, applying the goal without the ALARA concept and,  
25 two, applying the goal with it, and may well be that

1 those uncertainties are great enough that there may be a  
2 strong justification for continuing that as the  
3 fundamental basis for our regulatory program.

4 CHAIRMAN PALLADINO: Well, do I gather the  
5 majority of the Commission with regard to the ALARA ---

6 COMMISSIONER AHEARNE: I would agree with  
7 everything Jim says with the exception that I want to be  
8 here when he reaches that point.

9 CHAIRMAN PALLADINO: I gather you don't agree  
10 or do you?

11 COMMISSIONER GILINSKY: Well, I am not  
12 persuaded that you are doing the right thing and I would  
13 at a minimum want to sit down with the committee and  
14 hear them out.

15 CHAIRMAN PALLADINO: And I gather you feel  
16 that going ahead without the ALARA concept is ---

17 COMMISSIONER AHEARNE: Yes.

18 COMMISSIONER ROBERTS: Yes.

19 CHAIRMAN PALLADINO: Now the next one, No. 2,  
20 the quantitative design objectives in the most recent  
21 drafts appear to define an objective for risk of prompt  
22 fatality for an individual but not for the risk of  
23 cancer fatality for an individual. It may be that the  
24 current risk calculations suggest that the risk of  
25 cancer is acceptably low if the objective for risk of a

1 prompt fatality is met. However, that situation could  
2 conceivably change, and, in any event, the individual  
3 risk of fatal cancer due to nuclear power plant  
4 operation or accidents is an important consideration.  
5 We believe that a design objective should be  
6 specifically identified.

7           This is the issue you brought up a number of  
8 times. As I recall, we voted on both sides of this  
9 issue.

10           COMMISSIONER AHEARNE: Perhaps Jack could  
11 refresh us.

12           CHAIRMAN PALLADINO: Jack, can you refresh our  
13 memory on this?

14           MR. ZERBE: Yes. It had come up to the  
15 Commission and the Commission stated that they wanted a  
16 societal goal. The judgment was that that would be  
17 better for the delayed death, delayed fatalities and  
18 that would be better if the two occur out to a fairly  
19 sizeable distance like 50 miles which has been used  
20 before.

21           COMMISSIONER GILINSKY: Well, that ends up  
22 being, as I said, a pretty loose standard and that is  
23 the one that everybody got into a big argument over when  
24 Peter Bradford said that implied 13,000 deaths between  
25 now and the next century and then everybody said no,



1 that is not what they meant.

2 MR. RATHBUN: Well, that is true, but let me  
3 say when we revised the policy statement and sent it to  
4 the Commission in July we dropped out all societal risks  
5 and we put in an individual risk for prompt and an  
6 individual risk for delayed at a tenth of a percent.

7 After that meeting the Commission asked us to  
8 write some questions. We did that and sent them to the  
9 ACRS as well as the Commission and the ACRS responded to  
10 the questions how they would have answered the questions  
11 on the 15th of September. They said and the majority of  
12 the Commission said we think that you should have a  
13 societal risk limiter.

14 So what we did, in light of that comment, was  
15 to put back in a societal risk limiter at a tenth of a  
16 percent at least the purposes of the evaluation and we  
17 dropped out the delayed individual risk.

18 COMMISSIONER GILINSKY: Why do you need to  
19 drop out the delayed risk?

20 MR. ZERBE: If you have it in at one mile then  
21 that is the controlling item.

22 COMMISSIONER GILINSKY: Not necessarily.

23 MR. ZERBE: Well, it would be relative to  
24 delayed deaths and relative to the societal one which we  
25 have in there now at the 50 mile limit.

1           MR. RATHBUN: Well, actually you don't need  
2 the societal. For the reasons we have been citing at a  
3 tenth of a percent individuals within a mile have the  
4 dominant risk, whereas if you go out a greater distance  
5 to say 30 miles or 40 miles or 50 miles it is societal,  
6 which is what the Commission and the ACRS said they  
7 wanted, but it is not as tight.

8           COMMISSIONER GILINSKY: Well, it is loose to  
9 the point where the Commission won't stand behind it  
10 almost because when confronted with the numbers that  
11 Peter brought up every one backed away from it.

12           COMMISSIONER AHEARNE: No, that is not true.  
13 We have got lots of documents on what was said and what  
14 was not said. The question that we were addressing  
15 before and we are still wrestling with here is do we  
16 want to put down something that compares the hazard in a  
17 region or do we want to restrict it to the hazard right  
18 in the closest individual.

19           COMMISSIONER GILINSKY: But still in choosing  
20 a standard for a regional hazard you have chosen a  
21 number that makes you uncomfortable when you actually ---

22           COMMISSIONER AHEARNE: No, no. It is not that  
23 we choose a number that makes us uncomfortable, but it  
24 is that any set of numbers you deal with can be so  
25 characterized as to make it give a misleading

1 perception. I know for myself in the papers that I  
2 wrote at that time it was the misleading perception I  
3 was trying to counter.

4 COMMISSIONER GILINSKY: So the numbers you  
5 regard as an acceptable standard?

6 COMMISSIONER AHEARNE: It is the question of  
7 do we or do we not attempt to say that there was some  
8 comparison in any region and we set up a safety goal or  
9 set up a goal and are we going to say that the latent  
10 cancer risk from operation of a plant should be compared  
11 in a region with the statistical risk of dying from  
12 cancer.

13 COMMISSIONER GILINSKY: Yes, but you have  
14 picked a particular ratio.

15 COMMISSIONER AHEARNE: We have picked a ratio  
16 and we have picked a region, but the fundamental  
17 question is should there be such a comparison.

18 COMMISSIONER GILINSKY: Well, but you picked a  
19 standard that when Peter put down the numbers ---

20 COMMISSIONER AHEARNE: But, Vic, you can  
21 choose any number in any region and you will end up with  
22 some number that you will then say ah hah, the NRC is  
23 saying that it is all right for these number of people  
24 to die. As we tried to point out at the time, if you  
25 want to look at it that way you are saying that what we

1 are also saying is that we don't care about making the  
2 plant safe and we don't care if accidents happen.

3 COMMISSIONER GILINSKY: Well, I am not  
4 questioning your personal sensitivity to human tragedy.

5 COMMISSIONER AHEARNE: But that was the issue  
6 at the time. The question here is should there or  
7 should there not be a goal which talks about the risk of  
8 dying of latent death due to cancer from the operation  
9 of a nuclear power plant, including accidents, and  
10 compare that with the risk of dying from cancer? Should  
11 there be such a goal and then what should those numbers  
12 be? That is where the original OPE comment was they  
13 concluded there shouldn't be such a goal and the  
14 Commission ended up saying yes, there should be.

15 Dennis, I think you also said the ACPS also  
16 recommended there should be some societal goal.

17 MR. RATHBUN: Yes, sir, they did.

18 COMMISSIONER GILINSKY: As I remember your  
19 particular comment, you were saying then that you really  
20 didn't expect this sort of thing to happen and you  
21 expected the numbers to be lower.

22 COMMISSIONER AHEARNE: The point was to get  
23 that kind of a number calculated, and this is wandering  
24 away from the issue at point, but to get that kind of  
25 number calculated you would have to have a lot of

1 accidents. My point was that I didn't think whatever  
2 regulatory agency was in existence if there were a lot  
3 of accidents they would just sit there and keep running  
4 a tote board but there are not a lot of accidents.

5 COMMISSIONER GILINSKY: But then you are  
6 saying you really want a different standard.

7 COMMISSIONER AHEARNE: No, I am not. It is  
8 the application and interpretation of how you apply the  
9 standard. I argued at the time that since those papers  
10 are many pages long, and one clearly can't have a full  
11 debate here about that issue, there is a question of  
12 whether you want to give a misleading interpretation of  
13 the number.

14 The issue I argue still is do we want to put  
15 down a goal which compares this probability of dying from  
16 cancer due to the operation of a nuclear power plant for  
17 people in a region compared to their probability of  
18 dying from cancer. The Commission at least several  
19 times has come out with the answer yes. Now the  
20 argument has to be what number and what ratio do you use  
21 and how big a region and there is not obviously a  
22 fine-tuned calculation about either 50 miles or .1  
23 percent, but for a trial basis there we used 50 miles in  
24 a number of other calculations to .1 percent to track  
25 with the other .1 percent for a trial basis and it is a

1 workable set of numbers to use.

2 COMMISSIONER ASSELSTINE: John, why shouldn't  
3 that be done on an individual basis as well? I guess  
4 what I don't understand, and I agreed with putting in  
5 the societal risk, but I don't understand why that has  
6 to also ---

7 COMMISSIONER AHEARNE: Where would you locate  
8 that individual?

9 COMMISSIONER GILINSKY: Well, you have located  
10 him, I don't know, a mile away, or wherever. You locate  
11 him somewhere. But let me say that obviously the ACRS  
12 has thought about it. I mean we are not talking about a  
13 bunch of people who just scribbled this down and passed  
14 it under the door.

15 COMMISSIONER AHEARNE: I understand that. I  
16 recognize that.

17 COMMISSIONER GILINSKY: They have thought  
18 about this a good deal and they don't seem to think  
19 there is an inconsistency between have both planned to  
20 the guidelines.

21 COMMISSIONER AHEARNE: You have to read I  
22 believe No. 2 in association with No. 3.

23 COMMISSIONER ASSELSTINE: Yes.

24 COMMISSIONER AHEARNE: What they are saying is  
25 that the appropriate way to do the comparison with



1 cancer probability is for the individual, and that is at  
2 the site boundary, and you really drop out the rest of  
3 societal at that point. The rest is irrelevant and you  
4 can just drop it out.

5 COMMISSIONER GILINSKY: They made comments on  
6 both.

7 COMMISSIONER AHEARNE: Let me finish. That is  
8 what I say, you need them both. So what No. 3 then  
9 says, that they are saying is the appropriate societal  
10 is not to do a comparison with the probability of dying  
11 of cancer, but rather to put some kind of upper bound  
12 maximum number of deaths acceptable from an accident.

13 CHAIRMAN PALLADINO: You mean the risk  
14 acceptable.

15 COMMISSIONER AHEARNE: That is right, a risk  
16 acceptable. Dennis, I don't know if you looked up what  
17 kind of numbers they had.

18 MR. RATHBUN: Well, actually I couldn't find  
19 an upper limit per our earlier conversation. The Atomic  
20 Industrial Forum actually did propose a number.

21 COMMISSIONER AHEARNE: Let me then go back.  
22 In discussing with some of the people in the ACRS, and  
23 one in particular, he believed that what they had  
24 previously said was that there would be some range of  
25 numbers that would be acceptable in the sense that it

1 would be intolerable above that level, but that would be  
2 an absolute number and his argument was that then makes  
3 it more difficult for high population sites. That was  
4 the way that 2 and 3 would be read together. So they  
5 saw nothing inconsistent with No. 2 because they were  
6 doing away with the approach the current safety policy  
7 has on societal.

8           COMMISSIONER GILINSKY: Implicitly. They  
9 hadn't quite said that, but that is right.

10           COMMISSIONER AHEARNE: Yes. So that is how  
11 they deal with the societal. Having dealt with the  
12 societal that way, then they do have to come back and  
13 talk about the latent risk and it is absolutely  
14 consistent to take that individual as the way you take  
15 the latent risk.

16           MR. RATHBUN: They have another way of working  
17 the societal risk. The societal risk that we have  
18 shared for a year now in 0880 and all the subsequent  
19 drafts has been basically risk-risk, in other words, the  
20 incremental risk from a nuclear power operation  
21 vis-a-vis the risks to which members of the public are  
22 firmly exposed. The way they did it was what I would  
23 characterize as risk benefit, that is so many  
24 statistically estimated deaths per ten to the ten  
25 kilowatt hours of generation.

1           COMMISSIONER AHEARNE: Right, which is another  
2 way of ending up saying with a plant of given size and  
3 with a given capacity factor you can immediately  
4 translate that there is a ceiling.

5           MR. RATHBUN: With respect to their third  
6 question here on societal risks of the undesirable  
7 characteristic that larger societal risks are permitted  
8 for the nuclear power plant which has the larger  
9 surrounding population within fifty miles and there is  
10 no incentive for remote siting, that is a comment that  
11 they made in the June 9th paper that was sent.

12           COMMISSIONER AHEARNE: Yes, that is a  
13 consistent point they have been making.

14           MR. RATHBUN: Yes, it is.

15           COMMISSIONER ASSELSTINE: But is it an  
16 accurate point?

17           COMMISSIONER GILINSKY: Well, it seems to me  
18 that is the sensible way to bring in societal risk.

19           COMMISSIONER AHEARNE: Yes, it is because the  
20 safety goal is neutral.

21           MR. RATHBUN: Yes, it is because this was the  
22 policy statement and isn't intended as a siting guide or  
23 rule but rather to define how safe is safe enough.

24           COMMISSIONER ASSELSTINE: So there are fairly  
25 wide variations in terms of the actual fatalities that

1 would satisfy the goal, depending upon particular  
2 characteristics of the site.

3 MR. RATHBUN: It all goes as a percentage. In  
4 other words, if there 17.5 million within 50 miles of  
5 Indian Point, then these guides would suggest 34 would  
6 be acceptable. If it was the typical site of 1.7  
7 million then it would be 3.4. But the policy statement  
8 doesn't now and for the past year anyway hasn't had to  
9 deal with siting per se.

10 CHAIRMAN PALLADINO: We are presumably  
11 treating siting as a separate issue.

12 COMMISSIONER GILINSKY: Somewhere in the  
13 policy statement there is a sentence on, and I forget  
14 the exact wording, on the Commission supporting siting  
15 in lower population areas.

16 COMMISSIONER ASSELSTINE: That is right.

17 COMMISSIONER GILINSKY: And it would be  
18 consistent with that to adopt the ACRS point of view  
19 because that statement is not otherwise reflected ---

20 COMMISSIONER AHEARNE: Well, the statement in  
21 there, as I recall, is talking about the general  
22 subjects of ---

23 COMMISSIONER GILINSKY: But that sentiment is  
24 not reflected in any of the guidelines.

25 COMMISSIONER AHEARNE: You see, where it comes

1 in is it says the Commission also recognizes the  
2 importance of mitigating the consequence of core melt  
3 accidents and continues to emphasize features such as  
4 containment, siting in less populated areas and  
5 emergency planning and then in a later place it has the  
6 defense in depth approach.

7           COMMISSIONER GILINSKY: But it is not  
8 reflected ---

9           COMMISSIONER AHEARNE: No, but even the  
10 wording here is ---

11           COMMISSIONER GILINSKY: Yes, but if we believe  
12 that, then the sensible thing is to reflect that point  
13 of view in the guidelines.

14           COMMISSIONER AHEARNE: I agree that once we  
15 really fully understand how to apply the safety goal  
16 that it would be best to try to wrap in more of the  
17 fundamental understanding of how to go about doing the  
18 regulation, but we aren't there. Just as Jim finished  
19 pointing out in ALARA, at the end of the two years you  
20 may want to make that modification, but we aren't there  
21 yet. It is neutral on site.

22           COMMISSIONER GILINSKY: Let me ask you this,  
23 what sort of staff effort do you expect to get expended  
24 in connection with this activity which after all is not  
25 going to affect the decisionmaking of the agency, so to

1 speak, in parallel? Is that included somewhere or did I  
2 miss that?

3 CHAIRMAN PALLADINO: We never asked that  
4 question.

5 COMMISSIONER GILINSKY: What is this going to  
6 amount to? I mean is this one person or ten or a  
7 hundred?

8 COMMISSIONER AHEARNE: It is probably going to  
9 be very high.

10 COMMISSIONER GILINSKY: You know if you are  
11 talking about one or two people spending their time on  
12 this, then I would say okay they are trying something  
13 which isn't as good as one could make it. If we are  
14 talking about a substantial effort that is going to ---

15 COMMISSIONER AHEARNE: Isn't it a perspective  
16 that you are end up after you have done a lot of ---

17 COMMISSIONER GILINSKY: Well, except you get a  
18 bureaucracy in a groove and then it is pretty hard to  
19 change things.

20 MR. STELLO: Well, the bulk of the resources  
21 are going to go to developing a reference document and  
22 that is being done essentially independent of the safety  
23 goal anyway. How much it will be ---

24 CHAIRMAN PALLADINO: You call for this same  
25 reference document in other activities.



1 MR. STELLO: That is right, and that is where  
2 the bulk of the resources are.

3 Bob, do you have an estimate for how much that  
4 is going to take?

5 COMMISSIONER GILINSKY: Do you have any sort  
6 of estimate about how much the safety goal and  
7 associated activities are going to take?

8 COMMISSIONER AHEARNE: When you say associated  
9 activities, do you mean ---

10 COMMISSIONER GILINSKY: Well, I mean making  
11 the various evaluations and ---

12 COMMISSIONER AHEARNE: That you wouldn't have  
13 done had there not been a safety goal effort.

14 MR. BERNERO: I don't have the numbers at my  
15 fingertips, but the reference document work in toto is  
16 several million dollars of work, but we have to do that  
17 for severe accident work anyway. The safety goal  
18 increment I just don't know.

19 COMMISSIONER GILINSKY: Do you have any sort  
20 of guess or anything off the top of your head?

21 MR. DENTON: Certainly when we get into big  
22 issues such as ATWS or thermal shock it is taking today  
23 on the order of half a man-year or so to properly put  
24 those in perspective. I think here if we go much beyond  
25 just doing a core melt comparison and getting into

1 having to go out to public consequences it will add a  
2 little bit to that, maybe another man-month. That is a  
3 top of the head estimate.

4 MR. STELLO: You are estimating, Harold, the  
5 man-month per issue, one man-month per issue?

6 MR. DENTON: Yes.

7 COMMISSIONER GILINSKY: So what we are talking  
8 about is man-months here?

9 MR. DENTON: On top of a number of man-months  
10 per issue. That is per issue.

11 MR. MURLEY: You see, most of the cost-benefit  
12 type information ---

13 COMMISSIONER GILINSKY: Well, you said one  
14 man-month incremental per issue.

15 MR. DENTON: As a top of the head estimate.

16 COMMISSIONER GILINSKY: So I said there are a  
17 number of issues and a number of ---

18 CHAIRMAN PALLADINO: I think rather than try  
19 to do some back-of-the envelope calculation here, why  
20 don't we request that you go back and make us an  
21 estimate. It is my belief that the Commission wants to  
22 go ahead with this and they would like to get a feel for  
23 how much it is going to take. My feeling has been that  
24 the number is small enough that it is within the noise  
25 of our ability to estimate the overall manpower needs of

1 this ---

2 COMMISSIONER AHEARNE: This is to a large  
3 extent a perspective question.

4 MR. STELLO: You are asking the question of  
5 how many resources will we use if we have a safety goal  
6 and work that is associated with it strictly. As I said  
7 before, most of this goes on with a safety goal or not.

8 CHAIRMAN PALLADINO: Rather than just trying  
9 to guess it now, we will give you a chance to think  
10 about it.

11 Well, were we back on No. 2?

12 COMMISSIONER ASSELSTINE: Two and three are  
13 linked really.

14 CHAIRMAN PALLADINO: I guess they are.

15 COMMISSIONER AHEARNE: You see, for myself  
16 they aren't new issues. They are issues that we have  
17 been through many times and I can understand and I am  
18 sympathetic with some of the points that the ACRS has  
19 raised in the past on these. As my speeches earlier  
20 today indicate, I think it is more important to try to  
21 go ahead on a trial basis, and these are some of the  
22 points that I would hope at the end of the two years  
23 that you people look at carefully.

24 COMMISSIONER GILINSKY: Let me ask you this.  
25 You know, we launched a proceeding at Indian Point

1 because in effect there was a large population  
2 surrounding the plant and we treated Zion in a special  
3 way for the same reason and I think we are doing some of  
4 the same things in the case of Limerick. So what the  
5 Commission is in effect saying is that it really doesn't  
6 think anything special needs to be done where there are  
7 high populations because it has not reflected any of  
8 those notions in its safety goals.

9           COMMISSIONER AHEARNE: I guess I would fault  
10 that statement on two grounds. The first is I am not  
11 sure how those plants would fall within these  
12 calculations. For example, it is possible that the high  
13 population plants wouldn't meet some of the calculations  
14 made.

15           COMMISSIONER GILINSKY: Why would they be any  
16 different than any others?

17           COMMISSIONER AHEARNE: Not on the basis of  
18 population density, that is true. It is possible that  
19 for other reasons ---

20           COMMISSIONER GILINSKY: Wasn't that what it  
21 told the Commission, to treat them definitively?

22           COMMISSIONER AHEARNE: If I could finish. I  
23 said it faulted on two grounds. The second ground is  
24 this is the siting population paper and we are  
25 addressing such things as the emergency planning

1 capabilities and the resulting conclusions from that on  
2 the Americk case and also in the Indian Point case and  
3 we may reach conclusions entirely on that basis driven  
4 by the high population. This at the moment doesn't have  
5 that in it.

6 COMMISSIONER GILINSKY: But here the  
7 Commission has thought for a couple of years and it has  
8 come up with a statement that doesn't distinguish plants  
9 according to the population around them. It is  
10 uninterested in that is what it is saying.

11 CHAIRMAN PALLADINO: No, it didn't say that.

12 COMMISSIONER AHEARNE: It didn't say ---

13 COMMISSIONER GILINSKY: Except for the  
14 sentence we managed to get in there about siting in low  
15 population areas.

16 COMMISSIONER AHEARNE: Right, and I am sure it  
17 might be ---

18 COMMISSIONER GILINSKY: You want it in  
19 downtown Manhattan.

20 (Laughter.)

21 COMMISSIONER AHEARNE: Vic, it might be  
22 characterized that if we put this out it means we are  
23 uninterested, but it shouldn't be characterized that way.

24 COMMISSIONER GILINSKY: Well, but it seems ---

25 COMMISSIONER AHEARNE: Please. What it does

1 mean is that for the purposes of this first cut at  
2 trying to put in place something we can get the staff to  
3 try we didn't embed the high population density  
4 explicitly and all we were able to do is put in two  
5 places saying that we do continue to emphasize that just  
6 as we emphasized emergency planning, which is also not  
7 necessarily ---

8 CHAIRMAN PALLADINO: Vic, what would you do  
9 different?

10 COMMISSIONER GILINSKY: Well, I would start by  
11 sitting down with the ACRS.

12 (Laughter.)

13 CHAIRMAN PALLADINO: I am not clear.

14 COMMISSIONER GILINSKY: My inclination is  
15 probably to include the delayed fatalities in No. 2 in  
16 with the ---

17 CHAIRMAN PALLADINO: Then what you are doing  
18 is taking that 50 miles and collapsing it into one mile.

19 COMMISSIONER GILINSKY: And then putting a lid  
20 on the size of accidents we think are tolerable.

21 CHAIRMAN PALLADINO: Well, we are not ready to  
22 put a lid on them.

23 COMMISSIONER GILINSKY: Whether directly or  
24 indirectly in some way.

25 CHAIRMAN PALLADINO: But I thought that ---



1           COMMISSIONER GILINSKY: Well, look what they  
2 are saying. I mean they are saying the rules ---

3           COMMISSIONER AHEARNE: That would be  
4 consistent with what the ACRS is saying, with putting a  
5 lid on it. That is what that No. 3 is saying.

6           CHAIRMAN PALLADINO: But that is not where we  
7 came down.

8           COMMISSIONER AHEARNE: That is not where we  
9 came down.

10          COMMISSIONER GILINSKY: Well, you asked me  
11 where I came down.

12                   (Laughter.)

13          CHAIRMAN PALLADINO: I understand.

14                   Then you would arbitrarily put a lid on  
15 something without regard to the population.

16          COMMISSIONER GILINSKY: Well, that seems to me  
17 what societal risk means. In other words, you want no  
18 individual to be exposed to more than a certain risk,  
19 and I believe we cite what the precise level is, and you  
20 don't want to ---

21          CHAIRMAN PALLADINO: But it is proportionate  
22 to the number of people there.

23          COMMISSIONER GILINSKY: But you don't want a  
24 risk more than a certain size ---

25          CHAIRMAN PALLADINO: Statistically my risk is

1 a certain percentage of the population and if you are  
2 going to do it the other way you are changing my risk  
3 and I think that is the wrong way to go.

4 COMMISSIONER AHEARNE: But, Joe, it is one  
5 possible approach.

6 COMMISSIONER GILINSKY: See, your way does not  
7 distinguish in any way between a plant in downtown  
8 Manhattan and a plant in the middle of the Arizona  
9 desert.

10 CHAIRMAN PALLADINO: Well, and what are you  
11 going to do, make a plant in the middle of the Arizona  
12 desert better?

13 COMMISSIONER GILINSKY: Well, I think you need  
14 both kinds of standards, and I would say that I don't  
15 think I want to risk a plant in downtown Manhattan ---

16 CHAIRMAN PALLADINO: Incidentally, I find  
17 myself arguing against this, but one of the interesting  
18 things that you had in that table was I thought  
19 individual latent cancer probability in the vicinity of  
20 the site.

21 COMMISSIONER AHEARNE: But there is a  
22 difference in the calculations for specific plants which  
23 have to do with ---

24 CHAIRMAN PALLADINO: No, I was talking about  
25 the individual. I thought that table had the individual.

1 MR. STELLO: The table showed that if you met  
2 the early fatalities you were beating the latent  
3 cancers. The table showed there was one case where ---

4 CHAIRMAN PALLADINO: No, I thought there were  
5 two columns.

6 MR. STELLO: But they were not done at 50  
7 miles. They were done at one mile.

8 CHAIRMAN PALLADINO: That is what I say, you  
9 did do No. 2 in your table.

10 MR. STELLO: That is correct.

11 COMMISSIONER ASSELSTINE: But it was only done  
12 at one mile. It was not done out to 50 miles.

13 MR. STELLO: It was not done at 50 miles.

14 CHAIRMAN PALLADINO: No, I know, but he had  
15 already done what No. 2 says he ought to do, and that is  
16 look at the individual risk.

17 COMMISSIONER AHEARNE: There is a difference  
18 between what the staff should do ---

19 CHAIRMAN PALLADINO: That did not get done on  
20 the societal.

21 COMMISSIONER ASSELSTINE: That is right.

22 CHAIRMAN PALLADINO: But it looks like they  
23 are doing No. 2 anyhow.

24 MR. STELLO: We already did, the past tense.  
25 At one time it was one mile.

1           COMMISSIONER GILINSKY: You are making another  
2 point here which is that, as they say, the existing  
3 wording would seem to permit a very high risk of cancer  
4 for those living near the plant to be averaged out with  
5 the low risk to very large numbers of people living 25  
6 to 50 miles from the plant.

7           CHAIRMAN PALLADINO: And what is wrong with  
8 that?

9           COMMISSIONER GILINSKY: What is wrong with  
10 that?

11          CHAIRMAN PALLADINO: You have to average over  
12 something.

13          COMMISSIONER GILINSKY: If you average over a  
14 hundred miles you can subject them to even greater  
15 risks. You know, you just keep increasing the  
16 denominator and you can take the population of the  
17 United States ---

18          CHAIRMAN PALLADINO: No, wait a minute, when  
19 you come to the individual what you are doing is  
20 reducing it from 50 all the way down to one and now you  
21 have no societal risk and you have what the individual  
22 is going to get. So if you are going to take society  
23 you have got to take a big enough fraction of society to  
24 have that representative of society or otherwise it is  
25 down to individual risk. Now if you want to propose 25

1 miles instead of something else, I would have to ---

2           COMMISSIONER GILINSKY: Take the numbers that  
3 were published after the TMI accident. Now given the  
4 doses that people were subjected to were low, but they  
5 were reported in comparison with the population in a 50  
6 mile circle. Now in fact nobody got irradiated in any  
7 way between 25 and 50 miles. So you are just stuffing  
8 stuff into the denominator for in effect beyond probably  
9 ten miles. You are still putting more and more stuff  
10 into the denominator and it is really a phony estimate  
11 of what the impact on the population near the plant is.  
12 Now even if you did it right at acceptance point the  
13 number would come out low. So I don't want to raise  
14 that issue again.

15           CHAIRMAN PALLADINO: Your statement is  
16 correct, it is not phony but it is representative of a  
17 segment of the population.

18           COMMISSIONER GILINSKY: No, it isn't, Joe.

19           CHAIRMAN PALLADINO: Well, do you want to take  
20 one segment or do you ---

21           COMMISSIONER GILINSKY: You can get  
22 arbitrarily known number by taking the whole population  
23 of the earth.

24           CHAIRMAN PALLADINO: Ray Fraley has a comment.

25           MR. FRALEY: I think what the committee was

1 concerned about, and again this is my interpretation, is  
2 that if you average it over some ring the people in  
3 close will be running a very high risk of cancer or  
4 prompt death.

5 CHAIRMAN PALLADINO: Higher risk than the  
6 average.

7 MR. FRALEY: Higher risk than the average. If  
8 you average out far enough that can get higher and I  
9 know that you are not averaging it indefinitely. But  
10 then if you have a ring around every reactor where there  
11 is a much higher frequency of cancer, it will be a  
12 problem like the asbestos industry where if you live or  
13 work in an asbestos plant, although you average that out  
14 over the population it is, but it is unacceptable  
15 because the people who are near or in the asbestos  
16 plant, there is no individual limit on it and there are  
17 many other things of that same nature.

18 If you average it out over the population, the  
19 overall risk is very low, but a few people who are  
20 exposed to the high risk are unacceptable. I think that  
21 is what the committee had in mind.

22 The other item 3, and I think Dr. Gilinsky had  
23 that one correct, that the benefit of the plant, you  
24 know, a thousand megawatt plant, is about the same  
25 whether it is located in a high population zone or a low



1 population zone, but the risk is higher if it is in a  
2 high population zone. Without some cap there is no  
3 incentive to move to where the risk benefit improves.

4 CHAIRMAN PALLADINO: And I would agree if we  
5 had no other motivations and no other siting rules.

6 COMMISSIONER AHEARNE: Ray is just explaining  
7 what the committee meant.

8 MR. FRALEY: That is what I think the issues  
9 were.

10 CHAIRMAN PALLADINO: Well, with regard to his  
11 first point, that is what I was trying to say, the staff  
12 is already looking at the dangers of risk close in.  
13 That is not in our goal per se, but it is one of the  
14 factors that is being considered in the evaluation plan.

15 COMMISSIONER GILINSKY: Well, but if that is  
16 what we want to do, then we should put it in. I think,  
17 and let me put it in my own words, it doesn't excuse  
18 having a very high incidence of sickness or death in the  
19 neighborhood of a plant if a lot of people tens and  
20 hundreds of miles away are unaffected. You know, as I  
21 said, you can keep stuffing more and more people into  
22 the denominator and get the ratio down. You have got to  
23 have some indicator that deals with those problems  
24 around the nuclear plant.

25 CHAIRMAN PALLADINO: You are suggesting that

1 we ought to come down from 50 to ---

2 COMMISSIONER GILINSKY: Well, at a minimum I  
3 guess I would suggest that.

4 CHAIRMAN PALLADINO: And come how far?

5 COMMISSIONER GILINSKY: I don't know. I don't  
6 have the ready number to give you.

7 CHAIRMAN PALLADINO: Jack.

8 COMMISSIONER GILINSKY: I guess what I would  
9 have done is included that one in the individual risk  
10 which I would have weighted in some way over that region  
11 and put some cap on the total size of the accident that  
12 one thinks is tolerable.

13 MR. ZERBE: The risk of the latent death up  
14 close to the individual is directly related to the  
15 prompt fatality risk and we do have that captured and  
16 that is something that is exclusive ---

17 COMMISSIONER GILINSKY: Well, for a given  
18 source term and if the source term goes down that  
19 linkage is going to get chancier.

20 MR. ZERBE: Well, if the source term goes  
21 down, then they both go down.

22 COMMISSIONER GILINSKY: Yes, but you may end  
23 up with no prompt fatality in which case the individual  
24 risk just becomes vacuous. I didn't think this whole  
25 thing was very well thought out.

1           COMMISSIONER AHEARNE: Well, the whole thing  
2 has been argued for years and people have tried to get a  
3 better definition of how to approach the problem and  
4 this is the best that large numbers of people, including  
5 you and I and several others at this table on many  
6 occasions have discussed, and I think it is time to try  
7 to go forward with this first cut effort.

8           COMMISSIONER ASSELSTINE: I must say, though,  
9 I was troubled when we talked about the 50 miles at the  
10 last meeting because I gathered that the only  
11 justification for 50 miles is historically that is what  
12 people have talked in terms of rather than any more  
13 concrete basis for why 50 is reasonable, why 10 is  
14 unreasonable or whatever. At least 10 has the basis for  
15 being ---

16           COMMISSIONER AHEARNE: The 50 was at least  
17 somewhat plausibly argued related to ingestion pathway.  
18 The problem with dropping back to 10 is you start  
19 dropping out some large population areas that are close  
20 by and then it really looks like you don't care about  
21 this population.

22           MR. STELLO: For the sake of trying  
23 generalizations that can get you in trouble I will try  
24 one. I think based on what we know if we meet the early  
25 fatalities within one mile then that will be

1 controlling. If you meet that risk then you will meet  
2 the other risk, that is the tenth of a percent for  
3 delayed deaths.

4 COMMISSIONER GILINSKY: What do you need the  
5 other one for?

6 MR. STELLO: I said those were generalities.  
7 Now when the source term changes the mix will change and  
8 I don't know how that will come out, unknown. If the  
9 source term does change, this could be an area for  
10 further study.

11 The third point, and if Bob listens to me I  
12 suspect he has another table that we hadn't heard about  
13 and he can pull it out and answer the question.

14 (Laughter.)

15 MR. STELLO: But I suspect those calculations  
16 have got to be made anyway because the computer normally  
17 divides things up in the rings and I suspect you could  
18 devise it to divide it up into any rings that you want  
19 and you would get all those particular numbers, those  
20 interim numbers as part of the calculation. So in this  
21 trial use period we would have the whole spectrum of  
22 numbers to aid in that kind of understanding. But my  
23 guess is that they have already done such calculations  
24 and maybe we could ask Bob to give us some indication of  
25 how the sensitivity varies based on what has been done.

1           COMMISSIONER GILINSKY: Let me say for myself  
2 that I hope very much that the source term is going to  
3 come down and be very low because I am very worried  
4 about how things are going here.

5           CHAIRMAN PALLADINO: I think that deserves a  
6 little more clarification. I don't know what it is that  
7 you are worried about the way things are going here. It  
8 implies that we are embarked on doing something that is  
9 worsening the public health and safety and I don't see  
10 it. All we are trying to do is establish some  
11 guidelines as to how to assess whether or not we are  
12 safe enough in terms of some comparison or some ratio  
13 comparing other accident sources. So I don't know what  
14 we are doing that is so bad. I just think we ought to  
15 be careful of statements that we make like that.

16           Let's see we have got two and three before  
17 us. I gather, Vic, you would make some changes.

18           COMMISSIONER GILINSKY: Well, my first  
19 thought, as I said, since I thought these were important  
20 comments on the part of our advisory committee that I  
21 would start by sitting down with them and discussing  
22 it. Now you pressed me and you said what would you do  
23 and I gave you an indication of what I would do.

24           CHAIRMAN PALLADINO: These are not new  
25 issues. They may be new perhaps to Jim.

1           COMMISSIONER GILINSKY: Well, true, but that  
2 doesn't make them unimportant.

3           CHAIRMAN PALLADINO: Jim.

4           COMMISSIONER ASSELSTINE: I guess the only  
5 thing I would suggest is picking up on Vic's comment  
6 that perhaps as part of the evaluation period, since the  
7 computer will be able to provide that kind of  
8 information, that we look at a range of distances from  
9 the sites on the societal risk element up to 50 miles,  
10 that is look at some of the others from say 10 miles all  
11 the way out to 50 and get some experience on how that  
12 would affect the application of the societal risk factor  
13 if that is feasible to do and it seems to me that is a  
14 reasonable thing to do.

15           MR. STELLO: I think he has already done it.

16           CHAIRMAN PALLADINO: Well, why don't we ask  
17 Tom to look at the possibility of putting that in.

18           COMMISSIONER AHEARNE: As part of the  
19 evaluation plan.

20           COMMISSIONER ASSELSTINE: Yes, as part of the  
21 evaluation plan that we would do the calculations for a  
22 range of distances say from 10 out to 50.

23           CHAIRMAN PALLADINO: Let me ask another  
24 question. Since you already seem to be getting  
25 individual latent cancer risks, maybe some exploration



1 of that in the evaluation plan might not be unrelated.

2 MR. STELLO: I already have it.

3 CHAIRMAN PALLADINO: I understand and that is  
4 what I am saying. In recognition of the ACRS comments  
5 and in recognition that this may lead us in a different  
6 way of expressing our safety goal that we ought to do  
7 some exploration of that.

8 COMMISSIONER AHEARNE: But in the evaluation  
9 plan.

10 COMMISSIONER ASSELSTINE: Yes, so that we are  
11 really looking at the range of options.

12 COMMISSIONER GILINSKY: I want to get back to  
13 your comment of a moment ago, Joe. You were talking  
14 about we are not reducing anything. We manage to keep  
15 it in, but you wanted to take out the statement on  
16 siting in low population areas to preserve the option I  
17 presume to site in high population areas.

18 COMMISSIONER AHEARNE: Vic, but we didn't. We  
19 didn't do that.

20 CHAIRMAN PALLADINO: Sometimes I am on  
21 different sides and so are you.

22 COMMISSIONER GILINSKY: If you want to know  
23 why I am concerned, that is one of the reasons I am  
24 concerned.

25 COMMISSIONER AHEARNE: Okay, but as the person

1 who proposed putting that in, I am not concerned. It  
2 was put in.

3 COMMISSIONER GILINSKY: Well, is it going to  
4 stay in?

5 (Laughter.)

6 COMMISSIONER AHEARNE: Well, as long as I  
7 think the Commission has voted, it is in, and when we  
8 vote this policy statement out it will be in.

9 COMMISSIONER GILINSKY: You asked why am I  
10 concerned. You are not reflecting in the goals the  
11 traditional concern of the Commission about siting in  
12 higher population areas and in fact want to take them  
13 out. Now what sort of majority will be here a year from  
14 now I just don't know.

15 CHAIRMAN PALLADINO: If you want to debate  
16 that I can debate it with you a little bit. What my  
17 concern is is that we started with very remote siting  
18 and one of the proposals that was bought by the AEC and  
19 in turn by the NRC was that you can bring them closer in  
20 if you will put some engineered safety features on them,  
21 containment being the first one. Then it was found that  
22 unless you could bring in some emergency core cooling  
23 you couldn't really afford to bring them in much  
24 closer. So when you go to remote siting I think of way  
25 out in the desert and you think of something else.

1           So when I say remote siting, I don't want to  
2 go way back out to the desert. I don't want to put them  
3 right in downtown New York either.

4           COMMISSIONER ROBERTS: I don't either.

5           (Laughter.)

6           CHAIRMAN PALLADINO: So what remote siting  
7 means to you and what remote siting means to me are two  
8 different things.

9           MR. BERNERO: Mr. Chairman, I think it is  
10 worth adding that this calculation was made public some  
11 time ago related to the siting rule consideration of  
12 last year using the ACRS safety goal, which is not a  
13 whole lot different from the Commission's safety goal.  
14 When you look at present siting criteria they are beyond  
15 safety goal. They are stricter than the safety goal  
16 would make you do them, even the ACRS safety goal, and  
17 you make the decision of the remoteness of siting on  
18 other grounds, on site availability on ALARA grounds.

19           CHAIRMAN PALLADINO: Well, let's see, to take  
20 care of points 2 and 3 can we get in the evaluation plan  
21 that there will be exploration with different radii of  
22 ---

23           MR. STELLO: Yes.

24           (Laughter.)

25           CHAIRMAN PALLADINO: Let me finish. --- over

1 which we will average the societal goal and you will  
2 also look at the individual risks due to latent cancer.

3           Could we go on to No. 4. No. 4 I had  
4 difficulty understanding until I got to the last  
5 sentence and then I understood it, but perhaps somebody  
6 that understands it better could say it. Regarding the  
7 proposed cost-benefit guideline, the ACBS has previously  
8 recommended that all accident effects, including loss  
9 and recovery of on-site and off-site resources, be  
10 included, and that at least during the evaluation  
11 period, cost-benefit estimates be made using this basis  
12 as well as that in the \$1,000 per man-rem guidelines.

13           COMMISSIONER AHEARNE: That is very similar to  
14 Jim's point.

15           COMMISSIONER ASSELSTINE: I had limited mine  
16 strictly to off-site economic costs. It does seem to me  
17 that if we are looking at public risk here that one of  
18 the risks we are talking about is not just loss of life,  
19 but also contamination damage to property. I guess my  
20 own feeling had been, based upon one of my  
21 recommendations back in October, was that we look at  
22 those costs as one of the factors in doing a  
23 cost-benefit evaluation under the rule.

24           CHAIRMAN PALLADINO: Is this the one they are  
25 going to do, the occupational exposure?

1           COMMISSIONER ASSELSTINE: No, this is a  
2 different one I think other than the occupational  
3 exposure. I didn't think that we ought to take into  
4 account the loss of on-site property. My own feeling  
5 was that is the utility's responsibility to worry about  
6 their economic investment and not ours, but at least in  
7 terms of the public's loss or potential risk it seemed  
8 to me we ought to consider economic risks as well as the  
9 actual adverse health effects risks.

10           COMMISSIONER GILINSKY: Well, I am not sure  
11 there is really so much difference. In one way or  
12 another the public pays. In some of the reactors in  
13 fact the public is the owner.

14           COMMISSIONER ASSELSTINE: Yes, that is true.

15           COMMISSIONER GILINSKY: I think all of this  
16 falls under the common defense and security and there is  
17 that to consider and not just the health and safety.

18           MR. ZERBE: We changed that to take out these  
19 material risks back in comments that came out in July.  
20 But what came out here in the staff's evaluation period  
21 is they are going to look at that aspect. So that can  
22 still be captured after the two-year period if it is  
23 appropriate to do so. But what is in there now is just  
24 the health and safety of the people and not anything to  
25 do with the material inside or outside of the plant.

1           CHAIRMAN PALLADINO: I think when we get  
2 better experience and are a little more sophisticated we  
3 may very well do that.

4           COMMISSIONER ASSELSTINE: I don't know. I  
5 guess my own view is that at least contamination of  
6 property off site may well be a significant factor in  
7 some cases if we are going to have a safety goal that  
8 addresses public risk.

9           CHAIRMAN PALLADINO: I didnt say that it  
10 wasn't.

11          Bill Fraley has a comment.

12          MR. FRALEY: I just wanted to mention that I  
13 thought that Jack had mentioned that somehow we would  
14 capture this information during the two-year trial  
15 period. I think one of the concerns here that the  
16 committee had was that if you don't do this you won't  
17 capture the information. So maybe you know something  
18 that I don't.

19          MR. ZERBE: No. I thought it came up here  
20 today in an earlier conversation that the staff was  
21 going to evaluate the ---

22          MR. MURLEY: Yes, that was one of the items in  
23 the back of the implementation plan.

24          MR. BERNERO: We are already calculating all  
25 losses and all costs and publishing it that way and we



1 have promised the Commission on a number of occasions  
2 that we will continue to do so because you can get a  
3 different decision depending on which set of averted  
4 losses or which set of costs you use. We calculate all  
5 the data and put it all down and then offer the three or  
6 four options for a decision basis.

7 CHAIRMAN PALLADINO: Well, in recognition then  
8 of this comment should we had another point to our  
9 evaluation package?

10 MR. ZERBE: I think it is already in there.

11 CHAIRMAN PALLADINO: Do we have that?

12 MR. STELLO: What I can read as the very broad  
13 possible interpretation of what the ACRS said is that  
14 once you have met all of the design objectives you keep  
15 examining a \$1,000 per person-rem to find out to what  
16 extent any other improvements might be justified. I  
17 think you recognize that that can be unbounded and I  
18 think you need to recognize that you just make some  
19 reasonable judgments and do several examples and by no  
20 means will you be exhaustive when you do them. With  
21 that understanding, I thought we had committed to do  
22 that.

23 COMMISSIONER ASSELSTINE: That is right.

24 CHAIRMAN PALLADINO: Now they have another  
25 one. Furthermore, no threshold is defined above which

1 remedy of the hazard would be relevant or required,  
2 independent of results obtained from a cost-benefit  
3 estimate with all its attendant uncertainties.

4           This sounds like they want an operational  
5 limit.

6           MR. ZERBE: Right, and there are no  
7 operational limits in the safety goal. There are  
8 quantitative design objectives. Now if one wanted to  
9 use these after the trial period, it could very likely  
10 be that there would be threshold numbers put in as there  
11 were earlier. Some earlier versions of the safety goals  
12 had not only the objectives but some threshold numbers  
13 that had been entered in by the staff if they wanted to  
14 physically use this in regulation.

15           MR. STELLO: Well I read that and maybe Ray  
16 could help with the comment, but my reading of it was  
17 different, that they wanted a number, some number of  
18 people.

19           MR. ZERBE: This is something else.

20           COMMISSIONER AHEARNE: So many billions of  
21 dollars.

22           MR. FRALEY: I think this was the threshold  
23 concept is what they were talking about here, that there  
24 is some number below which you will not go.

25           COMMISSIONER AHEARNE: And there is some

1 number above which you must go.

2 MR. STELLO: People or dollars?

3 CHAIRMAN PALLADINO: Here I think they are  
4 talking dollars.

5 MR. STELLO: Which is risk.

6 MR. FRALEY: There is some sort of a risk  
7 above which you would not go, you know, and sort of  
8 irrespective of how much it costs and you would fix it.  
9 I believe that is what they meant. Well, the staff had  
10 this type of a number in their previous implementation  
11 plan.

12 CHAIRMAN PALLADINO: I think we would have a  
13 great deal of difficulty even trying to get such a  
14 number without some study.

15 MR. ZERBE: That is right. Let me just  
16 mention that in the last go-around the Commission's  
17 comments were they wanted to take out the threshold  
18 numbers and just have ---

19 COMMISSIONER AHEARNE: Well, the ACRS original  
20 approach was to tie the threshold at a level above which  
21 you must do something and below which you need not do  
22 anything.

23 CHAIRMAN PALLADINO: So I would propose that  
24 we make no changes to the document as a result of that.

25 No. 5 there is some suggested wording and I

1 would have no problem accepting the suggested wording  
2 except for one phrase.

3 COMMISSIONER AHEARNE: You mean the revised ---  
4 (Laughter.)

5 CHAIRMAN PALLADINO: They have a statement  
6 here in the first paragraph, the third sentence, that  
7 says "They will continue to receive consideration --  
8 particularly if the present situation regarding the  
9 reprocessing of spent fuel should change."

10 I would suggest that we accept this except we  
11 put a period after "consideration" and cross out the  
12 phrase that goes "particularly" et cetera.

13 COMMISSIONER GILINSKY: Why do you object to  
14 that?

15 CHAIRMAN PALLADINO: First of all, I don't  
16 understand it.

17 COMMISSIONER GILINSKY: Well, they are saying  
18 if there is going to be a lot of reprocessing that it  
19 raises ---

20 CHAIRMAN PALLADINO: That we should continue  
21 that?

22 COMMISSIONER GILINSKY: Well, there is going  
23 to be a lot of flow of material in plants that don't now  
24 exist and it raises problems that haven't been  
25 considered.

1           COMMISSIONER AHEARNE: I would have no problem  
2 with dropping this out because during the next two years  
3 I don't expect to see a lot of reprocessing.

4           (Laughter.)

5           CHAIRMAN PALLADINO: That may be a good  
6 reason.

7           COMMISSIONER AHEARNE: That is not going to  
8 happen in the next two years.

9           COMMISSIONER ASSELSTINE: Yes.

10          CHAIRMAN PALLADINO: Incidentally, the risk  
11 from the nuclear fuel cycle, I think, Jack, you had a  
12 suggestion.

13          MR. ZERBE: Well, certainly the safety goals  
14 address a portion of the fuel cycle now, the portion  
15 that is in the reactor when it is operating. So the  
16 things that are left out of the fuel cycle are the front  
17 end and the back end, the manufacturing of the fuel and  
18 the waste aspects. So we would make that specifically  
19 clear to indicate that we are covering part of the fuel  
20 cycle.

21          COMMISSIONER GILINSKY: Well, they are raising  
22 what they call diversion risks which is people stealing  
23 plutonium and making bombs out of it.

24          MR. ZERBE: Well, I guess the Chairman has  
25 proposed to keep that paragraph in, or at least part of

1 it, do you not?

2 COMMISSIONER AHEARNE: All of it.

3 CHAIRMAN PALLADINO: All of it except the  
4 phrase.

5 COMMISSIONER AHEARNE: And I would agree with  
6 that.

7 CHAIRMAN PALLADINO: And, by golly, we ought  
8 to be aware of it for all aspects of the fuel cycle.

9 Well, let's see, as a result of this review of  
10 ACRS comments we have asked that the evaluation plan be  
11 modified to the extent that we said earlier and that the  
12 safety goal itself should be modified to include the  
13 suggested rewording. I believe there was enough  
14 concurrence without the "particularly" phrase.

15 COMMISSIONER AHEARNE: Right.

16 CHAIRMAN PALLADINO: Now the question is do  
17 you want to vote? We can vote on both together or  
18 separately.

19 COMMISSIONER AHEARNE: Separately is fine.

20 CHAIRMAN PALLADINO: I think we are in good  
21 shape on the policy statement and we have got the words  
22 all fixed up. So is there a motion to accept the safety  
23 goal policy statement?

24 COMMISSIONER AHEARNE: I so move. Yes.

25 CHAIRMAN PALLADINO: Is there further



1 discussion?

2           COMMISSIONER ASSELSTINE: Let me just add one  
3 point before we vote. In general I support the  
4 development of a safety goal and I support this one.

5           There are three particular aspects in which I  
6 think the goal is deficient that we have discussed and I  
7 would just like the opportunity to attach a few views  
8 that outline my own reasons why I think we should not  
9 have a comparative study of the health effects of  
10 nuclear versus other competing energy technologies and  
11 why I believe in the goal we ought to include both the  
12 averted man-remS that would be associated with accident  
13 clean up in the benefit-cost consideration and also why  
14 I would include off-site economic costs.

15           But apart from those three elements that I  
16 want to address separately as elements I think ought to  
17 be in the goal, I am prepared to support it.

18           CHAIRMAN PALLADINO: Vic.

19           COMMISSIONER GILINSKY: I don't support it and  
20 I don't think it is a well thought out program  
21 proposal. At a minimum I would have, as I said,  
22 discussed this with the committee.

23           CHAIRMAN PALLADINO: I think we are protecting  
24 their points of view in part by at least addressing some  
25 of these points in the evaluation.

1           CHAIRMAN PALLADINO: Well, I would vote in  
2 favor of the safety goal policy statement.

3           COMMISSIONER AHEARNE: Aye.

4           COMMISSIONER ROBERTS: Aye.

5           COMMISSIONER AHEARNE: Aye.

6           CHAIRMAN PALLADINO: And you would vote no,  
7 right?.

8           COMMISSIONER GILINSKY: (Nodding  
9 affirmatively.)

10          CHAIRMAN PALLADINO: So how we have a formal  
11 approval of a safety goal.

12          Is there a motion to accept the evaluation  
13 plan subject to the modifications?

14          COMMISSIONER AHEARNE: Yes.

15          COMMISSIONER ASSELSTINE: As it is proposed  
16 for public comment.

17          CHAIRMAN PALLADINO: Yes, and it would go for  
18 public comment. I would propose that a vehicle  
19 something like the Federal Register notice that I wrote  
20 to you subject to the modifications we made earlier in  
21 discussion with Tom Murley be the vehicle, but I am not  
22 asking you to vote on the Federal Register notice. I  
23 think you will want to look at it carefully and do that  
24 by notation vote.

25          COMMISSIONER AHEARNE: Okay.

1 COMMISSIONER ASSELSTINE: Fine.

2 CHAIRMAN PALLADINO: Any other items?

3 (No response.)

4 CHAIRMAN PALLADINO: All right, all those in  
5 favor of approving the proposed evaluation plan?

6 COMMISSIONER AHEARNE: Aye.

7 COMMISSIONER ROBERTS: Aye.

8 COMMISSIONER ASSELSTINE: Aye.

9 CHAIRMAN PALLADINO: Opposed?

10 COMMISSIONER GILINSKY: Well, since I didn't  
11 support the goal, I would want to evaluate a different  
12 goal. Opposed.

13 CHAIRMAN PALLADINO: I would suggest a  
14 modification on the Federal Register notice based on our  
15 discussion today and try to get that out to you by  
16 tomorrow. If I could the concurrence or the  
17 suggestions, then we would be prepared to go out for  
18 comments on the evaluation plan and the safety goal.

19 MR. STELLO: When would the Commission need  
20 the rewrite of the evaluation plan, Mr. Chairman?

21 CHAIRMAN PALLADINO: Reasonably soon.

22 MR. STELLO: I would like to have the  
23 opportunity to review the transcript of today to make  
24 sure we have captured all of these comments.

25 CHAIRMAN PALLADINO: Yes.

1 MR. STELLO: By the end of the week I  
2 certainly think we could make it.

3 CHAIRMAN PALLADINO: All right. Why don't we  
4 shoot for that to try to get the revised evaluation plan  
5 and the final wording on the safety goal policy  
6 statement because there is only one little insert.

7 MR. ZERBE: Right, and there are a few items  
8 that Commissioner Ahearne had that we didn't capture in  
9 this.

10 CHAIRMAN PALLADINO: All right. Well, why  
11 don't we shoot for trying to get those by the close of  
12 business Friday.

13 MR. ZERBE: Yes, fine.

14 COMMISSIONER GILINSKY: I will have some  
15 thoughts that I will want to attach to the statement.

16 CHAIRMAN PALLADINO: All right.  
17 Anything more to come before us?

18 COMMISSIONER AHEARNE: I will add a phrase  
19 that this is a bold new step.

20 (Laughter.)

21 CHAIRMAN PALLADINO: Well thank you very much  
22 and we will stand adjourned.

23 (Whereupon, at 5:20 p.m., the meeting  
24 adjourned.)

25 \* \* \*

NUCLEAR REGULATORY COMMISSION

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

in the matter of: PUBLIC MEETING - Discussion and Possible Vote on Proposed  
Safety Goals and Staff Evaluation Plan

Date of Proceeding: January 10, 1983

Docket Number: \_\_\_\_\_

Place of Proceeding: Washington, D. C.

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Mary C. Simons

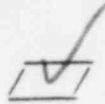
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Attached are copies of a Commission meeting transcript(s) and related meeting document(s). They are being forwarded for entry on the Daily Accession List and placement in the Public Document Room. No other distribution is requested or required. Existing DCS identification numbers are listed on the individual documents wherever known.

Meeting Title: Dis & Pass Vote on Proposed  
Safety Goals & Staff Evaluation Plan

Meeting Date: 1/10/83 Open  Closed

DCS Copies  
(1 of each checked)

Item Description:	Copies Advanced To PDR	*	Original Document	May be Dup*	Duplicate Copy*
1. TRANSCRIPT When checked, DCS should send a copy of this transcript to the LPDR for: _____	1	*	1	—	—
2. <u>Memo Burke to Com</u> <u>dated 1/7/83</u>	1	*	—	1	—
3. <u>Memo Burke to Com</u> <u>dated 1/7/83</u>	1	*	—	1	—
4. <u>Letter Accs to</u> <u>Chairman - dated 1/10/83</u>	1	*	—	1	—
5. <u>Letter ANS to Chairman</u> <u>dated 1/7/83</u> (PDR is advanced one copy of each document, two of each SECY paper.)	1	*	—	1	—

\*Verify if in DCS, and  
Change to "PDR Available."