

NUCLEAR REGULATORY COMMISSION

PUBLIC MEETING

In the Matter of:

BRIEFING ON CRITERIA FOR EMERGENCY

OFFSITE FACILITIES

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING

BRIEFING ON CRITERIA FOR EMERGENCY OFFSITE FACILITIES

- - -

11th Floor,  
Commissioners' Conference Room,  
1717 H Street,  
Washington, D.C.

Thursday, 30 October 1980.

The public meeting of the Commission was convened,  
pursuant to notice, at 3:08 p.m.

BEFORE:

JOHN F. AHEARNE, Chairman

VICTOR GILINSKY, Commissioner

PETER A. BRADFORD, Commissioner

JOHN M. HENDRIE, Commissioner

ALSO PRESENT:

Samuel J. Chilk, Leonard Bickwit, Harold Denton,  
Darel Eisenhut, B. Grimes, Mr. Malsch, Michael T. Jamgochian,  
Mr. Fouchard, and Mr. Blond.

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DISCLAIMER

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P R O C E E D I N G S

(3:08 p.m.)

CHAIRMAN AHEARNE: We meet this afternoon to discuss one item that has hung over from a meeting a few days ago in which we were addressing the Action Plan and follow-on clarifications of the Action Plan. This particular issue has to do with the Emergency Offsite Facilities -- where it is located, what it is, who tells what to whom.

Harold?

MR. DENTON: We have a planned presentation. Brian will present some calculations and describe the functions of the EOF. We have also surveyed all the sites to see the status of the construction of EOFs.

I would like to start the meeting, though, by capsulizing some of my thoughts on EOF, recognizing that this ground has been plowed before.

I guess what is apparent to me is that, depending on which function you value most highly in the EOF, it is best done at differing distances. Some functions are almost independent of distance, and others are dependent on distance.

For accidents where there is not a major release from the facility and there is free access near the site, such as at TMI, there are some very valuable reasons to be close in. You are able to talk to people going into the plant, coming from the plant, the guards, the maintenance mechanics --

1 there's an informal network of information-gathering that you  
2 can do if you're very close.

3 CHAIRMAN AHEARNE: Can you put a range on what  
4 you mean by "close in"?

5 MR. DENTON: Somewhere around the main road, but  
6 it could be several miles out, provided you were in the direct  
7 pathway so that people going in and out of the plant could talk  
8 to you.

9 CHAIRMAN AHEARNE: You're putting "close in" on  
10 transportation access, so there's a time element --

11 MR. DENTON: Yes.

12 CHAIRMAN AHEARNE: -- to what you mean by "close  
13 in"?

14 MR. DENTON: So that you get to see people as  
15 they go in and out, and the informal network would work; and,  
16 if I wanted to, or the man in charge there, could go in the  
17 plant very quickly.

18 CHAIRMAN AHEARNE: Okay, so --

19 MR. DENTON: So where there is free access, and  
20 no release --

21 CHAIRMAN AHEARNE: I don't want to put the time  
22 in your mouth, but what do you define -- obviously you have  
23 a sense of a certain amount of time as a reasonable distance  
24 to be away.

25 MR. DENTON: I guess I don't see the -- with the

1 on-site technical support center, we would have NRC people in  
2 the plant anyway, and I guess I was more focused on access to  
3 the information network of people going into and out of the  
4 plant. So it was a time between there and the plant --

5 CHAIRMAN AHEARNE: It's not the distance from  
6 the plant; it's that they stop by that --

7 MR. DENTON: That's right. In the mainstream of  
8 the traffic flow, so to speak. So that in essence --

9 CHAIRMAN AHEARNE: So that there was a mechanism  
10 to make sure they stopped, then you wouldn't care where it was?

11 COMMISSIONER GILINSKY: They might object to it,  
12 but he wouldn't.

13 (Laughter.)

14 MR. DENTON: But if you talk about Harrisburg  
15 and TMI, they would have had many routes to go directly home,  
16 and you would have missed a lot of information.

17 Now there's another reason for being close in  
18 that I think is important. That is, the emotional support to  
19 our own employees and to sort of standing there near the plant  
20 when an accident is happening that you don't get if you are  
21 far back. I think it was important for people at Harrisburg  
22 to know that NRC was as close as you could get to the plant  
23 during that time period. It's kind of a moral support that  
24 shows the government is there going to Amchutka, sort of  
25 feeling, that you're really there.

1 COMMISSIONER GILINSKY: But, let's see. The last  
2 time you didn't really have the equivalent of the on-site  
3 center, did you?

4 MR. DENTON: No, we didn't.

5 COMMISSIONER GILINSKY: And so that would serve  
6 some of these functions.

7 MR. GRIMES: Well, in a way, because of the TMI-1  
8 control room, so there was a little bit of that.

9 COMMISSIONER GILINSKY: But it seems to me that  
10 the trailer camp really was a combination of what is now the  
11 on-site center and the off-site center.

12 MR. DENTON: It served many of the functions;  
13 that's true.

14 COMMISSIONER GILINSKY: And we are planning to  
15 have people right there.

16 MR. DENTON: Well, I'm not trying to say how  
17 much weight to give it, but I think the fact that for briefings  
18 you come from the plant nearer, rather than to start out in  
19 Harrisburg, has some perception about the relative safety of it.

20 I can see that I had been headquartered in  
21 Harrisburg, one of the first questions would have been: Why  
22 aren't you closer? That sort of attitude.

23 So for that class of accidents where you're not  
24 having to evacuate people, it helps to be closer in. Now  
25 let's assume that the situation either started or changed

1 such that you can't reasonably stay in a normal sort of  
2 building, one with minimum sort of protection there, you'd  
3 have two choices. You could go into a control room, which is  
4 shielded for a bigger accident; or you could move out a  
5 distance far enough so that you would be reasonably sure you  
6 could have continuous occupancy there.

7           Going in the control room would give you the  
8 ability to influence the controls of the plant, and moving  
9 out would enable continuity of planning and emergency response,  
10 but I don't see a lot of advantages to being close in in a  
11 bunkered facility because you're going to lose your infra-  
12 structure. No one is going to bring you environmental  
13 samples; or you're going to lose the drivers.

14           CHAIRMAN AHEARNE: Everybody is not going to  
15 stop in --

16           MR. DENTON: That's right; they're not all  
17 dedicated NRC employees who are going to stay there in the  
18 event that the order to evacuate is beyond the EOF has gone  
19 out. So it would be very difficult to have free access. So  
20 in that case, then, it would be preferable to be out a  
21 distance five or ten miles so that you could provide con-  
22 tinuity of emergency planning and environmental measurements,  
23 and so forth.

24           So I guess where I would come out on reflection  
25 of this -- and forgetting about economics -- that it would



1 be desirable to have a close-in sort of facility -- and it  
2 doesn't have to be a bunkered one -- for the great majority of  
3 accidents where you don't have to evacuate and where the  
4 releases aren't big; that that has a lot of advantages for  
5 this being close in and having a good feel for the informal  
6 network.

7 For the really bad ones, I'd rather be far out,  
8 because then I can provide continuity of operations; you're  
9 far enough out so that the supporting services will come, the  
10 telephone man will come in and repair your phones, and all  
11 that sort of thing.

12 So I can see advantages in both being close in  
13 and being far out, depending on what the size of the accident  
14 is and what the particular function to be performed is. And  
15 we have some slides that maybe clarify these issues a bit  
16 more, and actual show the status of construction.

17 CHAIRMAN AHEARNE: And that is what then led you  
18 to this alternative-two type concept?

19 MR. DENTON: Yes.

20 CHAIRMAN AHEARNE: Because that's really what  
21 you're describing.

22 MR. DENTON: That's right. I guess I've never  
23 been a real fan for being close in, heavily bunkered, because  
24 I would lose access to the very things that I think are  
25 desirable.

1 COMMISSIONER GILINSKY: Well, wait a minute.  
2 Then why are we -- Are these alternatives for us? Or alterna-  
3 tives for the utility?

4 MR. GRIMES: They are intended as alternatives  
5 for the utility. This is the slide from the previous --

6 MR. DENTON: And what I have tried to say today  
7 is, backing off and relooking at the problem since we last  
8 met, that there are differing ways to look at it, and I didn't  
9 want to try to prejudge where we would end up, but just to  
10 start it that way and then let Brian describe it a bit more.

11 CHAIRMAN AHEARNE: Let me ask you a few more  
12 questions, though, if I could, on that philosophy.

13 In your description, it sounds like this is  
14 where it is the focus of licensee and NRC location. Where  
15 would you see county, state, other federal agency represen-  
16 tatives?

17 MR. DENTON: I think, provided that you had free  
18 access -- meaning, you had not ordered evacuation -- the  
19 counties, and the state, and FEMA would send people to wher-  
20 ever the NRC was for information-gathering; but I understand  
21 that most of them would not move their own base of operations;  
22 they would still operate out of their typical government  
23 buildings. But if it were an accident that didn't require  
24 evacuation, they would station a representative in wherever  
25 the EOF was because of access to the information. And then

1 they would relay it back to their own operations center.

2 Now they would not, as I understand it, many of  
3 them would not entertain moving into this EOF, because they  
4 just want to keep their own "sheriff's office" kind of thing.

5 CHAIRMAN AHEARNE: I guess then the second  
6 question is: Given that philosophy, it would almost seem that  
7 the first alternative you have here has all of the bad features  
8 that you described -- it's a single one, close in, heavily  
9 bunkered.

10 MR. DENTON: And it was trying -- That's right.  
11 So I'm not particularly enamored of that alternative.

12 CHAIRMAN AHEARNE: I just wanted to see if I --

13 MR. DENTON: You're right.

14 (Laughter.)

15 COMMISSIONER GILINSKY: What about --

16 MR. DENTON: It was trying to recognize the  
17 fact that there are some close in. I don't see a lot of  
18 advantages of being close in if we're not even able to open  
19 the door.

20 (Laughter.)

21 CHAIRMAN AHEARNE: Yes. I had some friends who  
22 were on an island in the Pacific in that situation, and it  
23 wasn't much -- the instrumentation is poor.

24 MR. DENTON: So I would see the close-in one  
25 as not having necessarily -- I wouldn't object to bunkering

1 a close-in one, and if the situation suddenly started  
2 deteriorating, you would certainly want to pull out. And in  
3 fact, if it was reasonably bad, you would have wanted to have  
4 already staffed further out.

5 COMMISSIONER GILINSKY: What about -- it seemed  
6 to me that originally the on-site center was reactor-  
7 oriented --

8 MR. DENTON: Yes.

9 COMMISSIONER GILINSKY: -- and the off-site  
10 center was public-protection oriented.

11 MR. DENTON: Yes.

12 COMMISSIONER GILINSKY: And the public protection-  
13 oriented center I don't think really needs to be close. It's  
14 the people who are concerned with the reactor -- in other  
15 words, you've talked about talking with mechanics, and so on,  
16 to draw some advantage from being close.

17 MR. DENTON: I think that's right. If the  
18 accident isn't so severe as to require evacuation, you never  
19 put into place -- if you ordered an evacuation, then a  
20 different sort of network takes place. FEMA gets in the  
21 role, the state highway patrol, and emergency preparedness  
22 lines in, and then you'd have to rely on the people in the  
23 tech support and the control room to cope the best they could  
24 with the reactor; but you would have already have made the  
25 decision to evacuate the people out to some distance by that

1 time.

2 MR. GRIMES: But you recall that at TMI it  
3 wasn't just focused on what the consequences were in the  
4 environment; but, rather, what was happening to the plant,  
5 and really the corporate TMI management, and high-level  
6 NRC management focusing on what are the implications of these  
7 plant conditions, was the main activity of that.

8 COMMISSIONER GILINSKY: Well, I was addressing  
9 the business of moving from one center to another. I wonder  
10 whether you ever really have to, if you had a public protec-  
11 tion center that wasn't directly involved with the details of  
12 the reactor; that one could be some distance away, and may not  
13 suffer from that.

14 COMMISSIONER HENDRIE: But the key question  
15 there is: What is the condition of the reactor? And what is  
16 it likely to be in a few hours, and so on.

17 COMMISSIONER GILINSKY: But there it seems to me  
18 they can get that over the phone, even, from the other center.  
19 The other people are worried about all sorts of details, and  
20 what to do --

21 COMMISSIONER HENDRIE: With running --

22 COMMISSIONER GILINSKY: -- and what sort of  
23 maneuvers to permit.

24 COMMISSIONER HENDRIE: With running the plant.

25 COMMISSIONER GILINSKY: With running the plant,

1 and a lot of details that don't have to be available to the  
2 guys who are going to decide whether people ought to stay  
3 indoors or not, or move if necessary.

4 MR. DENTON: I guess where I ended up was that  
5 for accidents that don't require evacuation, there are a lot  
6 of reasons to be fairly close in -- the ones I mentioned. If  
7 it is a severe enough accident to require protective action  
8 taken, then you might as well be out there far enough so you  
9 can provide continuity and have access to all the other  
10 government officials.

11 CHAIRMAN AHEARNE: But given that background  
12 philosophy, now --

13 MR. DENTON: All right. Let me ask Brian to  
14 summarize the questions and calculations.

15 MR. GRIMES: Okay, why don't we start with the  
16 first slide, which is just a refresher on the positions that  
17 we had brought two days ago as a proposal to allow the  
18 licensee to choose either a close-in habitable, or an  
19 alternative two, which is a primary reduced habitability  
20 system -- it wouldn't be completely nonhabitable, but it would  
21 only have protection factors of about five, and then with a  
22 designated secondary facility and some assured means for  
23 continuity.

24 (Slide.)

25 COMMISSIONER GILINSKY: I'm not sure what the

1 right word is, but "nonhabitable" doesn't seem right.

2 MR. GRIMES: "Reduced habitability," I think is  
3 a better --

4 COMMISSIONER GILINSKY: "Reduced protection."

5 COMMISSIONER HENDRIE: Why don't we refer to it  
6 as "lightly protected."

7 COMMISSIONER GILINSKY: Lightly protected.

8 MR. GRIMES: At the end of the discussion, we  
9 may not have to characterize the alternative.

10 (Laughter.)

11 MR. GRIMES: You may just have one selection.

12 CHAIRMAN AHEARNE: Yes, one selection are those  
13 that are all built, and the others of the future.

14 MR. GRIMES: What I would like to do in the next  
15 slides is just to refresh your memory, in some cases, and give  
16 you some more facts on dose rates and characteristics of  
17 accidents, and who does what in what facility, to give you a  
18 better background for the discussion.

19 May I have the next slide?

20 (Slide.)

21 No, that's the wrong slide. Try "Time Factors  
22 Associated with the Release."

23 (Pause.)

24 Could we have a different slide? "Time Factors  
25 Associated with the Release" is what we want.

1 (Slide.)

2 This just presents the same material that is in  
3 NUREG-0396, characterizing when significant releases might  
4 start, and what kind of continuous releases you might have to  
5 cope with. There's a fairly broad range, but it gives the  
6 general range. The travel times are also significant for  
7 very poor meteorological conditions that could be up to hours  
8 to get to off-site points.

9 The next slide is on the "Transfer of Emergency  
10 Response Functions," if we could have that? I think we got  
11 the slides out of order. It's called "Table 1." You have  
12 it in your hard copy.

13 (Slide.)

14 That and the next page in your handout lists  
15 along the left-hand column various functions that go on, and  
16 where these functions might be expected to principally occur.

17 The supervision of reactor operations and  
18 manipulation of controls stays in the control room for all  
19 emergencies.

20 Management of plant operations shifts to the  
21 Technical Support Center for more -- as soon as the event  
22 gets significant.

23 The technical support also shifts to the Technical  
24 Support center.

25 The management of the corporate response,



1 depending on the seriousness of the emergency and the timing  
2 of arrival of people on-site would, over a period of hours,  
3 shift to the Emergency Operations Facility.

4 The radiological effluent assessment again  
5 initially must be done in the control room, and for lower  
6 classes of accidents it would stay there in the Technical  
7 Support Center; but for the more severe accidents, as soon as  
8 the Emergency Operations Facility was staffed, that would be  
9 used.

10 (Slide.)

11 The next slide is a continuation of this table  
12 on communications with state and local organizations. The  
13 slide does not show it, but early in any event -- even the  
14 more serious events -- that initial communication comes from  
15 the control room. Then as the Technical Support Center and  
16 EOF are staffed, the more serious events -- with the more  
17 serious events, the normal communications flow would be from  
18 that off-site or near-site facility.

19 The event monitoring by the NRC would take place  
20 in all of these locations, probably only one individual on the  
21 control room.

22 The management of recovery operations again  
23 would be in the EOF.

24 And I guess to summarize, both the two key  
25 things that I think occur in the -- or the three key things

1 are: the management of the corporate emergency response  
2 resources; the decisions based on plant parameters as to the  
3 overall strategic course of action to take, whether that is  
4 to take an action which might significantly change the status  
5 of the plant, like tripping the pumps, or going on natural  
6 circulation perhaps, that kind of decision a few hours into  
7 the event will have to be made by the senior people on-site  
8 because it will indeed have potential effects on the public.  
9 And I think that is the same person or group of people that  
10 must make the decision on recommending evacuation, whether  
11 it's based on actual effluents going out of the plant, or based  
12 on plant condition. The other function is the actual  
13 assessment of the -- and dose projections which could  
14 conceivably be done from another place, as long as the  
15 decision-makers and the people that make the assessment of the  
16 significance of those effluents are -- I think need to be in  
17 the EOF, but there would be nothing to prevent dose calcula-  
18 tors with the computers someplace else, doing detailed  
19 calculations, those types of functions.

20 COMMISSIONER GILINSKY: I didn't catch what you  
21 said earlier. You said something had to be the same person?

22 MR. GRIMES: Yes. I think the group of people  
23 that deal with hydrogen bubbles and what you should do about  
24 that, or whether you should go on natural circulation, needs  
25 to be, with respect to what the plant should do which may

1 significantly change the plant status, and therefore the  
2 hazard to the public, needs to be the same people that are  
3 assessing the significance of what is actually going out of  
4 the plant, and what is likely to go out of the plant, from  
5 known conditions in the plant, to be recommending to off-site  
6 authorities what the actions are.

7 COMMISSIONER GILINSKY: I guess I'm not convinced  
8 that that's right, simply because people who are concerned  
9 with the operation of the plant are just caught up in that.  
10 It is all very well to say: If something doesn't work out at  
11 NRR, then we'll order an evacuation; but in an hour, another  
12 piece of information comes up, or you say, well, let's try  
13 something else. It seems to me there really ought to be  
14 someone whose primarily responsibility is public protection.

15 MR. GRIMES: Well, it could well indeed be  
16 somebody in --

17 COMMISSIONER GILINSKY: Who is not the same  
18 person who is deeply involved in the kinds of things that  
19 you were just talking about, and whether or not --

20 MR. GRIMES: I think there should be someone  
21 designated with that function, but I don't think that that  
22 individual would really be the person to make the off-site  
23 recommendation. Rather, the senior person from the licensee  
24 who must weigh all his information, both in-plant and --

25 CHAIRMAN AHEARNE: The senior licensee person you

1 see as the one making that recommendation?

2 MR. GRIMES: Making an off-site recommendation  
3 under the normal emergency plan. The NRC would be either --  
4 has an oversight function in the normal mode, and would be  
5 either endorsing that, or supplementing that recommendation.  
6 I would not see the NRC taking the burden off the licensee  
7 for making recommendations as to what the consequences of his  
8 plant are going to be. The plan really must function without  
9 us, and then we are an overlay and an oversight, and when  
10 we see something going astray, then we would interact.

11 COMMISSIONER GILINSKY: Are you talking about in  
12 the very early stages? Or even after we have arrived in  
13 force?

14 MR. GRIMES: Even after we have arrived. I  
15 have no vision of the NRC playing the only off-site recom-  
16 mendation role.

17 COMMISSIONER GILINSKY: Well, I would expect  
18 that people would turn to us.

19 MR. GRIMES: Yes, but I would hope that it would  
20 be more of a confirmation that we have looked at what is  
21 being recommended, and that there will be adequate confidence  
22 built up partly by the planning process that we are confident  
23 that the system would work.

24 COMMISSIONER GILINSKY: I have a feeling that  
25 they would look to us to give the principal recommendation.

1 CHAIRMAN AHEARNE: I think that's right.

2 MR. DENTON: I think that's a useful goal to  
3 plan towards, but it's not likely to be there in practice.

4 COMMISSIONER GILINSKY: Yes, I think ultimately  
5 that sort of confidence may get established.

6 MR. GRIMES: Well, I think that if we don't work  
7 toward establishing that confidence and making the system work  
8 between the licensee and the state, it will never happen.

9 CHAIRMAN AHEARNE: Now I noticed, with some  
10 interest, Brian, in your -- your table title covers my  
11 question. The title of your table is: Transfer of functions  
12 from the control room.

13 MR. GRIMES: Yes. The table was made up for a  
14 slightly different purpose.

15 CHAIRMAN AHEARNE: Yes.

16 MR. GRIMES: It was to describe transfer between  
17 the facilities involving an accident.

18 CHAIRMAN AHEARNE: So recognizing that you can  
19 say: Well, that's not covered by the table, I notice with  
20 some interest that you don't have the location where state,  
21 local, federal operations will be coordinated.

22 MR. GRIMES: No. This was specifically drawn up  
23 as a background to looking at a couple of actual incidents  
24 from the licensees.

25 CHAIRMAN AHEARNE: So I would ask you: Where do

1 you see state, local, federal operations coordinated? Where  
2 would you see that on this, if there was a coordination of  
3 state, local, federal operations?

4 COMMISSIONER GILINSKY: Where would these people  
5 be, also?

6 MR. GRIMES: The second one.

7 COMMISSIONER GILINSKY: Would Bill Fouchard --

8 MR. DENTON: In the original concept, my thought  
9 was that they would work out of the EOF. In other words,  
10 the EOF ought to provide enough space for that to occur.

11 CHAIRMAN: Which?

12 MR. DENTON: The EOF.

13 CHAIRMAN AHEARNE: No, no. Which people?

14 MR. GRIMES: He was talking about the news media.

15 MR. DENTON: The news media should be there in  
16 the coordination role.

17 CHAIRMAN AHEARNE: Okay, so you would -- if you  
18 had a state/local/federal operation coordination --

19 MR. DENTON: Yes.

20 CHAIRMAN AHEARNE: -- and then in Vic's case,  
21 interested in the news media --

22 MR. DENTON: No.

23 (Laughter.)

24 CHAIRMAN AHEARNE: It didn't quite come out  
25 exactly the way I intended.

1 MR. GRIMES: If you look at the top line, you  
2 will see where we think the licensee part of that role happens.  
3 In other words, it happens in the EOF.

4 CHAIRMAN AHEARNE: No, no, I understand. That's  
5 in informing. I'm worried about the coordination, and part  
6 of our coordination is --

7 MR. GRIMES: Well, the coordination issue --

8 CHAIRMAN AHEARNE: -- the coordination with the --

9 MR. GRIMES: -- the licensee coordination issue --

10 CHAIRMAN AHEARNE: And you would say that that  
11 would be the EOF?

12 MR. DENTON: Yes. I see the EOF as having  
13 access to the principal amounts of information, and then  
14 ideally that would be -- Yes. Yes.

15 CHAIRMAN AHEARNE: Fine. I'm not criticizing  
16 that. That's just fine. That's just fine.

17 MR. DENTON: And that would be the coordination --  
18 that would be a good coordination role for the state and local  
19 governments.

20 CHAIRMAN AHEARNE: That's just fine. That's  
21 just fine. I thought that was -- and that tracks with what  
22 I thought.

23 MR. GRIMES: Let me briefly describe what I think  
24 is the same thing, what our current criteria would call for  
25 in 6.5.4. That is, that the state and local people are

1 encouraged to send representatives to this point. And then  
2 the licensee must be prepared also to dispatch a single liaison  
3 person to other points.

4 CHAIRMAN AHEARNE: Yes, but I asked the point:  
5 Where would this coordination occur? And Harold has said he  
6 sees that as the EOF. Vic also reminded me that we had also  
7 made a big point about making sure there was a location where  
8 we could make sure the public was getting their information,  
9 and Harold said that's also the EOF.

10 Wait a minute, Joe. Wait a minute, Joe. I was  
11 trying to be sure I got that clear.

12 MR. GRIMES: Let me distinguish between the  
13 official source of information for the public, which must be  
14 the state and local officials, and dealing with the news media  
15 on a general basis. We try to perform a --

16 COMMISSIONER GILINSKY: The actual facts.

17 (Laughter.)

18 MR. GRIMES: We try to form a communications chain  
19 to the public on recommended protective actions through the  
20 state and local people, who should have the credibility to  
21 make this. This does not come from the licensee to the public;  
22 but, rather, through the state and local organizations through  
23 predesignated broadcast frequencies, et cetera.

24 Then what we have decided, at least at the staff  
25 level, is that we can't really justify making the press happy



1 as a condition of an operating license.

2 (Laughter.)

3 MR. GRIMES: In other words, it's difficult to  
4 say that because the licensee does not have a facility for the  
5 press, that that really affects the health and safety of the  
6 public.

7 However, what we have done is try to encourage  
8 them to have a place for at least a place to brief a pool of  
9 the press at the EOF. And Joe Fouchard and I have sent a  
10 letter --

11 CHAIRMAN AHEARNE: Well, Joe has been hopping up  
12 and down --

13 MR. GRIMES: -- independent of the licensing  
14 process saying that this is our experience, we encourage you  
15 to have a single, large facility someplace, probably ten miles  
16 away.

17 CHAIRMAN AHEARNE: Okay, so we'll ask Joe. I'm  
18 also going to ask Mike, our Standards expert on the Emergency  
19 Planning Rule, how he sees this: Where this coordination  
20 role under our Emergency Planning Rule is supposed to fit.

21 Joe?

22 MR. FOUCHARD: The concept is that at the  
23 emergency offsite facility there would be space for a pool of  
24 the press. I don't know what that number would be. My guess  
25 is in the neighborhood of about ten. Whether that press pool

1 would ever get in there, or whether that facility would ever  
2 be used for that purpose, in my judgment depends entirely on  
3 the circumstance of the accident.

4 If you're moving people out of the ten-mile zone,  
5 you're certainly not being able to move other people in.  
6 However, I think the capability should be there.

7 CHAIRMAN AHEARNE: For a pool?

8 MR. FOUCHARD: For a pool; yes, sir. A small  
9 number of people, and my guess is ten or fifteen.

10 With respect to handling the press generally,  
11 three- four- five hundred people, we have recommended to  
12 licensees --

13 (Laughter.)

14 MR. FOURCHARD: There were 400 of them there, sir.  
15 We have recommended to the licensees that they locate an  
16 off-site press center someplace between 5 and 10 miles,  
17 preferably closer to 10. If you get much further away than  
18 that, the press is not going to use the facility. This  
19 facility should be something that can be readily identified,  
20 where communications can be installed rapidly, where the owner  
21 of the property knows that it will be used for that purpose.

22 I think many licensees are moving in this  
23 direction. They have -- I visited two sites within the last  
24 couple of months. One is Dresden in Illinois, where the  
25 off-site press center would be about four miles away. The

1 first question I asked is: What's your fallback? Their  
2 fallback is their Jolliet office, which is about 15 miles away.

3 At Oconee in South Carolina, the off-site press  
4 center they would like to use is closer to the reactor than  
5 the offsite emergency center.

6 (Laughter.)

7 CHAIRMAN AHEARNE: That's a real test center.

8 MR. FOUCHARD: I asked them what their fallback  
9 was, and they said the Athletic Center at Clemson University,  
10 which is 10 miles away, a perfectly acceptable fallback.  
11 They are thinking about it.

12 CHAIRMAN AHEARNE: Okay, Mike, could you at all  
13 clarify what your understanding is of the rule -- what, if  
14 anything, the rule would end up requiring as far as a  
15 coordination of federal-local government people with respect  
16 to this Emergency Operations Facility?

17 MR. JAMGOCHIAN: Well, as Brian mentioned, as  
18 far as who makes the initial recommendation for taking of  
19 appropriate -- or what's the new word? -- "adequate protective  
20 action," excuse me -- for adequate protective action, it does  
21 come from the licensee first. We would have an oversight  
22 review capability on that, but the licensee is responsible to  
23 assess the course of the accident, and then to make an initial  
24 recommendation for the protective action to the state and  
25 local government.

1 CHAIRMAN AHEARNE: What would the role of this  
2 off-site facility be as far as the rule is concerned?

3 MR. JAMGOCHIAN: Well, the rule basically says  
4 there shall be one.

5 CHAIRMAN AHEARNE: Nothing more?

6 MR. JAMGOCHIAN: No; that's it. As far as who  
7 talks to who, when, and how, the rule does not go into it.

8 CHAIRMAN AHEARNE: It's silent?

9 MR. JAMGOCHIAN: Right.

10 CHAIRMAN AHEARNE: Fine. Thank you.

11 MR. DENTON: Let me ask Brian what -- my under-  
12 standing of how it might work -- I had assumed that state  
13 and local governments would send a representative to the source  
14 of information, but they would maintain, or appear to like to  
15 maintain their own base of operations, which might be other  
16 centers, and they don't appear to be changing.

17 MR. GRIMES: Yes, I think --

18 MR. DENTON: I think many of these other  
19 governments see that they have a base of operations for all  
20 kinds of emergencies --

21 CHAIRMAN AHEARNE: Sure.

22 MR. DENTON: -- and this is just one more kind,  
23 and they don't propose to change their base, but they would  
24 assign people to the information source.

25 MR. GRIMES: The general plans are to provide a

1 liaison person in the EOF. In addition, we are strongly  
2 encouraging that they send dose calculators there so that  
3 there could be a joint number -- a single number, rather than  
4 the state having one number -- later in the accident, rather  
5 than the state having one number and the licensee having  
6 another one.

7 CHAIRMAN AHEARNE: Are there any communications  
8 links established between these other bases?

9 MR. GRIMES: Oh, yes. That is a required  
10 redundant communication link between the --

11 CHAIRMAN AHEARNE: How many people in all do you  
12 see being in one of these EOFs? Or another way of asking it:  
13 How large are you requiring it?

14 MR. GRIMES: On the other of, I believe it's 30  
15 to 40 people, and then --

16 CHAIRMAN AHEARNE: Joe has already said 10 of them  
17 are press.

18 MR. GRIMES: -- with an additional capability to  
19 bring a press pool in on the order of 10 to 20; that 30 to  
20 40, and I think the number is 35, including about 10 NRC  
21 people. That is the general size. Of course anything of the  
22 duration of TMI, then a trailer city would probably build up  
23 around the EOF, as additional industry support.

24 (Slide.)

25 The next slide, I wanted to get into some of the

1 accident consequences. This simply illustrates that the dose  
2 levels from ground deposition after a plume passage, even  
3 from extremely low probability core melt accidents in the  
4 numbers you see of  $10^{-2}$  and  $2 \times 10^{-3}$ ; or given a core melt  
5 accident, what is the chance of that kind of event.

6 For even these low probability core melt acci-  
7 dents, the doses after a few days get it down below the 10 rem  
8 per hour range. So that ingress and egress would not be  
9 impossible and, for most core melt accidents, the doses would  
10 be substantially less than this.

11 The note at the top indicates that for the  
12 1-chance-in-50 core melt, the dose rate at 2.5 miles is always  
13 less than a rem per hour.

14 CHAIRMAN AHEARNE: Excuse me for a dumb question,  
15 but I'm having a little difficulty understanding the way the  
16 term is written. " $2 \times 10^{-2}$  per core melt"? " $2 \times 10^{-2}$ " what  
17 per core melt?

18 MR. GRIMES: The 1-in-500 core melts would give  
19 this result.

20 CHAIRMAN AHEARNE: I see.

21 MR. GRIMES: Or  $2 \times 10^{-3}$  means 1-in-500 core  
22 melts would give this result;  $10^{-2}$  means 1-in-100.

23 CHAIRMAN AHEARNE: Given a core melt --

24 MR. GRIMES: Given a set of 100 core melts, the  
25  $10^{-2}$  core melt is the worst.

1 CHAIRMAN AHEARNE: All right.

2 MR. GRIMES: And it gives, for specific  
3 distances, what the decay with time is. That is without any  
4 shielding. So it just says the doses for almost all core  
5 melts from ground deposition are low -- they can be signifi-  
6 cant in terms of integrating them over many, many hours, but  
7 they're not such as the --

8 COMMISSIONER HENDRIE: "Hours" or "days" on the  
9 bottom?

10 MR. GRIMES: "Days." I'm sorry, the slide  
11 doesn't show that. The handout has it.

12 (Slide.)

13 The next slide, I have attempted to -- you may  
14 have better luck with your handout than reading the slide.  
15 I have attempted to indicate for various likelihood core melt  
16 accidents, which is the left-hand column, the 1-chance-in-10,  
17 the 1-chance-in-100, and extreme worst case core melt accident,  
18 how long one could stay in various facilities at various  
19 doses.

20 So the first case is the 1-chance-in-10. There  
21 are two cases there for 10-rem and 50-rem doses, how long  
22 one can stay at various facilities. The first time column  
23 is the hardened, the bunkered facility, and it indicates that  
24 for the 1-chance-in-10 case you could stay there and not  
25 exceed those assumed doses. Actually, the "60 days" should

1 be "indefinite." It's not just "greater than 60 days," it's  
2 a very long time.

3 CHAIRMAN AHEARNE: Now if I read down your --  
4 There's something I'm missing. In the second and third  
5 columns, you have with a 50-rem dose you can stay three days,  
6 with the 100-rem dose, you can stay 60 days; the 250-rem dose,  
7 you can stay three days.

8 MR. GRIMES: That is for a particular probability  
9 core melt accident, to get up to -- to integrate up to that  
10 dose. So for the worst-case dose, that integration won't  
11 happen.

12 COMMISSIONER HENDRIE: You've got three  
13 separate --

14 MR. GRIMES: Three separate accidents.

15 COMMISSIONER HENDRIE: You've got three separate  
16 accidents, yes. You should draw a line between that.

17 MR. GRIMES: Yes, a couple of horizontal lines  
18 would clarify that.

19 Now whereas we only have -- as you recall, the  
20 habitability was specified as a function of distance for  
21 alternative one, so I only have one case there at any distance.  
22 The habitability factor gives you essentially this result.

23 However, for alternative two, there is just a  
24 straight protection factor of five, so it is going to matter  
25 at what distance you put that facility as to how long it takes



1 to integrate up to a total dose of whatever the assumed dose  
2 in the left-hand column is to the people inside. What it  
3 says is that for the -- I should preface that with saying  
4 that for most core melt accidents, the facility would be  
5 habitable. Probably only about 30 percent do you get a big  
6 enough release that you could get in the category of worrying  
7 about habitability for a protection factor of five.

8 Now for the 10 percent, 1-chance-in-10 for a  
9 10-rem dose, you would indeed exceed that. However, if you  
10 were willing to take 50 rem for emergency workers, you could  
11 stay there for a very long time. What that says is, there's  
12 a break point in between at 25 rem or so, where you might  
13 not get 25 rem at the 5 or 10 miles, but you would integrate  
14 in a few days to 25 rem at one mile; depending on the assumed  
15 dose you choose, you could possibly get an indication of a  
16 different distance. But for these two cases, there is  
17 essentially not a big difference with distance.

18 MR. DENTON: I think there are differing views  
19 on the staff of the, perhaps, value of protection; but  
20 basically, if you take this 10 percent case, or the 1 percent  
21 case, we would probably have required a movement of people  
22 or protective actions for these very big releases. And I  
23 don't see a lot of advantages to requiring that this place  
24 continue to be habitable if it's not going to have free  
25 access to other people bringing in data, or so forth.

1           So if people have moved -- if we are moving  
2 people out beyond an EOF, if the distance is beyond the EOF,  
3 I don't see a lot of reason to stay in the EOF. Because from  
4 the EOF you can't make control room actions, and if people  
5 aren't going to bring you the results of helicopter overflights,  
6 and ground samples, and deposition is going to come in from  
7 telephone, I would just as soon close the door in the EOF,  
8 and pack up, and move out another 10 miles and re-establish a  
9 base.

10           I am not opposed to protecting at some level, but  
11 it seems to me it does not buy you a lot to really protect a  
12 facility if no one else can approach it.

13           CHAIRMAN AHEARNE: What was the value of your  
14 assumed dose there, Brian? Were you using that as the maximum  
15 dose that the people could stay inside?

16           MR. GRIMES: It was just to illustrate capability  
17 under various probabilities. I think for the nominal case,  
18 you would probably not want emergency workers to accumulate  
19 more than say 5 rem total body, which means that if you were  
20 close to the site it might be 25 rem outside that you would  
21 have accumulated, and you would certainly have moved people.

22           CHAIRMAN AHEARNE: But on your assumed dose --

23           MR. GRIMES: It is not to indicate that those  
24 are acceptable doses; only that --

25           CHAIRMAN AHEARNE: But those are inside, aren't

1 they?

2 MR. GRIMES: Yes. Only if you're caught in the  
3 facility during those conditions, that there is some time to  
4 react.

5 MR. DENTON: I guess my point, Brian, is I don't  
6 see any point in requiring anyone to stay inside, if we're  
7 evacuating everybody beyond here; that they don't perform any  
8 useful service. We've already given the order to move, and  
9 we might as well move these people, also, and reestablish  
10 another fallback base somewhere; that they can't affect the  
11 course of the action by staying there.

12 MR. GRIMES: Yes. But I think that for 90 percent  
13 of the core melt accidents, you would be above this. This was  
14 to illustrate the protection you would get even against  
15 extreme cases.

16 (Slide.)

17 The rest of the handout are pretty much backup  
18 information. Perhaps we'll put on the slide slide, which is  
19 "Benefit of Shielded Emergency Operations Facility," which  
20 is another way of saying the same thing.

21 Unfortunately, this slide isn't quite correct.  
22 There are two lines of "days, months, years" and "hours, days,  
23 months." The first line should have "higher probability" and  
24 then the second line is "very low probability" for the same  
25 alternative.

1 For various accumulated doses, that gives some  
2 relative times that one could say. The footnotes indicate  
3 that for about 30 percent of core melt accidents, the EPA  
4 Protective Action Guides could be exceeded even outside the  
5 planning zone; so that, within the planning zone, you're  
6 certainly moving people for 30 percent of the accidents.

7 But on the other hand, the life threatening  
8 doses to the public are occurring in less than one in 100  
9 chance at the 10-mile distance.

10 So that gives a feel for what the consequences  
11 to the public are that we're talking about for these low -  
12 likelihood accidents.

13 COMMISSIONER GILINSKY: Can I ask you, do the  
14 reactor-oriented functions of the center -- or of such a  
15 facility need in fact to be carried out off-site, as opposed  
16 to the technical support center?

17 MR. DENTON: They get less and less important  
18 if you've already required an evacuation. In other words,  
19 if you think the accident is under control, and it is not a  
20 general emergency requiring protective measures, then it is  
21 good backup location to support the reactor operations.

22 COMMISSIONER GILINSKY: Because it's hard to get  
23 in and out of the facility, or what?

24 MR. DENTON: Yes, it could be. And the limited  
25 capability of people that can actually be in the control room

1 in the tech. support center. So you'd have a lot of backup  
2 capability.

3 But now if it's one of these worst-case accidents  
4 where you've already lost the integrity of the containment  
5 and you're releasing large amounts of fission products, then  
6 I think the role of the EOF is mainly to protect the people  
7 out there, and don't worry about not watching -- you may have  
8 lost control of the reactor.

9 So that's why I think the function that's done in  
10 the EOF varies with the severity of the accident. And for  
11 severe accidents, it makes a lot of sense to have the EOF far  
12 enough out that you don't have to be concerned with it. For  
13 accidents where you're not going to evacuate people, then  
14 there are some advantages in terms of reactor control to be  
15 fairly close in.

16 COMMISSIONER GILINSKY: Are you talking about  
17 having two EOFs?

18 MR. DENTON: Well, that would be -- economics  
19 aside -- what I would suggest.

20 COMMISSIONER GILINSKY: Well, actually it might  
21 be cheaper than hardening one.

22 MR. GRIMES: I don't believe so.

23 MR. HANRAHAN: Isn't it more important to be  
24 concerned about what the function is going to be done, what  
25 you want done there, what people are there? Rather than

1 exactly where it is, and whether there's one or two? As long  
2 as the facility can carry out the function that you want done  
3 during the time you want it done?

4 COMMISSIONER GILINSKY: Yes. I'm concerned that  
5 we are unclear about that.

6 MR. GRIMES: I think I would like to focus your  
7 attention on the accidents -- pre-core melt accidents, and even  
8 most of the core melt accidents, which will probably, once  
9 you get into a core melt, you'd be probably taking precau-  
10 tionary measures based on plant parameters, rather than  
11 actual releases. And for non-core melt accidents, as in TMI,  
12 I would expect also probably early in the event precautionary  
13 measures, perhaps five hours into the event, that under our  
14 current Guidelines one would have had perhaps a two-mile  
15 precautionary evacuation while things were still uncertain.

16 And it is in that kind of a situation, which is  
17 judging the plant conditions and making decisions on both how  
18 to prevent the situation from getting worse -- which often  
19 require commend decisions on the part of senior management --  
20 and, at the same time, to me, the same individual taking the  
21 advice he has from the people designated to make recommendations  
22 on protective actions, and making final decisions on what the  
23 licensee recommends to off-site authorities on that.

24 MR. DENTON: Well, I think there are many func-  
25 tions, and it varies how important they are. Maybe in the

1 interests of time, we should pass out the muddled state of  
2 construction of these facilities --

3 CHAIRMAN AHEARNE: Yes; I agree.

4 MR. DENTON: -- and then we will have completed  
5 our presentation.

6 CHAIRMAN AHEARNE: Yes.

7 MR. DENTON: Darrell, do you want to discuss the  
8 results of the telephone survey you conducted this week?

9 MR. EISENHUT: Yes.

10 Because of the -- actually as a result of some of  
11 the questions raised in the Tuesday meeting, yesterday I asked  
12 all of the Project Managers to conduct a telephone survey.  
13 Now there is always the caution, every time we do a telephone  
14 survey, that some of the data is obviously wrong. However --

15 CHAIRMAN AHEARNE: You don't think that a backup  
16 facility should be closer than that?

17 MR. EISENHUT: No, I don't. There's obviously  
18 going to be even some typos and things like that in here, too.

19 We asked all of the Project Managers to call their  
20 sites. We did that for the operating facilities, and we did  
21 that also for the facilities -- that is, the OLS, themselves.  
22 I think we've got most of the sites on this listing. You  
23 will find some of the sites got taken care of twice.

24 COMMISSIONER BRADFORD: Darrell, when they call,  
25 do they call the resident inspector? Or do they call the

1 licensee?

2 MR. EISENHUT: No, they do not. They call the  
3 principal contact that the Project Manager has at the site,  
4 and it varies in the level of who they are talking to, but it  
5 was really in this case talking to the chief licensing contact.  
6 There's not necessarily a resident inspector who is available  
7 at all sites. So I said: Call the licensing -- the  
8 responsible person that we're dealing with -- the licensing  
9 manager in the utility that we've been dealing with on these  
10 matters, because they should be knowledgeable in a very short  
11 order, and we had to conduct this in really something like a  
12 half-a-day.

13 I laid out the headings of doing it by site,  
14 the location of the EOF, simply the radial distance, and I  
15 recognized that some plants had already taken -- developed a --  
16 had a permanent EOF location, and some had already taken the  
17 option of a permanent backup. So that was the option there.

18 I asked whether the building design was complete --  
19 very subjective, of course, but I wanted a simple "yes" or  
20 "no" answer.

21 If there was a shielding factor, a protection  
22 factor, I asked: Can you give us what -- tell us whatever  
23 you have. I'll settle for a thickness of concrete; I'll  
24 settle for a protection factor, if you've calculated one, for  
25 .7 MEV number. That one column is particularly sketchy



1 because our September 5th draft letter that went out did not  
2 have in it, under the EOF discussion, didn't have the  
3 discussion about protection factors. So this is really one of  
4 the first times they'd heard about it.

5 More importantly, though, I asked what the  
6 building percent complete is. My way of getting a handle on  
7 what it really looks like, also I asked sort of a redundant  
8 question. That is: When is it going to be complete? Sort of  
9 because you can draw some judgments based on when it will be  
10 complete.

11 Looking down this, you can reach a lot of  
12 different conclusions. Of the --

13 CHAIRMAN AHEARNE: Cook is preparing for an  
14 attack by an armed mob.

15 (Laughter.)

16 MR. EISENHUT: Let me -- you brought it up, so  
17 there's an interesting observation that Brian and I have  
18 heard in discussions with a number of these people. Some of  
19 the utilities said that it's just as easy to pour two feet of  
20 concrete as it is six inches of concrete, and in fact once you  
21 put up the form and start a continuous pour of concrete, you  
22 can just about do it if you're starting from scratch.

23 So we do have facilities. You notice Beaver  
24 Valley said that the shielding protection factor of 50. I  
25 think, for example, that's one where Brian and I have met with

1 the utility, and indeed they have, based on our regional  
2 meetings, went back and redesigned their facility, and came  
3 back in with a new design which I believe had two feet of  
4 concrete?

5 MR. GRIMES: About 20 inches of concrete in one  
6 portion of the --

7 MR. EISENHUT: Covering the actual piece that  
8 needs to be habitable.

9 This varies considerably for the operating reactor  
10 sites. You have to look in the back, and sprinkle through  
11 and pick them out. About half of them came up with a zero-  
12 percent-complete, and about 25 said they had pretty well along,  
13 in fact most of "pretty well alongs" are 100 percent. But  
14 the sites were split about 50-50 for the operating reactor  
15 sites.

16 The only reason I differentiate "operating reactor  
17 sites" is the OL sites are a little farther down the line.  
18 If you look at it in terms of -- cross-cut another way in  
19 terms of distance, you find that I believe the number was  
20 about 40 sites have EOFs which are planned to be within one  
21 mile.

22 Now of those, I think about 10 within one mile  
23 have been said that they are complete, something like 10 to  
24 15 of them close in.

25 Now I have to add one more comment to that. That

1 is, that part of the approach under this muddled state of  
2 affairs over the last few months. Part of the way someone may  
3 have 100 percent on this chart is that if they bought the  
4 option, the first one I see showing up would be Cooper, that  
5 would buy an option of a very-close-in one, and then a little  
6 farther out. Which would mean that the close-in one, the  
7 reason they went the principal one with a backup is because  
8 the one in close was not going to be "hardened" or have a  
9 high protection factor, and therefore they may have been able  
10 to use an existing facility. Therefore, by definition, the  
11 building itself was built from day one.

12 So it's a little bit phony in some of the  
13 numbers.

14 CHAIRMAN AHEARNE: So you're suggesting, for  
15 example, at Cooper the 100 percent may refer to that .25 mile  
16 limit?

17 MR. EISENHUT: The .25 mile limit it may refer  
18 to, and it may refer to the fact that it is using an existing  
19 building to start with.

20 CHAIRMAN AHEARNE: Yes.

21 MR. EISENHUT: So I wanted to point out that  
22 there's a little phoniness in the number. The one thing I do  
23 take some comfort in being reasonably accurate -- and I've  
24 talked to a number of the people who actually did the survey,  
25 at least all of the PMS, I talked to several of the PMS -- they

1 said, licensees really did say: Yes, we might have been  
2 starting our things, but right now we are really doing nothing.  
3 We've stopped in our tracks. We really haven't made any  
4 meaningful progress in the building, and we've stopped pending  
5 the outcome of where we really want to go.

6 So that was the first time I certainly had an  
7 appreciation that there were about half of the operating  
8 reactor sites that had nothing done, in effect, at this point  
9 in time.

10 Now you could question the number, for example,  
11 but still it's a large fraction. And I think that is the only  
12 real inference I get from this.

13 MR. DENTON: I think you should almost look upon  
14 this as writing on a clean slate. In other words, we're  
15 moving toward beefing up the requirements and technical  
16 competence at the site, anyway, and I'm sure these buildings  
17 can be put to good use that they have there.

18 COMMISSIONER GILINSKY: Some of them presumably  
19 are existing, but buildings that existed before --

20 MR. DENTON: Yes. Some of them that are  
21 existing were for other purposes. It's only a few who have  
22 actually undertaken to build a special bunkered system that  
23 we may have incurred extra cost along the way for.

24 CHAIRMAN AHEARNE: Let me just take the first  
25 one that you have.

1 MR. EISENHUT: That's a good -- That's one we  
2 do have a few facts on.

3 CHAIRMAN AHEARNE: You've got "5 inches," so it  
4 sounds like --

5 MR. GRIMES: That's in the nominal protection  
6 factor, 4 to 5, yes.

7 CHAIRMAN AHEARNE: And it's "85% complete." So  
8 it sounds like they are building a building.

9 MR. EISENHUT: Yes, they are.

10 MR. GRIMES: On that one, I talked to an  
11 individual on the phone from Arkansas, and I believe he said  
12 it's a \$7 million building. I think it is to serve other  
13 functions besides just the EOF, but he said they were  
14 essentially stopped right now; if they went to a completely  
15 hardened facility now, it would cost them \$2 million more.  
16 But, on the other hand, if they wait until the building is  
17 complete in early spring to then harden the building, it  
18 would cost them \$4 million more. So they are very concerned  
19 to get a --

20 CHAIRMAN AHEARNE: They would rather it would  
21 cost them zero million dollars.

22 MR. GRIMES: Yes, they would rather it cost them  
23 zero million dollars.

24 MR. EISENHUT: This building in this case is in  
25 fact a building that is sort of a multi-use. They have sort of

1 a mini-close-in tech support center right next to the control  
2 room, but since it was not a very elaborate building this  
3 building is the one, Brian, that's right at the special security  
4 boundary, which goes right through the building. The part  
5 on the inside is going to be a super tech support center.  
6 The part on the outside of the security boundary is going to  
7 be the EOF.

8 (Laughter.)

9 MR. EISENHUT: It has --

10 CHAIRMAN AHEARNE: That's to keep Joe Fouchard's  
11 friends in.

12 (Laughter.)

13 MR. EISENHUT: No, there will be in fact in  
14 this building, as I recall, this is the one with the large  
15 auditorium. It's a several-thousand-square-foot building.  
16 It's got its own emergency power sources, it's own diesels --  
17 it's a very elaborate complex.

18 Arkansas Power and Light met with Brian and I  
19 months ago and laid out this program. They have been trying  
20 very diligently --

21 CHAIRMAN AHEARNE: After they met with you, you  
22 said?

23 MR. EISENHUT: We said it seemed reasonable to  
24 go ahead and build the facility, several months ago, and this  
25 is an example actually of a utility who has been trying to

1 make the January 1, '81, date. You notice they are still  
2 saying 4/81 for the actual facility.

3 CHAIRMAN AHEARNE: Yes.

4 MR. DENTON: And so I think we accept the  
5 responsibility for providing various bits of guidance to these  
6 companies along the way. I think it has been an evolving  
7 conception as to what the function will be.

8 CHAIRMAN AHEARNE: Now if I look at the chart  
9 that you people started out with that you showed on Tuesday,  
10 they shouldn't meet your chart. Right, Brian?

11 MR. GRIMES: They would meet alternative two, if  
12 they had another designated facility someplace else, not  
13 necessarily --

14 CHAIRMAN AHEARNE: Whereas -- yes.

15 MR. DENTON: And the key is --

16 CHAIRMAN AHEARNE: But it wouldn't meet number one.

17 MR. GRIMES: No, it would not meet number one.

18 MR. EISENHUT: And all they would have to do to  
19 meet alternative two is to have this backup EOF, which we  
20 pointed out we're not looking for a separate new building.  
21 It's a dedicated -- it's not a dedicated building, in that  
22 sense. It could be an area where they can move portable  
23 equipment in, portable data equipment. The thing you would  
24 have to have ahead of time is you would have to have the  
25 communications lines put in. And you would have to have a

1 procedure for assuring that you can transfer from one to the  
2 other.

3 It was really written that way, in fact,  
4 partially to reflect the fact that there are plants like  
5 Arkansas.

6 MR. DENTON: I guess one other comment, a lot of  
7 this tends to be site-specific, where you have very unique  
8 geographic locations, and rivers, and oceans, and the ability  
9 for any -- it's hard for me to define any given distance as  
10 being a magic milestone. The sites do vary a lot, and that  
11 has to be considered in some of these distances.

12 MR. EISENHUT: Yes, I guess I should point out  
13 that the plants where you find that they're well along are  
14 those plants that even -- we had the discussions, and they  
15 started building even before the Commission meeting where we  
16 discussed the 5 to 7 or 5 to 10 miles. So they've been on  
17 this program for quite some time.

18 COMMISSIONER GILINSKY: I'm bothered about this  
19 idea of shifting from one center to another just at the time  
20 when you're telling people to move out of their homes, and  
21 tuning into this station, while we're running down the road  
22 to our new center.

23 (Laughter.)

24 MR. DENTON: But I think if that were the case,  
25 if you knew that when you were manning the EOF, you would go



1 to the further-out one. It seems to me, if you had two  
2 centers -- if I were a utility, I would build a near-in center  
3 because I'd figure there would be a lot of occasion on which  
4 you'd use it, even if the NRC and the state and local didn't  
5 come in on the scene. But from the NRC's perspective, that  
6 if you knew anything about the accident, that would influence  
7 which center you might go to. If you really think it is going  
8 to be a contained accident with no emergency action required,  
9 you might as well get as close as you can. It makes a lot of  
10 sense for support.

11 If you think it's going to be a serious one, then  
12 I'd go to the further-out one and have continuity there.

13 COMMISSIONER GILINSKY: Some of it --

14 MR. GRIMES: I agree that there -- but there are  
15 ways to assure continuity. I have had some discussions with  
16 Commonwealth Edison, and their proposal to assure continuity  
17 would be that they are such a large company that they would  
18 have their corporate office staffed, also. They would argue  
19 that for the time period of transition, they would have  
20 enough additional staff in the corporate office who would  
21 also be getting this information that they could cover the  
22 transition period with recommendations to the state and local  
23 government. Or you could, if there was any uncertainty at all  
24 in this situation, you could certainly staff both centers at  
25 that time -- the alternate as well as the primary at that

JWB

1 time.

2 COMMISSIONER GILINSKY: Well, I was tending in  
3 the direction of -- from listening to this conversation -- of  
4 having the public protection center always some distance away,  
5 and the more reactor-oriented, hardware-oriented center close  
6 in. These are the people who benefit from being close to the  
7 machine.

8 MR. DENTON: It may be we're trying to put too  
9 many functions into this one building for optimum use, but I  
10 think --

11 CHAIRMAN AHEARNE: How many of the utilities are  
12 using their visitor center as the EOF?

13 MR. GRIMES: Well, a lot have designated a  
14 visitor center as the temporary one to meet the 1/1/81 date,  
15 so there are a lot of visitor centers currently being used;  
16 but those visitors centers for the most part would not meet  
17 the protection factor of 5. For example, a lot of times  
18 they're big glass structures, and they would not be suitable.

19 There are a number building new simulator  
20 facilities that would use that building, perhaps the lower floor  
21 of that building.

22 MR. DENTON: Another useful example to think  
23 about is Sequoyah, perhaps. That certainly for accidents  
24 where you can occupy the simulator training center, that's  
25 an excellent physical facility with a lot of space, and

1 auditoriums, and simulators and computers, and health physics'  
2 labs. So if you had free access there, that's a very good  
3 spot.

4 Now if you had to fall back, they have in  
5 downtown Chatanooga the full panapoly of the TVA Emergency  
6 Centers for all kinds of emergencies. So --

7 MR. GRIMES: And even with the primary center  
8 functioning, they may well do some of the dose calculation  
9 in their corporate center; but the person that assesses the  
10 significance of the dose calculations, and assesses the  
11 reliability of the information coming out of the effluent  
12 monitors and things I think is better off in the EOF.

13 CHAIRMAN AHEARNE: So where do you come out,  
14 Harold? What do you think is the best solution?

15 MR. DENTON: I guess I've -- I think for the  
16 great bulk of the accidents, we better serve the public health  
17 by being close in and trying to influence the reactor state --  
18 I mean, if you could ascertain that it was not likely to turn  
19 into one requiring emergency evacuation.

20 Now if it's an accident where you've already  
21 lost containment integrity or are proceeding down that pathway,  
22 I would like this fallback position to be out along the  
23 British line, 5, 7, 10 miles.

24 Now the thing I keep -- So I guess my least  
25 favorite is the bunkered alternative just for occupancy.

1 Wherever I think it is, I think you need reasonable access so  
2 other members of the public, and the state and local govern-  
3 ments can come in and bring you data, and communicate. So I  
4 am more interested in access among the parties than I am  
5 necessarily a hardened facility, and I wouldn't want to be  
6 isolated somewhere --

7 CHAIRMAN AHEARNE: Is that also, then, the  
8 reason that you -- one way of meeting part of your requirements,  
9 it would seem that the technical support center is the outside  
10 place where a lot of that interaction and the actual control  
11 of the reactor takes place.

12 MR. DENTON: Yes.

13 CHAIRMAN AHEARNE: Of course that is not really  
14 "accessible to the public."

15 COMMISSIONER GILINSKY: Well, you don't mean the  
16 "public"; you mean the people bringing data.

17 CHAIRMAN AHEARNE: No, I don't mean -- I thought  
18 he --

19 COMMISSIONER GILNISKY: I don't think he means  
20 the "public," either.

21 CHAIRMAN AHEARNE: Because it would seem that the  
22 technical support center is -- that a large part of the  
23 rationale was to provide that location for much of that.

24 MR. DENTON: That's right. That's true.

25 CHAIRMAN AHEARNE: So the other facility is much

1 of the second case anyway.

2 MR. DENTON: I think when I first started  
3 advocating it, it was an attempt to get away from "a" trailer  
4 and have a preplanned place, and now we really do have two  
5 places, with the tech support center being much more totally  
6 oriented toward the reactor control, and the EOF being much  
7 more oriented toward off-site monitoring and coordination.

8 CHAIRMAN AHEARNE: Yes. So does that argue  
9 more for moving the EOF farther out?

10 MR. DENTON: Yes. I think what that would say,  
11 then, is: Given the more minor accidents, that our regional  
12 directors, when assigned to the site, unless they thought it  
13 was a major accident, would probably proceed to the tech  
14 support center; and that the EOF would be more in a standby  
15 mode, unless conditions deteriorated.

16 COMMISSIONER HENDRIE: What that does, then, is  
17 to pull your state and local agency liaison people, the  
18 press pool, and all of the other, whatever other paraphernalia  
19 were headed for the EOF, to pull that into the Tech Support  
20 Center, which is just not set up for it. The Tech Support  
21 Center, you member, is to relieve the crowding in the control  
22 room; it's not contemplated that the vice president for  
23 engineering of the utility will go to the Tech Support Center.  
24 He's out. You know, the Tech Support Center are the immediate  
25 back -- the plant super, and the immediate backup to the

1 control room crew, and our aim was to keep the control room  
2 occupied only by the on-shift control room crew with maybe one  
3 NRC guy sitting there.

4 The Tech Support Center, then, is all those other  
5 plant people. Now if you're going to bring in, you know,  
6 vice presidents for this and that, and the guy from the  
7 sheriff's office, and the people from the state office of  
8 radiological health, and the state police --

9 COMMISSIONER GILINSKY: Why would they be there  
10 at all?

11 COMMISSIONER HENDRIE: What?

12 COMMISSIONER GILINSKY: Why wouldn't they be back  
13 at the other center?

14 COMMISSIONER HENDRIE: What I'm saying is, if  
15 you move the EOF well out, then for the great majority of  
16 circumstances in which you will need an EOF, it will be too  
17 far away for people to find it very handy.

18 CHAIRMAN AHEARNE: Where do you see that break  
19 point coming?

20 COMMISSIONER HENDRIE: In terms of what? Acci-  
21 dents? Or distance?

22 CHAIRMAN AHEARNE: No, no. Distance.

23 COMMISSIONER HENDRIE: I think if it's much more  
24 than, oh, obviously with some give and take on peculiar  
25 circumstances at a site, but several miles.

1 CHAIRMAN AHEARNE: How about five?

2 COMMISSIONER HENDRIE: That's a long way out.

3 I just would not put a requirement out that requires the EOF  
4 be outside five miles, because I think that you're going to  
5 want to be closer than that, and it's appropriate to be closer  
6 than that, and it will work much better if you're closer than  
7 that in, you know, 99 percent of all the circumstances in which  
8 you will need an EOF.

9 And I think the proposition of covering that  
10 one percent by having in mind someplace that is further out  
11 that you can retreat to if you have to, is good enough.

12 CHAIRMAN AHEARNE: I gather what the recommenda-  
13 tion here is that there at least be some arrangements made for  
14 it.

15 COMMISSIONER HENDRIE: Well, Rod said he'd like  
16 to see the communications lines laid in so that you didn't have  
17 to run telephone lines in order to activate it; so you'd like  
18 to get the communications set up ahead of time, just the normal  
19 status that you set up.

20 I have some questions, because we've talked at  
21 various times about having the data link printout in the EOF,  
22 and if the data link prints out in the EOF, does it also have  
23 to print out at the secondary site? And there are questions  
24 of that kind.

25 MR. GRIMES: Generally, if there's a telephone

1 line there, you can take a portable terminal in and get a  
2 readout without any problem; so you could relocate and get  
3 access to your data base.

4 COMMISSIONER HENDRIE: So the preparation that you  
5 need on the backup EOF is primarily to have several telephone  
6 lines already in place?

7 MR. EISENHUT: And having the portable equipment  
8 to move in and hook up. That's all we would contemplate.

9 COMMISSIONER HENDRIE: Portable equipment like?

10 MR. EISENHUT: Any kind of recorders --

11 MR. GRIMES: Like a CRT or something.

12 MR. EISENHUT: Whatever you want to get off --  
13 you're getting over the data lines, data-link type information.  
14 By having an area where you don't have to have it full-time  
15 there, it gives them a lot more flexibility in what kind of  
16 location they could use for the backup.

17 MR. GRIMES: And a few-thousand-dollar terminal  
18 is probably around someplace there in their corporate structure.

19 CHAIRMAN AHEARNE: Vic?

20 COMMISSIONER GILINSKY: I don't know. I'm  
21 bothered by the internal consistency of this proposal. It  
22 seems to me that for most of these cases we're not going to need  
23 all this support, and NRC support, either.

24 We were originally, it seems to me, trying to  
25 make sure that public protection decisions got made in a



1 reasonable way, and people had the right facilities, and  
2 communications, access to data, and this sort of thing, and the  
3 right people around to make them. And to set up a system  
4 which fails in the very -- well, not necessarily "fails," but  
5 at least is strained in the very circumstances when it might  
6 be called upon to make those decisions, doesn't make a lot of  
7 sense to me.

8 Now I agree that in many circumstances, if not  
9 all circumstances, the guys who are dealing with the reactor  
10 will benefit from being close in; but it seems to me also that  
11 those who are involved with decisions on telling people to  
12 stay indoors, or more away, or whatever, ought not themselves  
13 to be having to shift around in the very time when the  
14 decision needs to be made.

15 COMMISSIONER HENDRIE: Well, but the changes are  
16 that they won't have to. Even in circumstances where you will  
17 ask for protective action on behalf of the off-site public,  
18 the chance that you would have to move your EOF is still small.

19 COMMISSIONER GILINSKY: You're saying because it  
20 would be precautionary? Is that the idea?

21 COMMISSIONER HENDRIE: It would be precautionary.  
22 You've got 360 degrees on the wind rose, and protective action  
23 off-site of the public is not equivalent to very large releases  
24 of the kind that we've talked about. Next month we're going  
25 to have a meeting in which we're going to talk to some people

1 who think that there are good reasons to believe that even in  
2 severe core damage circumstances that what comes out may be  
3 rather less than what we've been calculating. And with regard  
4 to things like ground dose -- particularly things like ground  
5 deposition, and so on -- that is, the indication is that the  
6 sort of fission product loads are apt to be lower.

7 That doesn't mean that there will not be  
8 occasions when you will want to suggest some actions on behalf  
9 of the public; but what it does suggest to me is that the times  
10 that you will actually get chased out of a fairly close-in EOF  
11 are going to be a small fraction of the occasions on which  
12 you would be asking for some protective action, and then  
13 obviously a much smaller fraction of all circumstances where  
14 you might go into an emergency configuration.

15 COMMISSIONER GILINSKY: Well, if these new ideas  
16 prove out, we'll just have to reconsider it. But it does seem  
17 to me that we can use that as a basis for deciding now -- not  
18 that we have to decide right this minute.

19 CHAIRMAN AHEARNE: It would be helpful, though.  
20 We have a lot of people waiting there, as Darrell said.

21 COMMISSIONER HENDRIE: Well, I think it is one  
22 of those pieces of background that you just keep in mind. If  
23 for instance that thrust was coming in saying the release is  
24 going to be very much worse, and the ground deposition is likely  
25 to be much greater than you have been calculating, then I think

1 we would be scratching our heads over: Now what do we do about  
2 that?

3 All I am saying is that the indications are that  
4 it is likely to be the other way, and that that tends to  
5 relieve a little bit, in my view, a feeling of a need to get  
6 ten miles away with this thing.

7 MR. EISENHUT: Yes. I think I'd like to make one  
8 other observation --

9 COMMISSIONER HENDRIE: Or five miles away, if  
10 that's the --

11 MR. EISENHUT: You made the comment that right  
12 when you need the EOF most was when, with time, you would have  
13 to be leaving. I think Brian's chart that he went through  
14 earlier shows that in fact for all accidents certainly up to a  
15 core melt, no one would ever have to leave this facility; and  
16 in fact, for something between 90 and 95 percent, or 90 and 99  
17 percent of all core melts, you would still likely not have to  
18 leave this type of EOF --

19 MR. GRIMES: Immediately.

20 MR. EISENHUT: It would give you times in terms  
21 of probably up to a few days, depending on whether you're  
22 talking 90 percent of the core melts or not. So a large  
23 spectrum of accidents --

24 MR. GRIMES: We have some nominal habitability.  
25 The chart showed an hour to two hours --

1 MR. EISENHUT: For the worst case.

2 MR. GRIMES: And depending on what dose you're  
3 willing to take, that you could stay there. And the worst  
4 accident, of course, and the more unlikely the accident, I think  
5 the higher the dose --

6 COMMISSIONER GILINSKY: Well, let's see. These  
7 are circumstances in which you would be recommending some  
8 action on the part of the public?

9 MR. GRIMES: Right. You're suddenly surprised  
10 by a very large release which you had not already recommended  
11 precautionary actions for, and this chart shows that you don't  
12 have to go out the door immediately; you can stick around for  
13 an hour and not have to take extraordinary doses on the part of  
14 emergency personnel while you're making those recommendations.

15 MR. EISENHUT: That's 90 percent of the core melts,  
16 you've got an hour at 10 rem, without even exceeding 10 rem.  
17 So you've got some time. And of course you'd be willing to  
18 take 20 rem -- remember the number went, if you can take 50 rem  
19 you can stay there 60 days for 90 percent of the core melts.

20 So for not that big of a dose, you can stay quite  
21 some period of time.

22 CHAIRMAN AHEARNE: Well, I think the point that  
23 Vic was making -- and, Peter, I'll turn to you in a minute.  
24 I just wanted to --

25 COMMISSIONER BRADFORD: That's all right; I can

1 wait.

2 CHAIRMAN AHEARNE: The point that Vic was making  
3 was really the one that has bothered me throughout all of this.  
4 As I tried to think back how we got where we are right now, at  
5 least I thought -- it doesn't mean that that's the way we got  
6 here -- but I thought that we had concluded that we definitely  
7 needed some place, as was pointed out, to get a lot of that  
8 mob out of the control room, to be able to do the technical  
9 analysis, reactor control, et cetera; and to have a base of  
10 operation. Part of the other problem with that is we wanted  
11 to make sure we had NRC people that could help, that we had a  
12 technical support center -- all the plants had to have that.

13 But then there was another consideration that,  
14 for those cases where there was going to have to be emergency  
15 action taken, we wanted to have some facility in which we  
16 could coordinate that kind of activity. And I thought that  
17 was this thing.

18 And so arguments said there are only a very  
19 small --

20 MR. GRIMES: I don't think we had --

21 CHAIRMAN AHEARNE: Please, let me finish. I'm  
22 trying to tell you where I was coming from.

23 And although there are only a very small percentage  
24 of the time that you would lead to a core melt, and a very  
25 small percentage of the time of a core melt would you lead to

1 protective actions being required -- that was an argument as  
2 to whether or not you needed one of these facilities; not,  
3 given that you needed one, where would it be.

4 So I still would come out with the conclusion  
5 that it has to be farther away, because that's the rationale.

6 COMMISSIONER GILINSKY: Also I remember we were  
7 talking along the lines of having the individuals responsible  
8 for the big decisions to be a little removed from the reactor,  
9 and in fact not caught up with the mechanics and the engineers  
10 and the operators and people. We were talking about getting  
11 time to think.

12 CHAIRMAN AHEARNE: Now the real mitigating  
13 argument that you've raised that cuts into at least the flow  
14 I was making is that you're saying you're not going to be able  
15 to get these other state and local people into that facility.  
16 It mitigates, but doesn't --

17 MR. GRIMES: I think the other thing is, I don't  
18 think you had before you what the nominal protection factors  
19 would do, even for the low probability core melt accidents, and  
20 not having to relocate that facility.

21 CHAIRMAN AHEARNE: Except, Brian, you see, the  
22 whole point I was trying to make is that the cases that you  
23 need -- in my view, the cases for which you have the facility  
24 are those cases where you are going to have circumstances where  
25 you do require emergency action; that you do run into this

1 question about whether or not you have to relocate; and I  
2 conclude, therefore, that it ought to be out farther.

3 MR. GRIMES: But to me, the key ones are the  
4 transition ones.

5 COMMISSIONER HENDRIE: But in precisely that  
6 subclass of cases, in only a small fraction of that subclass  
7 would you get run out of the facility. For the protective one,  
8 practically never. And for alternative two, you would have  
9 to retire to the backup and, I don't know --

10 MR. DENTON: I guess I could look at it the other  
11 way --

12 COMMISSIONER HENDRIE: -- in a small fraction of  
13 the cases.

14 MR. DENTON: -- and say that the one that it's  
15 really designed for is the bad accident one, and that has to  
16 be far enough away. Then require a backup close in --

17 (Laughter.)

18 CHAIRMAN AHEARNE: No, I wouldn't say to "require"  
19 a backup close in. At that stage, if the utility wants to  
20 build something close in --

21 COMMISSIONER GILINSKY: I guess what I'm talking  
22 about is, you know, no matter how small that percentage is --  
23 and that percentage, it seems to me, argues to whether we really  
24 ought to have this facility or not -- but in just those cir-  
25 cumstances when the reactor is in the worst state, and the

1 number of people who might have to move is the largest and when  
2 the concern is the greatest, the system is going to function  
3 least well. That somehow doesn't sound right to me.

4 COMMISSIONER HENDRIE: I don't see why it  
5 functions -- It's sort of the way the staff tried to set up  
6 the requirement for the protection factors, why you get  
7 reasonable times.

8 CHAIRMAN AHEARNE: I think I will have to ask  
9 Commissioner Bradford's forbearance, because it's really his  
10 turn.

11 COMMISSIONER BRADFORD: No, I'm not eager, John.

12 (Laughter.)

13 MR. BLOND: Roger Blond from the Office of  
14 Research. There's one other point. That is, the timing involved  
15 on the instituting of the center. For the big accidents, there  
16 probably won't be too much time to initiate the in-close  
17 center before you would have to move to the further away center.  
18 The accident would have occurred before the NRC people would  
19 probably have made it to the site, giving them some time to  
20 move to that further away center. So the timing of the accident  
21 also enters into the decision -- not that there would probably  
22 be the time available to move from one to the other. Most of  
23 the accidents are rather short --

24 COMMISSIONER GILINSKY: Well, what does that  
25 argue? Does that argue against having the far-away center



1 all together? Because it sounds from what you're saying is --

2 MR. BLOND: No, the far-away center would be --  
3 you could activate that as your initial measure.

4 COMMISSIONER GILINSKY: But you seem to be saying  
5 that that --

6 CHAIRMAN AHEARNE: It argues against having the  
7 inside center.

8 COMMISSIONER GILINSKY: Oh, I understand that  
9 point.

10 (Laughter.)

11 MR. BLOND: This is again for the largest  
12 accident.

13 MR. GRIMES: For the life-threatening cases.

14 COMMISSIONER GILINSKY: But it sounds like --

15 MR. GRIMES: That they would happen before even  
16 the corporate people got to staff the EOF.

17 COMMISSIONER GILINSKY: Yes. It sounds like  
18 he's saying the decisions would have to be made before the  
19 far-off center would be activated.

20 MR. BLOND: That's precisely why the control  
21 room operators have to be given the responsibility to make that  
22 decision, and have to have the ability to talk to the state  
23 and local people, because the timings are such that there might  
24 not be the time available for operator action.

25 COMMISSIONER GILINSKY: Is it really inevitable

1 or unavoidable that the state and local people will not group  
2 together with us in one facility? Because that does affect  
3 things.

4 MR. GRIMES: It's fairly rare that they're  
5 planning to do that.

6 CHAIRMAN AHEARNE: Well, given, as I look down  
7 this list --

8 MR. GRIMES: Even when it's far out, it's rare.

9 CHAIRMAN AHEARNE: Well, I mean, half a mile,  
10 700 yards, a tenth-of-a-mile, half-a-mile, a quarter-of-a-mile,  
11 a tenth-of-a-mile, yes, I would think it's very rare.

12 MR. GRIMES: One of the few cases that I know  
13 of that the state and local people are going to do this is  
14 Davis Besse, which is a very close-in facility.

15 CHAIRMAN AHEARNE: How about Big Rock, for  
16 example. You have 12 miles.

17 MR. GRIMES: I'm not familiar with Big Rock.

18 MR. EISENHUT: We haven't approved that one yet.

19 CHAIRMAN AHEARNE: It's 100 percent complete.

20 (Laughter.)

21 MR. GRIMES: Knowing that utility --

22 CHAIRMAN AHEARNE: Oh, I see.

23 MR. GRIMES: -- I believe it's an existing  
24 building.

25 CHAIRMAN AHEARNE: I see.

1 Peter, I think we inevitably have --

2 COMMISSIONER BRADFORD: I just have a question or  
3 two. I don't have any driving thoughts.

4 If you were starting completely from scratch at  
5 this point as of today, nothing were built anywhere, what would  
6 you be recommending?

7 MR. GRIMES: I think you will get three  
8 different answers.

9 MR. EISENHUT: I would probably look and see what  
10 the Commission has approved.

11 (Laughter.)

12 CHAIRMAN AHEARNE: Do you know what you said?  
13 You said, if you were starting from scratch, you would look at  
14 what we'd approved.

15 (Laughter.)

16 CHAIRMAN AHEARNE: Therefore, you didn't mean --

17 MR. EISENHUT: I was looking at what we had --

18 MR. DENTON: What I would do, starting from  
19 scratch and if there was money to spend, I would try to provide  
20 a really good, far-away center that combined state and local,  
21 and provisions for the utility to gather there, and it doesn't  
22 have to get set aside with the door locked. Maybe it could be  
23 used for multiple civic functions, or whatever it could be  
24 used for. But that would seem to be a very good investment  
25 for the se accidents where you really have to be out.

1 At the same time, recognizing that the plant is  
2 going to have numerous upsets that don't ever require activation  
3 of this, I would want to have the substantial capability for  
4 damage control and utility presence near the site by people  
5 who weren't ordinarily stationed there.

6 So I would want something nearby to go to to  
7 cope with problems that didn't amount to big releases.

8 COMMISSIONER BRADFORD: But as a regulator, would  
9 you be requiring that second one, as well? Or would that just  
10 be the utility's choice, if they wanted to build it?

11 MR. DENTON: I guess I would have a hard time  
12 requiring it. I might want to take a second look at the  
13 technical support center definition to see if we didn't have  
14 a close-in EOF, and recognizing that the only place to work out  
15 of close in was the tech support center, have we adequately  
16 defined that requirement? Because that says that for the great  
17 bulk of the upsets that we've had at the plants like Crystal  
18 River, O'Reilly would not have gone to the EOF someplace, he  
19 would have gone on in the plant, as he did. So you need to  
20 have a tech support center that could cope with a fair number  
21 of regulatory officials.

22 COMMISSIONER GILINSKY: Well, the one you  
23 described first sounds like the EOF we talked about awhile  
24 back.

25 CHAIRMAN AHEARNE: Yes, I was thinking that, too.

1 I remembered that.

2 (Laughter.)

3 COMMISSIONER GILINSKY: And if Joe is right, we  
4 will hardly ever use that even in the case of accidents.

5 MR. EISENHUT: It's sort of our alternate two,  
6

7 MR. DENTON: So I guess I have kind of concluded  
8 that they are differing functions, and it is up to you to  
9 which one you want to call the primary one. There is a need  
10 for both these kinds of things.

11 CHAIRMAN AHEARNE: Well, as Vic said, the one  
12 you just described was the one that certainly I thought we were  
13 getting.

14 COMMISSIONER GILINSKY: I think we ought to make  
15 some effort -- I don't know what the possibilities are -- to  
16 see whether state and local authorities will join us in a  
17 center like that, if the circumstances call for it.

18 MR. DENTON: I think our plan would be to put  
19 this in the clarification letter, and we can get that one, if  
20 that's the decision of the Commission.

21 CHAIRMAN AHEARNE: Joe, you don't agree?

22 COMMISSIONER HENDRIE: No, I think the staff  
23 proposal has got enough flexibility in it to accommodate a fair  
24 part of what has already been committed out there in good  
25 faith and it covers the EOF needs from our standpoint quite

1 adequately. I would buy off on the staff recommendation.

2 COMMISSIONER GILINSKY: Well, I have always been  
3 for at least the first part of what Harold outlined, and the  
4 second part is reasonable as a facility to deal with many  
5 circumstances as a lot of people get close to the reactor.

6 What I want to ask is: Do you feel that the  
7 briefing that we're going to get within a week or two --

8 COMMISSIONER HENDRIE: Would change this?

9 COMMISSIONER GILINSKY: -- would affect this in  
10 some way?

11 COMMISSIONER HENDRIE: I don't think we ought  
12 to -- No. A, I don't think that -- the proposition of the  
13 briefing is: Here are some thoughts -- Stratton and his  
14 cohorts, and the various other parties, are intrinsically  
15 saying: We think it's worth a careful further look at some of  
16 these release fractions, and the physical chemical nature. Not  
17 that here is a proven case. Okay? So I think it is not in the  
18 nature of something which then becomes controlling here, or  
19 ought to be considered as primary information into it.

20 I cite it because I think it is useful to find  
21 that at least some expert opinion tends in that direction at  
22 the present time, as compared to trending in the other direction,  
23 for instance. But I wouldn't propose that it be controlling.

24 COMMISSIONER GILINSKY: You also said something  
25 about licensees having built these in good faith. That seems

1 to me to argue for making exceptions, rather than necessarily  
2 going in that direction.

3 COMMISSIONER BRADFORD: Well, that is certainly  
4 true if one is prepared to make the exceptions. I don't know.  
5 What basis, though, would you have for making an exception?  
6 You could obviously change the deadlines and extend them, but  
7 in the end what basis would you have for saying it was all  
8 right in one place to be within half-a-mile and --

9 CHAIRMAN AHEARNE: What I would suggest is,  
10 first, I don't see any reason for requiring the alternative  
11 one -- that's the bunkered, close-in facility; and that's the  
12 one that Harold is describing as, at least in his opinion,  
13 isn't useful, it's not necessary, and when it might be necessary  
14 it's not useful.

15 MR. DENTON: That's my feeling, but I should ask  
16 anybody that feels differently to give their own views about it.

17 COMMISSIONER HENDRIE: Watch out how that's  
18 phrased. To suggest that because a close-in facility is  
19 heavily protected in terms of filtration and shielding, it is  
20 therefore "not useful," I think is incorrect. What Harold is  
21 saying is that if the thing gets a bad cloud right over it  
22 and a heavy ground deposition right around it, he would just  
23 as soon have been ten miles away, rather than hunkered down at  
24 the site.

25 CHAIRMAN AHEARNE: Right. But what my point is --

1 whether it was Harold's or not -- I agree with it, if it's  
2 Harold's, if it isn't then it's my point -- is that if someone  
3 has within about a half a mile, or three-quarters of a mile,  
4 I don't think that we ought to say: All right, you have to have  
5 a protection factor of 50, you've got to put the foot-  
6 foot-and-a-half-inch thick concrete walls around it.

7 COMMISSIONER HENDRIE: Well, but the staff  
8 position doesn't say that. It says --

9 CHAIRMAN AHEARNE: That's number one.

10 COMMISSIONER HENDRIE: -- if you don't want to  
11 do the protection, why then provide a --

12 CHAIRMAN AHEARNE: Yes, I know. But what I would  
13 say is that --

14 COMMISSIONER HENDRIE: You don't want to allow  
15 them the option.

16 CHAIRMAN AHEARNE: I would say that I can either  
17 live with -- If they've already got this thing built, or a  
18 large way underway, that's fine; that they still, though  
19 should make the kind of arrangements that Harold was talking  
20 about for some farther out location, the description he made,  
21 which is a little bit further than the secondary, but at least  
22 to make arrangements for a facility that's out there.

23 If they haven't gone that way, then I would want  
24 to say that whatever they build should be greater than five  
25 miles. So that's where I would come out.



1 (Pause.)

2 CHAIRMAN AHEARNE: And that would also address  
3 your point, because if they have something close in, they'd  
4 then have to have a farther out arrangement.

5 MR. DENTON: In that greater-than-five, do you  
6 require any special protection there? Or the factor that  
7 buildings just result in?

8 CHAIRMAN AHEARNE: Well, I would not then go to  
9 the additional protection requirements. I don't think that  
10 the large amount of protection is really going to buy anything.

11 MR. DENTON: Recognizing that if it were that  
12 extreme case and a fallout right over this one, there would  
13 still be a need to fall back further out somewhere.

14 COMMISSIONER BRADFORD: But then there's nowhere  
15 to go.

16 MR. DENTON: Well, you'd have to make the best  
17 of the situation, that we'd be back to pre-TMI with that  
18 combination.

19 MR. GRIMES: I must say, I would be not very  
20 satisfied with the single facility even at 5 or 10 miles that  
21 didn't have either some nominal protection, or a backup location  
22 designated, because for any of the big accidents, if the  
23 footprint hits the facility, if there is no protection or  
24 alternate, you're in a hard way because you're going to have  
25 to move people, even at 5 or 10 miles, from big accidents.

1 COMMISSIONER GILINSKY: What sort of protection  
2 are you talking about?

3 MR. GRIMES: Well, to not --

4 COMMISSIONER GILINSKY: What you've got laid out  
5 here?

6 MR. GRIMES: Yes, what we had laid out there --

7 COMMISSIONER GILINSKY: A protection factor of  
8 five --

9 MR. GRIMES: -- to not have to move people, we  
10 had said a factor of 15 at 5 miles, or 10 at 10 miles would  
11 be reasonable, and then if you had less than that, say a factor  
12 of 5, which we proposed in alternative two, then you had to  
13 have another facility designated.

14 (Pause.)

15 Just being at 5 or 10 miles does not avoid the  
16 problems of relocation.

17 COMMISSIONER GILINSKY: What is a protection  
18 factor of 15 amount to?

19 MR. GRIMES: I think it approaches 9 or 10 inches  
20 of concrete.

21 MR. DENTON: I guess I'm not really sure I agree  
22 that it warrants a lot of hand-tailoring with distance. In  
23 other words, if you go to specifying special shielding, then  
24 you exclude conventional buildings which they may be able to  
25 rent. And as we require special factors of 6, 7, 8, 9, 10 miles,

1 they would have to build them with special factors. I guess  
2 I was trying to see if you would accept the principle that  
3 there's always a chance, if you're within 5 or 10, that you  
4 may have to relocate for something. If you specify a factor,  
5 then you may be requiring a special building for that wide,  
6 which kind of complicates the -- one of the features you're  
7 trying to do is get everybody together in that building. It  
8 is conceivable to me that conventional structures may be more  
9 amenable to a cooperative sort of arrangement than building it  
10 up from scratch. Maybe, maybe not.

11 I guess I just don't see a lot of need to try to  
12 protect people in this building any differently than we are  
13 protecting the neighbors who live around it. That's why I go  
14 back to having reasonable access so people won't be afraid to  
15 come to the EOF from the outside.

16 COMMISSIONER BRADFORD: I think I'm missing  
17 something here, Harold. When you say you don't see the need to  
18 protect this building more strongly, you're expecting people to  
19 stay in this building under circumstances in which all the  
20 buildings around it will have been evacuated?

21 MR. DENTON: No. I would think that you would  
22 quickly find in this that there would only be a few NRC employees  
23 left, if you were moving people -- if we ordered other people  
24 to leave further out.

25 COMMISSIONER BRADFORD: I see what you're saying.

1 MR. DENTON: And that you wouldn't get the  
2 supporting services bringing information in. So there I would  
3 be inclined to pick up the maps and fall back further out. I  
4 just don't see the need for having bunkered dedicated people  
5 there when there is nothing they can do with the reactor, and  
6 in fact the more interesting measurements are at the boundary  
7 of the protective action zone, it seems to me. In other words,  
8 you have lost -- I would like to be in this kind of situation  
9 located far enough out than the leading edge of protective  
10 actions.

11 MR. GRIMES: Well, you've got to get clear the  
12 concept that the 10-mile zone is only a planning zone, and for  
13 20 percent or 30 percent of the core melt accidents you may  
14 be taking protective action outside that distance. And if  
15 you don't have anymore protection than is given to anybody  
16 else, then for 30 percent of the core melt accidents you will  
17 be relocating the people in that facility.

18 COMMISSIONER HENDRIE: A smaller fraction than  
19 that because of the wind rose.

20 MR. GRIMES: Yes, it doesn't vary -- it diffuses  
21 with distance about the same as the probability of getting hit  
22 by it.

23 CHAIRMAN AHEARNE: I guess I am willing to live  
24 with that problem.

25 MR. GRIMES: But then, it seems to me, since the

1 worst-case accidents generally have a track in one particular  
2 direction, or the plume tracks, it doesn't matter whether you're  
3 in or out; it's just the chance of being in that particular  
4 direction.

5 COMMISSIONER GILINSKY: I'm afraid we're going to  
6 end up with four centers.

7 (Laughter.)

8 COMMISSIONER GILINSKY: Five, if you count the  
9 control room.

10 MR. GRIMES: It seemed to me that the argument  
11 for having it at 10 miles was that you wanted to have continuity  
12 during protective action measures; unless there is some  
13 consideration of a backup facility or a habitable facility,  
14 you're going to have to move it just about as often as you do  
15 a close-in one.

16 COMMISSIONER BRADFORD: I must say, when I  
17 started playing with the numbers in the protection factors, it  
18 becomes very like -- for me, not perhaps the rest of you --  
19 pin-the-tail-on-the-donkey at a small child's birthday party.  
20 I would much rather just sort of state the criterion that you  
21 just did.

22 It seems to me that what one wants is the chances  
23 of people having to pick up and move during the time when  
24 they're supposed to be guiding the protective actions; that the  
25 chances of that have to be miniscule; that the argument against

1 the two-center arrangement basically is that it does contemplate  
2 just that possibility.

3 So my preference -- and I am not sure how to add  
4 up the numbers to get it -- is to pick a spot that's far enough  
5 away, and protect it to whatever extent is necessary, so that  
6 the chances of the people who are there having to move in the  
7 early -- and really by that, I would think the first day or  
8 so of the accident -- that those chances really are vanishingly  
9 small. I don't know how else to put it.

10 MR. GRIMES: If you give me a percentage, I'll  
11 give you a proposal.

12 (Laughter.)

13 CHAIRMAN AHEARNE: You had proposed, Peter, that  
14 a facility --

15 COMMISSIONER BRADFORD: Well, I am in agreement  
16 with you about the single facility; but what Brian has said  
17 about the need for a protection factor on it if it's at five  
18 miles, seems to me to be fairly compelling. Granting everything  
19 Joe has said about the unlikelihoods of having to move even  
20 from a half-mile away facility, if one sort of allows one's  
21 self to think in terms of this event as having happened and  
22 being ongoing, I think at that point you just have to avoid  
23 a situation in which the planners join the evacuees on the --  
24 it may not be that easy to move from 5 to 10 miles in the  
25 normal 5 or 10 minutes that that would take. And you just

1 just don't want these people stuck in a traffic jam somewhere.

2 CHAIRMAN AHEARNE: So I guess, if I understand  
3 you correctly, what you're saying is that you would argue for  
4 a distance protection factor connection?

5 COMMISSIONER BRADFORD: Yes. I mean, I think  
6 whether it is five miles or ten miles -- if I'm understanding  
7 what Brian is saying properly -- I would then take the  
8 protection factor off of his alternative one and attach it to  
9 whatever distance we came down on.

10 CHAIRMAN AHEARNE: Did you choose your protection  
11 factor for alternative one based upon some probability of  
12 stay time?

13 MR. GRIMES: Essentially looking at different  
14 likelihood accidents and saying that one could say there for  
15 various lengths of time with various doses, much like the  
16 detailed table you saw saying that for 10 percent of the core  
17 melt accidents one could be there half the time for 30 days,  
18 or 60 days, or whatever, and not get more than 5 or 10 rem; for  
19 less likely core melt accidents you might tolerate 50 or 100  
20 rem; and for worst-case accidents, you could get away without  
21 life-threatening doses for those protection factors. And then  
22 as a function of distance, those are roughly equivalent at  
23 any distance.

24 MR. DENTON: To be in a building, I would sure  
25 like to have protection factors, and so forth. My only point,

1 which is more philosophical, that if the center is at five miles  
2 and you've ordered evacuation in that direction of everyone out  
3 to 10 miles, I don't see what real purpose it serves to be  
4 able to keep people at 5 miles. Where are you going to get the  
5 drivers? Is there going to be an NRC driver bringing one of  
6 you up to that location?

7 MR. GRIMES: No, no, what was contemplated --

8 MR. DENTON: And who is going to bring that  
9 information in? So I don't see why we would insist on keeping  
10 people there, if they have had to move further out?

11 MR. GRIMES: No, I don't think one would keep  
12 people there for long periods of time. The thing was to assure  
13 continuity during the time when the actions were being taken  
14 and the recommendations --

15 COMMISSIONER BRADFORD: That's what I had in  
16 mind; that it's not a matter of you staying there for a month  
17 or two.

18 MR. GRIMES: You might relocate in the day to a  
19 better place.

20 COMMISSIONER BRADFORD: Exactly.

21 MR. DENTON: So now we have gone far out, and  
22 we have bunkered in.

23 (Laughter.)

24 CHAIRMAN AHEARNE: And of course in theory you  
25 would have ordered the protective action prior to it actually



1 being absolutely needed.

2 MR. DENTON: Yes.

3 CHAIRMAN AHEARNE: Well, I'm not sure we are going  
4 to get a resolution out of this this afternoon, frankly.

5 MR. DENTON: Well, there probably is no single  
6 correct answer. I think any of these answers we have had are  
7 much better than what we had pre-TMI, and I don't feel strongly  
8 about any of the various ones I've advocated, but just trying  
9 to present the pros and cons.

10 CHAIRMAN AHEARNE: Mr. Hendrie would accept the  
11 original staff recommendation giving them the alternative of  
12 the habitable EOF with protection factors, or the reduced-  
13 habitability EOF, and then a secondary one.

14 And I gathered, Joe, that that would mean for  
15 those plants that are already well underway a close-in one that  
16 doesn't have the protection factors, and they would then have  
17 to make this secondary arrangement.

18 COMMISSIONER HENDRIE: I guess so.

19 CHAIRMAN AHEARNE: Mr. Bradford would go for a  
20 single one, but out far enough in the 5- to 10-mile range, and  
21 protected with a heavy enough protection to guarantee that the  
22 people could stay in it some period of time.

23 COMMISSIONER BRADFORD: Yes, whatever a reasonable  
24 period of time for that is. I don't think it's 30 or 60 days,  
25 but a couple of days.

1 CHAIRMAN AHEARNE: I would have preferred the ones  
2 already given in the Staff approval, and they're underway to  
3 accept those, but to require them to make a more permanent  
4 arrangement for a farther-out facility similar to what Harold  
5 had previously described, which goes beyond the secondary EOF.  
6 And then for those that have not, then to require them to build  
7 a single facility no closer than five miles.

8 COMMISSIONER BRADFORD: And you and I are  
9 differing because of the question of how long they should say?  
10 Because I don't necessarily disagree with letting the ones who  
11 have gone ahead have some period of time to readjust. In fact,  
12 I don't disagree with that at all.

13 CHAIRMAN AHEARNE: Yes, I really don't -- I guess  
14 I am willing to require them to put some level of protection on.  
15 I just don't think that they are going to -- it's going to be  
16 very useful for very long in that kind of a case.

17 Victor, I didn't describe where you came out,  
18 because I hadn't yet perceived that.

19 COMMISSIONER GILINSKY: Well, after I've followed  
20 all these variations, I think I am more or less inclined to  
21 agree with Harold, but I want to think it over a little bit about  
22 the question of protection.

23 CHAIRMAN HENDRIE: Harold could you summarize  
24 yours?

25 (Laughter.)

1 COMMISSIONER GILINSKY: With the new Harold.

2 MR. DENTON: I certainly agree.

3 (Laughter.)

4 CHAIRMAN AHEARNE: Well, would one of the two of  
5 you help me understand what each of you are agreeing?

6 Vic agrees with you, or you agree.

7 MR. DENTON: I would prefer that you state it.

8 I think I had --

9 COMMISSIONER GILINSKY: Well, Harold was talking  
10 about a facility five-or-more miles out, but not necessarily  
11 having protection, on the grounds that they probably wouldn't  
12 be staying there.

13 MR. DENTON: Right.

14 CHAIRMAN AHEARNE: Right. Okay.

15 COMMISSIONER GILINSKY: It seems to me that  
16 just being that far out gives you a certain amount of time to  
17 cope with things you wouldn't have if you were closer in. I  
18 am not entirely excited about the protection question, but  
19 what Harold said sounds reasonable.

20 CHAIRMAN AHEARNE: I would guess, then, that  
21 really means that we are not yet settled.

22 COMMISSIONER HENDRIE: That sounds like you two  
23 are pretty close.

24 CHAIRMAN AHEARNE: I think we are, and I think  
25 we could probably pick up Peter, also.

1 MR. GRIMES: Somewhat foreseeing this option, one  
2 of your slides has possible additional language on EOF  
3 locations.

4 CHAIRMAN AHEARNE: Yes.

5 MR. GRIMES: Would that satisfy the intent?

6 CHAIRMAN AHEARNE: Well, with a slight difference.  
7 In the first place, I use the language which staff approved, as  
8 opposed to construction underway.

9 MR. GRIMES: That's difficult to define. There  
10 has been no formal approval.

11 CHAIRMAN AHEARNE: Well, no, I know that.

12 COMMISSIONER HENDRIE: But that means no existing  
13 facility gets grandfathered.

14 CHAIRMAN AHEARNE: No, no. In other words, I  
15 thought that there were a couple of facilities here where you  
16 commented you didn't know really what it was.

17 MR. GRIMES: Yes.

18 CHAIRMAN AHEARNE: And I just didn't want --  
19 someone says, "Oh, yes, see that shed out there? Now we built  
20 that last week, and we've got letters on the side of it that  
21 says 'EOF'." It had to be a little bit more than that.

22 MR. GRIMES: It's still difficult to define.

23 MR. EISENHUT: I did want to make a comment on  
24 that. I would say -- I just skimmed down the list, and for  
25 those where they really built a new facility -- it's probably

1 under a dozen sites. I have a little -- I think I was jotting  
2 down what we would call our "preferred option," or the option  
3 we require for certainly all new sites, and those where they  
4 went to a facility that existed -- that is, they didn't build  
5 one -- which would be the vast majority of all sites. I would  
6 suggest making it 5 to 15 miles, because you pick up 11 sites  
7 that, from a practical standpoint, are 11 miles away, or  
8 something, as proposed.

9 Then the words -- the same words we talked about  
10 for a tech support center -- to make it a well-engineered  
11 facility, not specifying the details or the criteria, except  
12 I could certainly live with saying it's a protection factor of  
13 15 if you're 5 to 10 miles, and 10 if you're 10 to 15 miles.

14 Now what that means is 7 or 8 inches of concrete.  
15 So it's not a massive structure. It's a protection factor of  
16 10 with 7 inches of concrete. Right, Brian?

17 MR. GRIMES: Yes.

18 MR. EISENHUT: And 15 is just a little bit bigger  
19 than that.

20 The other thing I noted was, you could strongly  
21 recommend that it be orchestrated with the state and local  
22 authorities to try and integrate it into one facility, and  
23 make it perhaps even at the same location where they are very  
24 nearby. And if you required such a facility as that is "the  
25 EOF" somewhere between 5 and 15 miles, I got either "encourage"

1 or "require" the utility have something close in where sort of  
2 an area where the people can go to the small events, where you  
3 don't have to worry about evacuation -- the Crystal River type  
4 events.

5 But by the "primary EOF" or "the EOF," or whatever  
6 you want to call it, that I just went through, I think you pick  
7 up all but about a dozen sites where they are actually building  
8 something now.

9 For those dozen sites, you could say: Basically  
10 follow the approach where you don't really have a protection  
11 factor for that close-in EOF with a building very close, but  
12 you would require a backup.

13 I'm just trying to keep track on the bidding --

14 CHAIRMAN AHEARNE: Yes. The difference I would  
15 have going -- for the backup, I really would have to have some  
16 words on that.

17 MR. EISENHUT: I understand that.

18 CHAIRMAN AHEARNE: I wouldn't require or urge a  
19 close-in one; that would be up to them.

20 MR. EISENHUT: I understand.

21 CHAIRMAN AHEARNE: And I still don't come out  
22 where you come out on the protection factor. I am more with  
23 Harold's rationale. I agree with that.

24 MR. EISENHUT: Sure. The only reason I said that  
25 is, you get that inherently, anyway, I think. So therefore --

1 CHAIRMAN AHEARNE: Well, that's fine what you  
2 get inherently is fine. I don't think we ought to require  
3 things unless --

4 MR. EISENHUT: Unless they're required. I'm with  
5 you 100 percent.

6 COMMISSIONER GILINSKY: No, but it sounds like  
7 you think it ought to be required.

8 MR. EISENHUT: Not necessarily, no. I don't  
9 think it should.

10 (Laughter.)

11 MR. EISENHUT: I was pushing alternative two to  
12 try to get this thing resolved. Originally there were those  
13 among us who conceived alternative one, and that we were  
14 trying to work out --

15 MR. GRIMES: Well, actually our initial position  
16 was alternative two. Then after the August Commission meeting,  
17 we went back to a single habitable facility. And then --

18 MR. EISENHUT: You can argue it either way.

19 MR. GRIMES: -- my preferred position is, if we  
20 were going to go with one position, would be alternative two.  
21 I must say, it is going to be somewhat difficult to rationalize  
22 a facility meant to cover a wide spectrum of accidents which  
23 doesn't cover a wide spectrum of accidents.

24 COMMISSIONER BRADFORD: Which doesn't cover the  
25 worst of them.

1 MR. GRIMES: Right.

2 MR. EISENHUT: So the thing I was putting together  
3 was really trying to be a concensus of what I think we were  
4 saying.

5 MR. DENTON: I guess the one remaining question  
6 is: Should we move on the letter, minus this? Or wait?

7 CHAIRMAN AHEARNE: I think you'd better move on  
8 the letter, minus this, and just put in that "further words  
9 will follow on this."

10 MR. EISENHUT: We're prepared to do that, and  
11 we're planning to do that tomorrow.

12 CHAIRMAN AHEARNE: And could I suggest you try  
13 to put together what you think is the alternative that begins  
14 to move in the direction at least the three of us were leaning  
15 in, and I will talk to the gentleman on my right and maybe he  
16 can convince me to change my mind.

17 COMMISSIONER GILINSKY: Let's see, now. In  
18 suggesting that we not get involved in this protection factor --

19 COMMISSIONER HENDRIE: I'm not even going to try.

20 COMMISSIONER GILINSKY: -- was that to make it  
21 easier to simply go out and rent a building?

22 MR. DENTON: Yes. I think any time we start  
23 laying on protective measures, it carries this regulatory  
24 framework with it, and I would prefer to keep it a simple  
25 building that we didn't try to regulate the structural design



1 of, the building heating and air conditioning of, and so forth.  
2 And I would go to distance out far enough so that they could  
3 either rent a building -- and consider the trouble we've had  
4 with buildings -- to simplify the acquisition of a building  
5 that would serve the function.

6 COMMISSIONER GILINSKY: What sort of a protection  
7 factor do you get out of a typical brick building?

8 MR. GRIMES: A factor of two, perhaps, with a  
9 roof on it, a normal roof.

10 MR. DENTON: It depends on the windows --

11 MR. GRIMES: If you're in the basement of such  
12 a building, you could approach -- the basement of a large  
13 office building, you can do better than a factor of five.

14 COMMISSIONER GILINSKY: So a factor of 10 is  
15 fairly substantial?

16 COMMISSIONER HENDRIE: It requires special  
17 construction. You're just not going to go out and find one,  
18 and you're not going to build one in the conventional mode in  
19 order to get that.

20 MR. GRIMES: You might get it in a large basement.

21 CHAIRMAN AHEARNE: All right.

22 (Whereupon, at 5:05 p.m., the meeting was  
23 adjourned.)

24 \* \* \*

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

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in the matter of: PUBLIC MEETING - BRIEFING ON CRITERIA FOR EMERGENCY  
OFFSITE FACILITIES

Date of Proceeding: October 30, 1980

Docket Number: \_\_\_\_\_

Place of Proceeding: Washington, D. C.

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

Jane W. Beach

\_\_\_\_\_  
Official Reporter (Typed)

Jane W. Beach

(SIGNATURE OF REPORTER)