

NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:

WORKSHOP ON
ALTERNATIVE SITE RULEMAKING

Place - McLean, Virginia

Date - Thursday, 15 March 1979

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

WORKSHOP ON
ALTERNATIVE SITE RULEMAKING

Conference Room,
The Mitre Corporation,
1820 Dolley Madison Boulevard,
McLean, Virginia.

Thursday, 15 March 1979.

The workshop was called to order at 8:30 a.m.,
Malcolm L. Ernst, Moderator, presiding.

mpbl

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P R O C E E D I N G S

MR. ERNST: I think in the interest of time, we should reconvene the workshop.

I say in the interest of time because it might save us some time this evening. Because I do intend to wrap up each of these topics before we depart for dinner.

I think it might be useful. There were a few points that were sort of left up in the air, I think, yesterday evening, and I think I stated that we would pick these up after looking at the Mitre summary tomorrow. On reflection last night, I thought we could probably wrap it up rather quickly today, and then perhaps not have to rehash ground tomorrow.

It might be more efficient to wrap it up in the first few minutes today.

I would like to suggest to the panel that with respect to Question 2.1, I think that I heard yesterday is a general consensus that the answer to Question 2.1 was yes, with perhaps the following proviso, that I think perhaps is a rewording job with respect to what we really mean by "reconnaissance level information". And I think the answer was yes, that we do rely on reconnaissance level information as long as one does not try to in the criteria themselves specify the amount or the quality or the type of worst case analysis that might be required in the analysis.

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1 You know, we're not trying to address the exact
2 kind of information or the quality, nor what kind of worst
3 case analysis might be necessary on a case by case thing.
4 I think we realize that this is an area that is not ready
5 for rulemaking certainly at the present time, and maybe never.
6 And maybe it's so dependent on the case by case situation
7 that you just can't do any better than that in a rule. But
8 just to accept the definition of "reconnaissance level
9 information" as that that's essentially available without
10 having to do extensive site specific studies, or that can be
11 gotten through very quick walk-throughs of the site or short
12 term studies on particular issues with respect to the site.

13 If there is any disagreement with that kind of
14 an approach, then I'd like to hear that.

15 DR. KEENEY: I don't particularly have agreement
16 with the approach, but I do have disagreement with--if I
17 had to vote now on 2.1, I'd vote no, partly because I would
18 vote no on 2.2. If I don't understand what I'm voting on,
19 I'm not going to vote for it.

20 Secondly, you said there is sort of a feeling
21 that we do rely on this type of information. That is a
22 descriptive type of sentence. Certainly on 2.1, the idea
23 is prescriptive, should we be relying on it, and that is
24 different also.

25 MR. ERNST: I guess, as a matter of fact, we have

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1 relied on it, and what is proposed in the criteria clearly is
2 that we would rely on it. And that's the intent.

3 DR. KEENEY: The other part of my question is
4 what's the "it"? I'm not clear on that. I think some
5 others were not.

6 MR. ERNST: Are there any other comments from
7 the panel?

8 MS. CAPLAN: Yes.

9 One thing that I'm not clear on is how this
10 information is going to be used. Is the selection of sites
11 going to be prior to the selection of a proposed site by the
12 utility?

13 In other words, are we going to come in with
14 equal information on all sites at this point in the process,
15 or are we going to have one site for which there is detailed
16 information, and the other five sites for which we have
17 reconnaissance level information?

18 MR. ERNST: I think we have not addressed that
19 specifically. I think either one would be permissible.

20 Of course, the decision on alternative sites
21 would not be such a firm decision that you couldn't change
22 your mind if the detailed information which might be obtained
23 subsequently reveals details on that site that are of a
24 very substantial nature that hadn't been anticipated before.
25 There would be that degree of uncertainty if you did not come

mpb4

1 in with detailed information on the site at the same time as
2 you're making your alternative site decision.

3 So I think we're saying that either option would
4 be permissible. The option of not having detailed informa-
5 tion on the proposed site in some situations perhaps could
6 be somewhat more risky as far as that decision holding up to
7 some later date.

8 MR. DINUNNO: I would like to comment on that also
9 because I was having a bit of difficulty yesterday distinguish-
10 ing between information requirements and then what you could
11 do with the information, and I think that subject does deserve
12 some discussion.

13 There may be a diversity of views, but if that's
14 the case then let's bring them out.

15 I have no problem with the concept of reconnais-
16 sance level type information, perhaps because having been
17 through this exercise, as Jerry Kline indicated yesterday, I
18 am reasonably convinced that there is a great deal of
19 information of the kind that allows a decision on, first, a
20 set of candidate sites, and then screening of those candidate
21 sites to arrive at a proposed site.

22 And my version of what that decision at that
23 point entails, when you come up with a proposed site, you're
24 proposing it for further investigation. You're not propos-
25 ing it for even a construction permit application at that

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1 stage of the game.

2 What you have done is you've made an assessment
3 of the data and have reasonably concluded that there's a high
4 probability that if you looked at that site in considerable
5 detail that one would find that whether by a cost-benefit
6 analysis or a detailed impact analysis that that site had a
7 high probability of meeting all the environmental requirements
8 that have been imposed, as well as other requirements, I might
9 add.

10 The environment is just one, as I indicated
11 yesterday, just one set of -- one subset, if you will, of
12 criteria, a subset of a requirement.

13 So that in effect what you do with the data is
14 to assess it to arrive at a reasoned judgment as to the
15 high probability of that proposed site emerging as an accept-
16 able one. That's all you're doing at this stage.

17 Now obviously the degree of assurance that you
18 have in that decision is no better than the data base that
19 you have. And if you had more data on all sites, you could
20 come up with a greater assurance that your decision was
21 correct.

22 But short of doing a full detailed impact
23 assessment or all sites at that stage -- and I'm assuming
24 you have six candidate sites -- you're always going to end
25 up with a certain amount of uncertainty with respect to

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1 whether that site will eventually qualify. But that's part
2 of the risk that one takes in making that decision. And I
3 think that in general that those who are proceeding are willing
4 to take that risk that if a site then is examined in detail
5 there's a possibility that some flaw will be discovered,
6 and indeed this has been the case in some instances.

7 So in summary, what you do with the data is to
8 arrive at a decision after analysis of the data, that one out
9 of the slate of candidates appears to have those attributes,
10 environment, non-environmental, engineering, institutional,
11 whatever the case may be that provide a reasonable degree of
12 assurance that that site is a licenseable, functionable site.

13 MR. MC DONOUGH: I'd like to make a short comment.

14 As our utility has also gone through this process,
15 and that is that we have found that there is really a wealth
16 of information out there that is under the basic category of
17 reconnaissance level, and also I'm sure every utility goes
18 over the sites rather well themselves as far as observing
19 what the terrestrial ecology is. The Departments of
20 Conservation, Fish and Wildlife Service know the rivers and
21 streams and lakes rather well.

22 We find that probably the most difficult task
23 is to try to come up with a common data base because, of
24 course, some sites you know more about than others. But with
25 the criteria that they have here it appears to me that it is

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mpb7

1 reasonable that going through this on a reconnaissance level,
2 some flyovers and what not, that you should be able to come
3 out with the assurance, as they state here, that the sites
4 selected are among the best that are obtainable.

5 MR. BLACKMON: Further comment in that same
6 light I think might be this:

7 I had some problem with this yesterday and was
8 trying to think of an analogy of it. The more money we are
9 willing to spend the better our confidence level is going to
10 be that the reconnaissance level information we have is good.
11 And if we make a mistake once, it's shame on us. If we make
12 that mistake twice, it's shame on somebody else. And some-
13 body else starts looking for another job.

14 The analogy that I finally came up with was this:

15 If I have to buy a car, I'm going to have to do
16 some research to find out what kind of car I'm going to buy.
17 Reconnaissance level information includes such things as look-
18 ing in the newspaper and seeing that all the dealers are
19 advertising cars, and I set my threshold and I'm not going to
20 spend any more than \$7,000. So immediately I can weed out
21 many automobiles.

22 (Laughter.)

23 Then I take a look and I go out and buy one of
24 these books and in looking at the books I see that \$7000 is
25 substantially more than I have to spend to get an automobile.

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1 So I set my limit at \$4000. And I take one of those books and
2 I can see all of the bells and whistles that I can add onto
3 an automobile to push the price back up to \$7000, but I'm
4 not willing to pay for the bells and whistles.

5 So I get the book and I determine from that book
6 that there are only three different manufacturers that make
7 the kind of car that I'm willing to buy for the money that
8 I'm going to have to spend for that automobile. That is still
9 reconnaissance level information.

10 And until I make the decision that I'm going to
11 buy Automobile X and I go into the showroom and he says, Well,
12 that book you just read is two years old, we can't sell you a
13 car for that any more, that's shame on me. And if I go into
14 him and he says Yes, those prices are right, we can sell
15 you the car for that money, or you may want to go ahead and
16 go across the street where they've got a ten percent discount
17 on cars this week, then that's more than reconnaissance level
18 information.

19 MR. ERNST: I would extend it further and have
20 some site specific investigations of several autos, I think,
21 in the process.

22 MR. BLACKMON: You never know when you're going
23 to get a lemon.

24 MR. VESSELS: That makes me feel better, that
25 you're going to look a little further.

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1 You know, we've been talking about the fact that
2 we do it all on the basis of reconnaissance level data now,
3 and the utilities presumably are doing all these fine jobs.
4 But then I keep thinking from my experience, why is it we're
5 always picking the other site; why are we not going to the
6 primary site; why isn't it the best site?

7 So if the process is so great, why isn't it work-
8 ing now?

9 I think you have to go a step beyond reconnaissance
10 level data. Yesterday it was said several times that this is
11 a semantic problem. And I talked a little bit before we got
12 together with some people, and their concept of reconnaissance
13 level data is not my concept. It is a much higher point.

14 For instance, in aesthetics, what is the
15 reconnaissance level data that's available on aesthetics?
16 You have to do something special. You don't just go out and
17 survey literature, you have to specifically do something.

18 I was wondering whether -- you used the word
19 in your proposed criteria A1 "or brief field investigations",
20 if you meant that, or if you really mean "and brief field
21 investigations", and whether it would help if we talked
22 about consultations with regional and local experts as
23 opposed to experts.

24 I'm trying to get out to where the action is,
25 to where there may be people who really understand what the

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mpb10

1 aesthetics problems are, and I don't think they can be solved
2 necessarily that any utility headquarters is going to do this,
3 and I know it can't be solved in Washington, D.C.

4 It's just that I think -- I really believe it's
5 got to be something more than reconnaissance level. I think
6 I satisfied with reconnaissance level to do the rough screen-
7 ing to come up with the six sites. I think I can see that
8 that's all right. But I frankly believe that you're not going
9 to get involved with aesthetics in that screening. I think
10 it is out at that point.

11 But when you start doing the six sites to narrow
12 down the other one, I think you have to go further than that.
13 I really believe that, my experience has convinced me that
14 you're never going to do it and get satisfaction unless you
15 do that.

16 MR. ERNST: Let me suggest that I think we under-
17 stand the various opinions of the participants sufficient to
18 improve our writing on this subject. And I don't think I
19 really disagree with any of the things I've been hearing.
20 On aesthetics I have a little bit of a problem because I'm
21 not sure that CP level data would find it either.

22 I think the fact that the environmental process
23 found it and that you have a DES that gets circulated, and
24 then some other information comes in, and we do have to rely
25 on people out there where the action is in order to be sensitive

mpb11 1 to local values, and some of these will not come forth
2 until you are in the public process, and that's why I
3 personally favor an early public process.

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1 I think we have enough that we can close on this
2 unless there's an objection from the panel.

3 MR. CALVERT: I don't have an objection. I would
4 just like to bring one point up.

5 I think we would agree that the reconnaissance data
6 gets us down to about six sites, and the reconnaissance level
7 data normally gives us sufficient information to identify major
8 issues.

1.230 9 It might be that the applicant misinterprets the
10 over-all feeling toward a subjective feeling such as aesthetics.

11 Speaking personally, having been involved with
12 siting processes since 1969, in 1969 we were trying to iden-
13 tify aesthetics as a criterion from looking at observation
14 points where we believed that people would be, and we tried to
15 get some feeling of the impact of this.

16 Now it might be that the wrong decision was made.
17 Perhaps at that stage it was believed that this was an accept-
18 able environmental degradation, if you will, and that this
19 issue was wrong. But I believe that the reconnaissance data
20 in fact identifies the issue, and then you have to get in and
21 do the detailed studies on it.

22 MR. ERNST: I think that is again in consonance
23 with what we are trying to do, and we'll just have to do it
24 better in writing the words, I think.

25 MR. MESSING: Excuse me, Mal. I do have one

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1 objection to the restatement of our understanding, and I can
2 summarize it very quickly.

3 I think I've been persuaded that reconnaissance
4 level information is normally sufficient to do the site screen-
5 ing to bring us down to six sites. However, if we go to a
6 rule we do want -- we want specified the type and the level of
7 the information required. If that is normally available through
8 reconnaissance level techniques, that's fine. If it requires
9 additional work then that becomes a burden on the applicant.

10 But we are interested in-- You know, if we look
11 at this in terms of a rule, we want to know certain charac-
12 teristics of hydrology, seismicity, terrestrial ecology,
13 population density, and as I say, I'm persuaded by the conver-
14 sation that this is normally available through reconnaissance
15 level, but that's not the way the rule should be worded.

16 MR. ERNST: I have to ask one thing, and I guess
17 I may have to ask for a vote on the panel on this one.

18 If you were faced with a choice of not having any
19 rule in this area, or having a rule that does not get to that
20 degree of specificity, realizing that we still are not sure
21 that we can come up with a rule -- certainly at this stage of
22 the game I'm positive that we can't come up with a rule that
23 gets to that degree of specificity. We are working on some
24 guidance in this area and trying to develop this very same type
25 of thing you're talking about. Whether we succeed or not I

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1 don't know but it's a matter of a couple of years' process,
2 I'm sure.

3 If it's a question of not having a rule at all, or
4 having a rule that goes to that depth of specificity, which
5 way would you vote?

6 VOICES: No rule.

7 MR. ERNST: All those who would favor no rule,
8 that you cannot get to that degree of specificity, I would
9 like to see a show of hands.

10 (Show of hands.)

11 MR. MESSING: I don't see that we're talking about
12 different degrees of specificity. We're talking about the
13 structure of the requirement, not the degree of specificity.

14 I think the reconnaissance level information as
15 it has been described -- I mean if that is what was used in
16 Seabrook and in others, reconnaissance level information can
17 provide us with more specificity than we might need. It's not
18 a matter of the degree of specificity; it's a matter of the way
19 in which we structure the requirements.

20 We do want to know that if you're going to decide
21 that these six sites are among the best available, that we've
22 got a minimum amount of information about the water charac-
23 teristics and the air, about the seismicity, things such as
24 this.

25 MR. ERNST: I think this is something we will not

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1 be able to resolve because my understanding of what you're
2 talking about is clearly different than what you're talking
3 about because what I think you're talking about I don't think
4 we can put in a rule at this time, or maybe never. And maybe
5 I just need a better understanding of what you're talking
6 about.

7 MR. MESSING: I think we can.

8 MR. ERNST: Let's leave it for now, and maybe if
9 you can come in to us with a better description of what you
10 mean it might be very helpful.

11 MR. MC DONOUGH: Can I make just a short comment,
12 please?

13 I think if we get into the threshold criteria and
14 then come back, I think this will put it in the proper per-
15 spective because if you can get the basic reconnaissance level
16 data that will fill in the blanks and make people firmly
17 convinced that their threshold criteria has been satisfied, I
18 think it answers the question.

19 So why don't we defer this and then come back to
20 it. Okay?

21 MR. ERNST: Fine.

22 I was also going to ask for no discussion now but
23 just a poll of the panel. I think my five or ten minutes on
24 the subject is getting out of hand here.

25 Yesterday there was some discussion about safety

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1 issues or what one might call residual risk, however one de-
2 fines that and however one calculates it, which you know I
3 don't think has any easy answer, whether that should be part
4 of the general considerations for alternative sites.

5 So this is as separate from the standard way of
6 doing business, considering safety as a go-no go meeting of
7 safety criteria. But should this residual, whatever it is,
8 risk be a consideration in the question of alternative sites,
9 recognizing the difficulty in trying to describe what is meant
10 and quantify it.

11 I would just like a sense by Yes or No of whether
12 this might be a desirable thing to do, to have this residual
13 risk aspect be part of the alternative site analysis.

14 If I could have a show of hands of individuals that
15 believe that this would be a useful consideration?

16 (Show of hands.)

17 MR. ERNST: It's almost unanimous, I think.

18 Thank you very much.

19 MR. MC DONOUGH: Could I put in a minority comment?

20 The reason I didn't vote Yes was because I under-
21 stand there is a very comprehensive internal study going on
22 within the NRC, trying to develop this thing, and I think it's
23 kind of presumptuous not to wait for that kind of thing.

24 MR. ERNST: I think it's a very complex subject
25 and I wouldn't want this show of hands to represent the

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1 considered judgment that indeed that's a good thing. I'm just
2 trying to get a sense of what the feeling might be.

3 MR. MC DONOUGH: Just as long as it doesn't go
4 that this panel is on record as --

5 MR. ERNST: It's an extremely complex subject and
6 I think one of the difficulties would be the criteria for
7 making judgments, and how do you analyze this.

8 MR. BLACKMON: I think inherent in the siting of
9 the power plant is the consideration of safety issues. It
10 cannot be divorced from environmental issues. I think that is
11 the sense in which we are talking.

12 MR. VESSELS: I thought the sense that I voted that
13 we had to have it was in looking at what the New York Power
14 Pool did, the New York utilities. The first thing they looked
15 at was as a deferral criterion, does it mean you can't ever use
16 the site? But they defer all the sites that have seismic
17 activity, and it seems to me to be the right way to go. You
18 get rid of it; you don't have a problem; you don't have to
19 engineer around it.

20 MR. ERNST: Okay. Maybe there's a little bit of
21 confusion here because mine was a question with regard to NRC
22 decision-making. Now there's clearly a decisional process
23 that utilities must go through as to whether or not a site can
24 be justified from a safety standpoint, and clearly there are
25 screening processes used by utilities to get to sites that they

eb7 1 feel more comfortable that those sites can be defended from a
2 go-no go.

3 I was not talking about that. I was talking about
4 whatever the residual risk may be and however one might deter-
5 mine it, should that then be placed on the alternative site
6 scale on a cost-benefit kind of a balancing? That was the
7 question.

8 Now with that little bit of added, is it still the
9 same sense?

10 MR. MC DONOUGH: Yes.

11 MR. ERNST: Still the same sense. Thank you.

12 The question was how am I going to use things like
13 this since it's not in the literature. I must confess that was
14 right off the top of my head.

15 We are working in this area, trying to consider,
16 and I think it's a useful sense, feedback to the NRC. I look
17 at it that way.

18 Now I could ask the other question: If you cannot
19 develop this kind of thing except maybe in the next two or three
20 years, should a rule be deferred?

21 I haven't asked the panel to vote on that. I think
22 that's a judgment we'll have to make as we proceed down the
23 path of considering the site. I'm not going to ask a question
24 like that. I just wanted to get a sense of what the--

25 MR. CALVERT: I think the issues you're looking at

eb8

1 in siting from a safety standpoint are floods, seismic, and
2 population density, and those are about the only three cri-
3 teria that you use, but they are inherent in any siting
4 process.

5 So I think from that point of view was the reason
6 I had always assumed that it was so inherent I didn't even
7 notice its absence in this. But those are the only three basic
8 issues.

9 MR. ERNST: But currently population density is the
10 only one of these that are explicitly identified as triggering
11 a further or deeper consideration of alternatives. The other
12 two are go-no go kinds of criteria.

13 MR. DINUNNO: Population density in the sense of
14 the environmental criteria are reflections of intensity of
15 land use to some extent, and socioeconomics associated with
16 disruption of a population group. They're not necessarily in
17 the safety orientation.

18 MR. ERNST: Not necessarily; that's right.

19 MR. DINUNNO: It happens to serve two purposes,
20 and the fact that the same population information also gives
21 you, in terms of the effluents, a population at risk, if you
22 will; in the population and demography sense here, one is look-
23 ing at the potential for disruption of urban developments,
24 places where people already exist, the intrusion on that situa-
25 tion.

eb9

1 That's a different sense than applying a safety
2 sense. That's why most of us don't differentiate. When we get
3 population information as it may be involved in connection with
4 a site, it is used in two ways. And I agree with Don that this
5 is an inherent property that a utility looks at. One doesn't
6 differentiate in the deciding process that Well, this is some-
7 thing that I need for NEPA and this is something that I need
8 to satisfy the Atomic Energy Act.

9 That differentiation is made only in the context
10 of the legal framework for doing this, which is partially
11 official in the minds of those of us who are involved in looking
12 for sites.

13 MR. ERNST: Let me try and speed things along here
14 now, since I have succeeded in slowing things up.

15 MR. ROISMAN: Can I ask a question about residual
16 risk?

17 I am unclear as to whether you are supposing that
18 there will have been a safety review that preceded the alter-
19 nate site look, either because you're dealing with a standardized
20 design or because the order of making the resolution is safety
21 first and then the sites. Because if you're not, I'm not sure
22 how you will do the residual risk analysis.

23 I would not agree with the gentleman over there
24 that it is as simple as simply three factors, seismicity,
25 population density, and meteorology, because at least the

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1 population density is affected by what you assume the risks are.
2 One set of population figures will be affected more if we
3 assume that there are greater risks, residual risks, left than
4 another. And that will come into the cost-benefit balance.

5 And then you might start looking at ways to make
6 the risk to that larger population comparable to the risk to
7 a smaller population at another site. That raises economic
8 costs and we begin to get an economic comparison between the
9 sites.

10 And I am unclear how you can make the alternate
11 site determination if you're really trying to go all the way,
12 that is, approve the site without having the safety out of the
13 way first.

clb

14 MR. ERNST: Let me try and clarify and go back to
15 what is in the document. My question was purely to get the
16 sense of the panel, recognizing that the question itself is a
17 complex one. And I'm not sure, even if we all agreed that it
18 was a good idea, I'm not sure exactly of the mechanics of how
19 this would be done, and I don't have any real preconceived
20 notion.

21 That really I think is going beyond the scope of
22 the workshop.

23 What is in the criteria right now is population
24 density and the fact that we do consider costs or possible
25 costs of mitigation in order to make a site safe or environmental

eb11

1 acceptable, and that is in the criteria.

2 The other is going beyond, really, the scope of
3 the workshop. It's a personal request of what might the sense
4 of the panel be because, as I mentioned yesterday, we are in-
5 house looking at this particular question, and I was just
6 interested in the sense of the panel.

7 Let me go on here.

8 There was yesterday a residual item left over. I
9 believe there was a statement by one or two of the participants
10 that other factors -- and now I'm talking about the ones listed
11 on page 12 of the study document -- that there are other factors
12 that perhaps were left off.

13 I don't want to go into those because I think it
14 may be, on a priority basis, more time consuming than it might
15 be worth. But if any participant feels there are other factors
16 that should be included in page 12, I would suggest that in
17 some way, comments coming in or something like that, that these
18 factors be suggested to the NRC.

19 Also in the same vein, I think yesterday a couple
20 of times it came up that Criterion A.3 under Topic 2 was not
21 an appropriate one. In fact, I think Ruth Caplan stated that
22 it seemed sort of absurd to think that alternative sites would
23 be reconsidered at the operating license stage.

24 My statement at that time -- I just want to reflect
25 on it again for the panel's consideration later today, that

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1 if in Topic 7 it is determined that some other criterion for re-
2 review at the OL stage is more appropriate and if that then
3 affects this particular criterion on page 13, we will so
4 modify the criterion on page 13.

5 But again the criterion on page 13 only states
6 that if the question is re-raised at the OL stage, the appli-
7 cant will be required to provide new information, you know,
8 if it exists, new information to re-raise the issue.

9 With that, I think I would like to leave Topic 2.

10 Did everyone get Supplement Number 1 to the staff's
11 Study Document? It's a two- or three-page supplement.

12 During the coffee break you might check the out-
13 side. It's a two- or three-page Supplement Number 1 to the
14 staff's Study Document. We will be discussing it this after-
15 noon.

16 We are now joined by Tony Roisman. We're pleased
17 to see you here. We gave the opportunity for everyone to give
18 a five-minute opening remark yesterday. If you'd like to
19 exercise that option, Tony, we'd be pleased to hear from you.

20 MR. ROISMAN: Well, I'll only say one thing. I
21 just asked Karin a question and she gave me an answer that
22 would prompt me then to say something on the question of the
23 alternate sites.

24 Both Karin and I, as you know, were involved in
25 Seabrook, and Seabrook was the case in which the principal

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eb13

1 intervenors were opposed to nuclear power, not just Seabrook
2 nuclear power. And yet those same principal intervenors were
3 very active on the alternate site issue for the obvious reason
4 that the alternate site issue was an opportunity to argue
5 against the nuclear power generally for that utility.

6 And when we ultimately got to the place of having
7 to decide, well, did we want any site for the nuclear plant,
8 our answer had to be No, we were not in favor of any site for
9 a nuclear plant. And when I say "we" here, I'm speaking of
10 the client here, the New England Coalition.

11 What that makes me realize is that a lot of the
12 pull and push that formed the basis for the controversy over
13 alternate sites occurs because people are using the alternate
14 site controversy as the available mechanism for fighting a
15 different fight, a fight which legitimately, in my opinion,
16 ought to be fought, and ought to be fought on a plant-by-
17 plant basis. But because of the order in which things come,
18 particularly the environmental review proceedings, the safety
19 review, and also the absence of certain important issues, at
20 least from our perspective, important safety issues in the
21 safety review, and the throwing of them over to the environ-
22 mental side, the so-called residual risk which you would call --
23 the waste problem I would put into that category -- we don't
24 get that on the safety side. We have to deal with it on the
25 environmental side.

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eb14 1 The unresolved safety problems we generally have to
2 address as the residual risks. The regulations are going to
3 be met but there is still a risk.

4 We are forced into arguing in an environmental
5 context what we really want to argue in the safety context,
6 that is, we really want to be able to go "go-no go" on the
7 plant. And if that issue were out of the way, in other words,
8 if you had already decided there is a need for a facility and
9 it should be a nuclear plant, I mean it's just a question of
10 which place it's going to be put, and you've defined that it's
11 got to be within a certain geographic area. You can't have it
12 on the West Coast if your load is on the East Coast. I mean
13 you can do that fairly fine, that you wouldn't get the level
14 of controversy over alternate sites.

15 Now I know that the Commission has traditionally
16 done this in reverse order. That is, after the Calvert Cliffs
17 case the Commission opted for let's do the NEPA review first,
18 and the safety review second, and that sort of has become the
19 vogue.

20 But it seems to me that the focus of citizens'
21 concerns about nuclear power have been moving more and more
22 into the safety area, and that that is the more controversial
23 question. Some of these questions are admittedly subject to
24 generic resolution, certainly with regard to classes of reactors
25 and sizes of reactors.

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1 But however you resolve them, if you have them out
2 of the way and the parties came to the alternate site review
3 with the knowledge that we know there is going to be a nuclear
4 plant built, we know that it is going to have to start con-
5 struction by a certain date to meet a need, and essentially
6 no one can reopen any of those questions, I think the level of
7 controversy would be substantially reduced, and developing
8 criteria for how to deal with the alternate site question would
9 be markedly easier.

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1 I think for myself, and I suspect for Karin too,
2 that it's frustrating to be talking, and that's how we got into
3 the residual -- this question a moment ago -- it's frustrat-
4 ing to talk about the alternate site question when the ques-
5 tion we have in the front of our minds is well, should it be
6 nuclear or not?

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7 MR. ERNST: Thank you.

8 I think that is the sense that we're trying to
9 proceed in the workshop, and that's why the two presumptions
10 made, or assumptions made in the workshop was that there is
11 a need and the nuclear question has been resolved. Because
12 I fully understand and agree with the point that you make. I
13 would disagree I think only in one area.

14 When I speak of residual risk I'm talking about
15 residual plant risk, and I don't think I would put in the
16 same category the waste problem as a residual risk problem.
17 It sounds like it lowers the importance of the particular --
18 and I'm sure that wasn't meant.

19 MR. ROISMAN: Do you mean in the workshop that
20 you're assuming that on a plant by plant basis it has been
21 decided that the plant is needed and that it should be
22 nuclear, or are you saying for purposes of discussion we will
23 assume it but it will not have actually occurred?

24 MR. ERNST: For purposes of discussion in the
25 workshop we're assuming that the plant is needed, and the

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1 plant is nuclear; and the question now is where to site, and
2 what are rational decision criteria to proceed with that
3 decision.

4 So it is for purposes of the workshop.

5 MR. ROISMAN: But to put it in NRC terms, then
6 that's a non-mechanistic assumption, is that right?

7 (Laughter.)

8 You're not assuming it really happens, we're
9 just making the assumption so we can have a discussion?

10 MR. ERNST: Have it your way.

11 (Laughter.)

12 Unfortunately we took the first -- maybe not
13 unfortunately -- the first 45 minutes going back over yesterday's
14 material. That may well turn out to be a plus, however,
15 because I suspect if we didn't address it today we would have
16 had to address it for an hour and a half tomorrow.

17 So it might be better to have caught it while we
18 were fresh.

19 The next subjects in many respects I thought might
20 be more difficult, in other respects may not be as difficult.
21 I think we got through some of the understanding problems so
22 that people start communicating better on the same level of
23 discussion, anyway, or definition of terms in the past day
24 and that's helpful and it may speed things along for the
25 future subjects.

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1 The complexity of the subjects we will discuss
2 today are really the facts that we get into more specific
3 criteria and numbers and things like that, which I'm sure
4 there will be some disagreement with.

5 I had a sense yesterday, and I think it has been
6 reinforced last night, and even somewhat again this morning,
7 that the sense of the panel is that a rule would be useful.
8 And there may be some disagreement with that, but most of
9 the opening statements and everything indicated that a rule
10 would be useful, but they had certain problems in certain areas.
11 At least that's the sense I got out of it.

12 If that is an incorrect sense, somebody should
13 tell me so.

14 But let me challenge the group that if indeed the
15 sense is that a useful rule should come forth, and I would
16 submit that if that is the case it should come forth as
17 expeditiously as possible, and if there is disagreement with
18 criteria proposed in the next five topics but general agree-
19 ment on the philosophy of what we are trying to do, I would
20 like to challenge the panel to suggest different criteria that
21 should be used.

22 We have done a lot of soul search and a lot of
23 in-house discussion on what some criteria might be to follow
24 a certain philosophy that seemed to make sense. If indeed
25 the philosophy or the approach is reasonably good, then what

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1 I would like to see out of the panel, where they disagree
2 with the criteria to suggest other criteria that would be
3 more operative, but would still achieve the end goal. And
4 that is the protection of the environment in a reasonably
5 cost-effective manner, and a rule that can be put out that
6 is understandable.

7 So with that as hopefully a guiding light, I
8 would like to get into Topic Three.

9 Topic Three, I think we had some discussion on
10 at various times actually yesterday. Topic Three basically
11 proposes that we have an earlier review of the alternative
12 site question, or at least the option for an earlier review
13 of the alternative site question, perhaps even before the
14 utility develops detailed baseline studies on the proposed
15 site.

16 That is in essence the criteria proposed in
17 Topic Three.

18 The questions posed to the workshop, there are
19 three -- or four, four questions, and without further ado,
20 I would like to get into the address of these particular
21 questions.

22 DR. MASSICOT: Mal, if you are assuming by
23 this earlier review that you do not have detailed -- or are
24 you assuming that when you're talking about an earlier review
25 you do not have detailed data on the proposed site? The

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1 reason I'm asking that is I understand the "obviously
2 superior" criterion is partly one of the rationales for that,
3 that you would have more detailed data on the proposed site.
4 And if you're considering a comparison of the proposed site
5 with alternate sites where you have the same level of detail
6 at the proposed site, I'm wondering whether there would be
7 any impact on the use of that "obviously superior" criteria.

8 MR. ERNST: Let me state the position being taken
9 in this document. We are not specifying whether you should or
10 should not or shall or shall not. I think what was stated,
11 and I believe it was Joe Dinunno, but I'm not really sure,
12 was a good characterization. And I think what I also said
13 before, that if you do not have detailed site specific data
14 at this time you are running a slightly -- and when I say
15 "you", the utility, and in general the public, if you have
16 to redo this evaluation and then come up with a different
17 decision, it does hurt the public also -- you are running
18 a slightly higher risk that the decision might be overturned
19 if you indeed found some substantial impact that was hidden
20 in the earlier review.

21 I guess it is the Staff judgment that this less
22 detailed data, namely reconnaissance level, which is essen-
23 tially everything except detailed site specific long term
24 studies -- let's not get back into Topic Two again -- that
25 those data really normally are sufficient to make good

mpb6 1 judgments as to the relative comparison of sites. And that
2 generally the detailed data that is collected are more aimed
3 at the exact design and operating characteristics of the plant
4 on that site to reduce further any residual adverse environ-
5 mental impacts. And that's generally the premise that the
6 Staff has gone forward with, that while the lack of detailed
7 information, CP level information on the proposed sites may
8 be of some consequence, the Staff feels that this is a smaller
9 factor in the consideration of "obviously superior" than the
10 other factors.

11 What this might do is if you have a site that is
12 questionable, you might have a more risky decision, and I
13 think what that would mean is if you did not have very detail-
14 ed site specific information -- and I will leave that judgment
15 up to the utilities -- you might likely be coming in with
16 sites that are easier to approve than sites that have less
17 chance for significant adverse environmental impact.

18 In other words, the rule might actually lead one
19 toward agreement on a slate of sites that very likely will not
20 have any unidentified impacts based on available reconnaissance
21 level information just because of the somewhat added risk.

22 Do those words help a little bit?

23 DR. MASSICOT: Could the Staff, then, or could
24 the NRC make a decision in an early review of alternative sites
25 where they say well, the proposed site is okay because no

mpb7

1 alternative sites are obviously superior, and could someone
2 say But you're using too severe a standard of proof, you
3 should only have to show that they are reasonably superior or
4 something like that, since you don't have one of the two
5 requirements, as I recall, for the justification of the
6 criterion of "obviously superior".

7 MR. ERNST: I think we'll have to leave that up
8 to the lawyers.

9 I think technically the feeling is that "obviously
10 superior" has to do with the confidence that you've made the
11 right decision. That's basically our interpretation in the
12 study document of "obviously superior".

13 This confidence has several factors that must
14 be considered in making the decision. But I would rather
15 equate the "obviously superior" to the confidence that the
16 agency is making the right decision to move the site, and the
17 factors that affect that confidence may have where may be
18 several factors and these factors may have different sig-
19 nificances depending on the specific situation.

20 I don't know whether it is profitable to invent
21 different kinds of terms for different kinds of situations.
22 What we're talking about is confidence that you made the
23 right decision.

24 MS. CAPLAN: Excuse me.

25 My understanding from what we had said before was

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1 that this reconnaissance level data is used to get to your
2 six sites. When you're going to go beyond that level of
3 decision, the decision as to which of the six sites would be
4 the best site, that you're going to have to have more data.
5 You're not going to do it on the reconnaissance level data.

6 And therefore when you go to make your clearly
7 superior judgment, you're not doing it just on reconnaissance
8 level data.

9 Maybe there's a disagreement there.

10 MR. MESSING: That's not my understanding of it,
11 and it does get to the issue of timing.

12 My understanding is that using reconnaissance
13 level data to get to the six candidate sites, but that you're
14 making an "obviously superior" decision at that level, which
15 is prior to the point at which an applicant submits an
16 application for a proposed site, and it's only at the time
17 that the applicant submits the application that you go to the
18 site specific data, as Mr. Dinunno described it earlier.

19 So that we are -- or you would be making the
20 decision on "obviously superior" based on reconnaissance
21 level or candidate site level data rather than proposed site
22 data.

23 I see two heads there nodding in two different
24 directions.

25 (Laughter.)

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mpb9

1 MR. ERNST: Let me try and state as simply as I
2 can what is proposed in the study document.

3 What is proposed in the study document -- and
4 let's not determine how we get to the candidate sites, that's
5 Topic Five, and I don't want to get enmeshed in that -- but
6 the information used to get to the slate of candidate sites
7 is reconnaissance level, clearly. The information used to
8 make an obvious -- a decision on "obviously superior" is
9 also reconnaissance level. It may also have some site
10 specific information, long term studies on the proposed site
11 if the applicant so desires. If he does not do that, there
12 may be some risk that the detailed studies done later on
13 could overturn that previous decision.

14 But what the applicant would come in with is a
15 slate of candidate sites, one of which is the proposed site.
16 And we'd make a determination of whether there is another
17 site in that slate that is "obviously superior" to that
18 proposed site. So, there would be a decision on the proposed
19 site.

20 MR. MESSING: But on the reconnaissance level data.

21 MR. ERNST: On the reconnaissance level or at the
22 utility's option including site specific data, depending on --
23 it's a permissive kind of a thing the way it is written.

24 MR. MESSING: But the fact that one of those
25 six sites is the proposed, the utility's preferred site, does

mpbl0 1 not necessitate a higher degree of information for that site?

2 MR. ERNST: No.

3 The decision that would be made by the NRC at
4 that time would be only on the alternative site question.
5 It would not be a site acceptability decision at all. At
6 some later time there would be a site acceptability decision
7 which could put at risk the previous determination regarding
8 the alternative site question, if indeed you come up with
9 something based on the detailed data that shows clearly a
10 safety problem, but even in the environmental area, a big
11 impact that just hadn't been found before. But included
12 in that reconnaissance level investigation, I submit
13 reconnaissance level investigations could have picked up
14 just as easily -- or not picked up, as the case may be -- the
15 Green County problem on aesthetics.

16 I think I agree with the previous determination
17 that it would be very difficult for the Staff or anybody to
18 go out and find that kind of a thing on their own. But the
19 circulation of the DES did bring new information to mind.
20 I claim that is still reconnaissance level information. It's
21 just a matter of finding the concern and the process discovered
22 that, not the Staff study or the applicant study. It was
23 the process that found that.

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25

ld ebl 1 That would still be found in this suggested process.
2 You would still have an environmental impact statement. The
3 decision would be on alternative sites. We would still have
4 a DES and an FES on that subject. So the process would be the
cl 5 same.

6 MR. VESSELS: I would like to speak to something
7 that you said that concerns me. -

8 If we're talking about comparing all these sites
9 on a reconnaissance level basis, I wouldn't have any trouble.
10 But if I were a utility and I really wanted to sell a site,
11 I'd go all out. I'd give you the full data and you would have
12 reconnaissance level data to compare it to, and I think you
13 could really make a case for the other site and you'd have an
14 awful time overriding it.

15 MR. ERNST: I agree.

16 MR. VESSELS: So I wish there was some way you
17 could set it up so that this early comparison-- I want to go
18 early. I want to go as early as we can to get a comparison --
19 is only on the basis of comparable reconnaissance level data.

20 MR. DETER: Yes, I would certainly agree with that,
21 too. I'm afraid that if you come in with high level data
22 on the so-called preferred site that you are really biasing
23 that particular site against the alternatives, and I agree with
24 that.

25 MR. HARLEMAN: I think that's why it's important

eb2

1 that you have the review early, so it is all based upon about
2 the same level of data because if it occurs late, then you're
3 going to have, as you say, a much higher level of information
4 on one site and a disparity on the other sites.

5 I think also the other point on the early review
6 is would it be possible for a utility to narrow down from six
7 at that point to perhaps two, on which he might make a much
8 more detailed study which is more along the line of the two
9 alternate sites concepts employed in New York State now?

10 MR. ERNST: In fact, that would sound better be-
11 cause I'm not-- Maybe we can have a few words for the benefit
12 of the panel, what the New York process is, but I don't think
13 they have this previous step on deciding which two. I don't
14 know what their alternative site process is beyond the two.

15 Maybe a couple of words, Bob?

16 MR. VESSELS: Well, to be honest with you, we're
17 trying to get away from the two-site concept. We would like
18 to go to one primary site and that's why we're pushing very
19 hard on the site survey concept where you're going to end up
20 with a group of sites, a bank or a bucket or whatever you want
21 to call it, of 30 sites.

22 And we really don't care which is the best site out
23 of 30. I mean the rationale then is another kind of rationale.
24 Is it near a load center, or is it economics? Of course we're
25 talking fossil or nuclear. So is it a good fossil site as

eb3

1 opposed to-- And that would probably relate to transportation.

2 But we'd like to get away from it because we think
3 that going the way we presently go of two full-blown, really
4 thorough evaluations of two different sites is very costly
5 and if you can do this early siting process properly, I don't
6 think it is really necessary as long as you're doing the early
7 process on a comparative basis.

8 You have to recognize the fact that as you get
9 into using one of those 30 sites, you may uncover, a a result
10 of a lot of more detailed studies, something that says No,
11 this is a site you should not go forward with. That is a risk
12 that is always there.

13 MR. MESSING: I can speak very briefly to the
14 legislative history in New York on the two sites, and that is
15 that we are looking for something to insure alternate site --
16 alternate energy consideration. At the time, had anybody
17 serious proposed an inventory of all potential sites in the
18 state, there would have been no serious consideration given
19 to that.

20 And so, as negotiations are going toward a bill,
21 there is at a minimum, let's get two sites so there's some
22 mandatory consideration of alternatives. But I think the
23 consensus is that it wasn't well thought out in advance and
24 hasn't functioned as we hoped.

25 The surveying technique is a more sophisticated

eb4 1 planning tool.

1.050 2 MS. SHELDON: I think that points up the problem
3 with having any magic numbers, two sites or three sites or six
4 sites. If you're fixed into that, that can cause you some
5 problems. If you are wedded to numbers-- I think it's an
6 excellent idea to have a number of alternatives to look at,
7 but I heard some comments yesterday about the potential
8 rigidity of this rule, and some of that concern springs from
9 sticking numbers in, and if there's going to be a commitment
10 to the numbers as opposed to the basic motivation for having
11 a variety of sites, I would have some problems with it.

12 I had two concerns about this early site review.
13 One has already been expressed, and that is the difficulty of
14 unseating the chosen site in an early site review if there is
15 a substantial difference between the data that you have avail-
16 able on the proposed site and the data you have on the other
17 sites.

18 I would be concerned also that if you had an early
19 site review and then several years down the line began a
20 hearing process once the utility decided it was time to build
21 the plant, that there would be imposed on the intervenor or
22 other group trying to challenge that site choice or that site
23 data an undue burden to show that there was new information
24 or that an area had not been covered previously.

25 I think that this-- You know, I'm looking at this

eb5 1 from my cynical side. This would give perhaps an undue oppor-
2 tunity to lock up the site on the basis of information that
3 would not be totally adequate to make a decision that the
4 proposed site was the best site, and that there was no obviously
5 superior site to it, and I wouldn't want to see that happen.

6 Secondly-- So my question will be what kind of
7 burden of proof are you going to impose on people who would
8 question the results of the early site review later on?

9 The second question has to do with Item Number 2
10 of the criteria. Maybe we're not there yet. But the cost-
11 benefit analysis and the reasonable cost of delay in moving
12 the site item. Because the utility chooses to go for an early
13 site review, do they automatically get the benefit of having
14 all the costs of delay or moving the site assigned to them
15 if, at a later time, that choice was demonstrated not to have
16 been as wise as it might have been?

17 If that is to be the case I have some concerns about
18 that, that I think defeats the purpose of it.

19 I would just like some discussion on that.

20 MR. ERNST: I think to make sure there is no mis-
21 understanding of what is being proposed, the early review of
22 alternative sites would be a full review as proposed in the
23 staff's Study Document. It should consider all important
24 factors. With respect to siting it would go through an en-
25 vironmental impact statement process to get the public deeply

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eb6

1 involved so that they know what's going on, and a decision
2 would come out of it.

3 If that happens, then it was the feeling and the
4 judgment in the staff document that that is a decision that,
5 to a great extent, the utility should then be able to rely
6 upon in further planning and development of site-specific
7 information, the necessary engineering design, and whatever
8 long-term component commitment is necessary in the subsequent
9 construction of a large facility.

10 DR. FARLEMAN: Can I ask a question on this?

11 MR. ERNST: If I may finish the train of thought
12 for a second?

13 If after that time, when a utility comes in, again
14 in good faith, with the application for a specific facility on
15 that site, then the philosophy in the staff document was that
16 it's in the public interest because it is not the NRC pocket-
17 book or the utility pocketbook that ultimately gets affected.
18 It's in the public interest since a previous full consideration
19 was made to put whatever the cost might be of changing that
20 decision onto the balance scales in a responsible manner.

21 That doesn't mean, I don't think, that the inter-
22 venor would have to make the full case as to what the cost
23 would be or anything else.

24 I think the elements of cost should be legitimate--
25 legitimate costs should be considered on the cost-benefit

eb7

1 scale, is what we're saying here because then it becomes a
2 full social decision as to what are the advantages and dis-
3 advantages in toto of changing that previous decision that
4 was made in full public participation.

5 That is the philosophy. It has problems and nobody
6 is saying that it doesn't have some crunch points. But that
7 is basically the philosophy.

8 MS. SHELDON: Then we're going to need to know what
9 the utility is going to put on the site at the early site
10 review stage. I have no problem with the philosophy and I
11 also have no problem with going through a full and complete
12 early review.

13 But if what we are reviewing is a site for a quite
14 tentative proposal, we don't know exactly what the plant will
15 look like because design questions haven't been decided, the
16 utility hasn't really figured out how much it's going to need
17 in terms of capacity, that kind of thing, if we're dealing with
18 a plant that isn't clearly fixed, that's going to cause us
19 some problems.

20 If what we thought we were putting on the site was
21 a 600-megawatt open-cycle something-or-other and then five
22 years down the line we find it's going to be 2200 megawatts
23 and it's going to have to have 600-foot natural-draft cooling
24 towers, it's a very different item. And I think that defeats
25 the purpose of doing a site review.

eb8

1 The plant and the site should be as well connected
2 as possible during that early time, I think is my point.

3 MR. ERNST: It is the intent in this document --
4 and I hate to interject myself all the time, but I do want to
5 make sure that the intent of the document is understood. And
6 if there's a problem with the intent, we can change the words.
7 I think the words are in there but maybe it is just implicit
8 rather than explicit.

9 I think the capacity of the site must be part of
10 the early information, you know, what is the site going to be
11 used for in terms of total capacity.

12 I think the type of cooling system, not the detailed
13 location of structures and things like that but the general
14 type of cooling structure is an important aspect that need be
15 considered also. And I think that is at least implicitly
16 brought out in the document.

17 And I think we generally know the envelope or the
18 kinds of impacts that you would get from light water reactors
19 with certain general types of cooling systems to make legitimate
20 kinds of siting decisions. And that is indeed built into the
21 philosophy.

22 Now I have tried to stay out of it but I think
23 we're trying to get a firmer understanding of what is being
24 proposed in the Study Document.

25 Now let's hear some remarks.

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eb9 1 DR. HARLEMAN: Do I understand you to say that
2 prior to the so-called early review, the six environmental
3 impact statements for each of the six sites, EIS, as we now
4 know them, will have been prepared?

5 MR. ERNST: No, sir. One on the proposed site.
6 That's what I was trying to make plain, that the utility would
7 propose a site and also submit the slate of alternative sites
8 and a decision would be made at that time through the environ-
9 mental impact statement process, as to whether or not it looks
10 like there is an obvious -- that their proposed site should
11 be rejected at that time because there's an obviously superior
12 site.

13 There will be one impact statement but it would
14 include the attributes of all the candidate sites.
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1E mpbl

1 MR. MATCHETT: If that is the case and an EIS
2 is prepared which includes the characteristics of the plant
3 to be put on the preferred site, it's not clear the differ-
4 ence between that EIS and the one that we prepare now.

5 MR. ERNST: The difference would be now you have
6 site specific information. You're required have long
7 term baseline studies. We know the location of intake and
8 design pretty much, or at least the characteristics of intake
9 and discharge structures. We know a lot of detail that to
10 some degree, or to a large degree is aimed at mitigation of
11 residual adverse impacts at the site.

12 But I guess it is the Staff's judgment that know-
13 ing whether or not you're going to have cooling towers and the
14 ultimate capacities of that particular proposed site,
15 together with the known general boundary of effluents that
16 come from a power plant, a nuclear power plant, is sufficient
17 to make good relative siting judgments of one site versus
18 another, not sufficient to get down to the engineering
19 details of exactly how you design the plant and locate
20 structures, but good enough to make reasonable siting deci-
21 sions of one site versus another site.

22 MR. MATCHETT: My feeling is that the
23 two issues, making siting decisions and the characteristics
24 of the plant, are so closely tied together that it is very
25 difficult to separate them this way. It would take great care

mpb2 1 in specifying the requirements of the alternative site EIS
2 as compared to the EIS that we prepare today. Otherwise
3 there would be tremendous confusion when people are planning
4 as to the amount of data and analysis that is required.

5 MR. BLACKMON: Let me make a comment here. We
6 may be getting a little bit offscale.

7 Number one, I don't think that it should be
8 mandatory for an Early Site Review of alternative sites. I
9 think that that would be contrary to what we're trying to do,
10 because what will happen, if we do get caught in the pinch
11 and have to go in with an application in the alternative
12 I would say is this, and I know sometimes the Staff cannot
13 do it and sometimes the applicant cannot do it, but there
14 are things called blinders. And the alternative site
15 analysis and alternative site review is what we currently
16 put into Chapter 9 of the environmental report.

17 Unluckily in many cases the information that is
18 in Chapter 9 for the alternative sites, other parties then
19 turn around and try to use that information which is
20 reconnaissance level, much of it to more detail than the
21 review of literature. But at the same time they try to equate
22 that with the site specific information on the proposed site,
23 so that we have two different animals there.

24 History indicates that, at least for us, that
25 we have had parties where we have had site specific information

mpb3

1 for three years onsite with regard to water quality, and we
2 make these findings -- not these findings, but we make these
3 analyses, and the analyses indicate that one time during the
4 life of the plant we may have a problem with the low flow
5 situation in the river. To that they then try to equate the
6 fact that the reconnaissance level information for the other
7 sites show that that would never be necessary.

8 Well, that's two different things.

9 The other thing is that from a utility viewpoint
10 after we screen down to a reasonable number of sites, we do
11 a further review of reconnaissance level information and we
12 come down to a manageable number of sites. It is reasonable
13 I think to say that unless guidelines, criteria, technology,
14 and all the other things that are involved with power plant
15 siting change, that each one of those sites is then going
16 to be a good site, and the decision as to which one is the
17 best site is going to be based on such things as timing,
18 load centers, socioeconomic impacts, and this time frame
19 versus another time frame ten years down the line.

20 We may end up with three excellent sites. You
21 can't determine whether one is any better than the others
22 except that you decide that the site in the southern end of
23 the area may be the one to build at this time, and then two
24 years later you might start construction of a site on the
25 northern end of the system.

mpb4

1 The inventory then says that you've got good
2 sites throughout, and the decision as to which one is the
3 best site at this time is something other than environmental,
4 strict environmental type information.

5 The timing, we were talking about the timing of
6 the Early Site Review, or the alternative site review. I
7 think, as I said, I do not think that an alternative site
8 analysis should be mandatory as a first step. In other words,
9 we don't need any more steps in the licensing process than
10 what we've got now. It can be a part of the licensing
11 process, it rightly should be.

12 But the alternative sites should be compared by
13 the NRC Staff at the same level of information that it is
14 prepared by the utilities, and that is with the best
15 reconnaissance level information available. The site specific
16 information for the proposed site is not the type of informa-
17 tion that should then be compared to reconnaissance level
18 information on alternatives.

19 We are right now looking at something on the
20 order of a 14 year lead time from the day that a utility
21 says we need more energy until the point where it can be
22 brought on line, to the nuclear point. A fossil unit is 13
23 and a half. So what difference does it make whether it's
24 fossil or nuclear?

25 Increasing the length of the review is doing

mpb5

1 nothing more than making the need for power question even
2 more difficult to answer. If we can say -- what Tony was
3 saying before is a good point. That is that the need for
4 power issue is separate from the methodology for alternative
5 sites.

6 If we can say that eventually some time down the
7 road we will need more energy, we don't know what it is going
8 to be, when it is going to be, or anything else, but we do
9 have to have a site for it, then let's go ahead with the
10 siting process, so that everybody who will be involved can
11 get involved and know substantially ahead of time that a
12 plant is proposed for that area, or that it has been deter-
13 mined that that location is an adequate site for a plant.
14 When and if it will ever be used is another question.

15 MR. ERNST: One point of clarification:

16 The Early Site Review rule in the regulation
17 does not require a proving of need for the facility.

18 MR. PETERSON: Following up on his statement,
19 how early is early, just in terms of real years? What are
20 we talking about?

21 We do say permission has to be given two years
22 prior to the time of a Limited Work Authorization. But what
23 do you mean -- when do you actually make the application?
24 What sort of time were you people thinking of?

25 MR.ERNST: I don't think we were thinking of

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1 anything different at this stage of the game than what is
2 currently in our rules, and that is a five year -- I think
3 the legislation measure talked in terms of ten, but my own
4 inclination is not to touch that subject in this particular --

5 MR. PETERSON: That would be five years plus
6 the two years?

7 MR. ERNST: Right now, you see, an Early Site
8 Review is talking in terms of five years before an application
9 is made to construct a specific facility on the site, and I
10 wouldn't envision touching that particular aspect.

11 What the rule also says, though, is you don't
12 get two bites at the apple for Early Site Reviews. You come
13 in once, and that's it. And the only thing that we're talk-
14 ing about here is should that particular rule be modified to
15 say that if you want to come in, still within the five
16 year period, but at an earlier time just to get resolution
17 of the alternative site question, and then you want to come
18 in a year or two later with your site specific data and get
19 that out of the way before you come in with your plant design,
20 that's the only thing that's being affected by the Staff posi-
21 tion.

22 MR. PETERSON: We started talking about, it seems
23 to me, a whole scenario, a sort of Flash Gordon exercise.

24 The need is conceivably 19 years away. Your
25 reconnaissance level data, weighing the impacts of a plant, is

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1 based on presumably work that has already been done, work
2 that is maybe five or ten years old for impacts which are
3 going to be occurring 20 years down the road, when presumably
4 by that time you're going to have a lot more information,
5 which all comes down to the point that we're really talking
6 about awfully long lead times.

7 We're talking about the things that are being
8 built into it. It's going to be very difficult, it's already
9 almost impossible, it seems to me, to really figure out what
10 the needs are really going to be.

11 We're talking also now about what the impacts --
12 it's becoming virtually impossible to figure out what the
13 impacts are going to be too because once you start using
14 incredibly long lead times we're reaching a very difficult
15 area.

16 I think it just does lead to -- what's going to
17 happen, you can predict what's going to happen. You'll get
18 these sites banked or you'll get them selected. Five or ten
19 years down the road you'll start to build and people are
20 going to be raising all kinds of hell about it. And they'll
21 say, Well, listen, this study says this, and they'll say, Well,
22 the study didn't come out until three years after the selection
23 was done. And you really went into all sorts of social problems.

24 MR. ERNST: Again, let me say what we're going to
25 get at, what we're trying to get at.

mpb8

1 If there are better suggestions, let's have them. What we
2 have now is a process that's long, but it's also a process
3 that, again, assuming there's a determination that there's a
4 need for the plant and nuclear is it, that long process still
5 has to have an answer as to what is the site or where is the
6 site that this facility should be located.

7 And the problem that we have is that it is real
8 that there is a commitment to a site under our proposed way
9 of doing business -- I mean, under our current way of doing
10 business, that is a substantial commitment.

11 The case of Green County is clearly a substantial
12 commitment of resources. And what the question is is whether
13 or not we need this process alone. And if we do, what weight
14 do we give this commitment, this third of a billion, if indeed
15 that is the right number, what weight do we give that.

16 It's partly my money, it's partly your money, and
17 that's what we're talking about. Is there a better way to
18 get a reasonable decision early where we don't have to put
19 double jeopardy on our pocketbook.

20 MR. MESSING: I would like to speak on the pro
21 side of 3.1.

22 In other words, what are the considerations
23 important to the usefulness of the early review of alternate
24 sites as a possible bifurcation of early site review process.

25 Under the existing Early Site Review process we

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1 have two channels. The first, as I understand it, is one that
2 results in a nonbinding -- a nonbinding finding about the nature
3 of the site and can be conducted in the absense of construction
4 permit applications.

5 That is, if somebody, either a potential applicant
6 or a state wants to review a potential site, and they don't
7 have an application, they can come in and get a general feel-
8 ing from the Staff that it looks good or doesn't look good.

9 Alternately, if they don't have a construction
10 application then they can get a rolling review of it.

11 Okay. The purpose of that is to provide early
12 public participation in the general planning of electric
13 utility systems, so that if there is a finding that there is
14 a need for power people will have had an opportunity to
15 express where this power might best be situated.

16 Secondly, to help in the early identification of
17 potential problems. It's the NRC Staff feeling that new
18 information about plate tectonics is going to force us to
19 rethink earthquake severity potential in an area, something
20 like this. It doesn't give you a lot more certainty, but it
21 aids in the early planning, the early public participation
22 and identification of potential problems.

23 What is the purpose of the alternate site review?
24 It's essentially the same, except that the umbrella is now
25 under the NEPA requirement for alternate site and alternate

mpb10

1 consideration. That is, we're trying to identify what are the
2 potential alternatives in terms of system planning, in terms
3 of the same problems.

4 If we're going to require the multiple sites,
5 let's say six arbitrarily, to meet NRC's current obligations
6 under NEPA and the "obviously superior" rule, then I think we
7 ought to make the early site review, I think we ought to
8 join the two, that is track one of the early site review
9 process, and this NEPA review of alternate sites, so that we
10 are requesting, or requiring now, that utilities come in early
11 on and propose where the potential site areas are.

12 I am strongly opposed to the banking of those
13 sites. I have yet to be convinced that our level of data
14 acquisition and our projection of plant parameters is suffic-
15 ient to allow banking and determination. But I think as a
16 tool to get the public involved in the general planning
17 parameters and to try and signal potential problem areas,
18 track one of early site review is a good way to go, and if
19 we are going toward this multiple candidate site review
20 process, we ought to join the two. And it's a way of
21 requiring early public participation in the planning process.

22 That is one of our objectives, and I think this
23 is basically a step in the right direction. Negotiating the
24 details might be a little tricky, but I really strongly
25 favor this general approach.

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1 MR. ERNST: Thank you.

2 Any other comments on this? Again I have to stress
3 that if we disagree with the philosophy let's talk about that.
4 But let's get to the specifics. If we disagree with the
5 philosophy and the intent of what we're going to do, give us
6 a better way if there is a better way.

7 MR. MC DONOUGH: I believe there really is no ad-
8 vantage to separating out just review of site considerations
9 from the early site review. I think the early site review
10 is the mechanism whereby you can get out basically what you're
11 putting on the site, get behind you those factors that you
12 think are really relevant to the licensing of that site, which
13 in our case would probably--

14 As we have talked around the table here, you'd
15 want the heat dissipation facilities out because that would
16 probably be the one that would impact the most, so we want
17 to get your whole train of intake, discharge, cooling towers,
18 ponds or whatever you're going to use out of the way, and how
19 it fits on the site, and compare it to your other alternatives.

20 We don't feel that-- Going to an early review of
21 sites, going to an early site review and then going in for a
22 CP, you're going through three layers of hearings on basically
23 the same thing. Right now we're having quite a difficulty
24 even getting some of our operating license stage reviews being
25 done in a timely manner, and we're told that staff time goes

eb2 1 to operating plants, operating license stage reviews when they
2 are going to load the fuel.

3 With CPs and an early site review, I don't know
4 where the priority would be on this one. We feel that one of
5 the things that we're looking for in any rulemaking is having
6 some certitude of once these things are out and the decision
7 is made, and go forward. And I think to go in and try to go
8 through a whole hearing process on just the siting issues, just
9 try to come up with six sites without having really concepts,
10 will very likely open up more than when you go in for your
11 early site review and say Well, we've got significant new in-
12 formation.

13 And I think that as far as we're concerned we don't
14 think this separation of the review of sites from an early
15 site review would be worthwhile. We believe in the early site
16 review.

17 MR. MESSING: Isn't there some degree of certainty,
18 a worthwhile degree of certainty that's achieved when you go
19 through an early site review and you establish the hydro-
20 logical and the seismic characteristics of the site? That is,
21 even if we don't put a stamp on it, unless there is significant
22 new information, you know that when you come in for a construc-
23 tion permit application that's the data base, and if it conforms
24 with criteria, that at that point I think you do have a high
25 degree of certainty that those issues will be approved.

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1 That is, anything that is covered in the early site
2 review, barring significant new information, if it conforms
3 with criteria, provides you with reasonable certainty that
4 it will be approved.

5 MR. MC DONOUGH: I'm not sure when you are saying
6 track one-- We had a little problem in semantics yesterday.
7 Track one I'm saying is option one, which is the draft environ-
8 mental, final environmental statement, public hearings, and
9 the Licensing Board decision. That's what we're looking for
10 when we say early site review.

11 MR. ERNST: I think there was a confusion there.
12 I interpreted it differently yesterday and today I think when
13 he says track one he's talking about the CP kind of a review
14 as opposed to a state or--

15 Is that correct?

16 MR. MESSING: The reason why I didn't specify that
17 is because I think that the level of detail and the nature of
18 that decision is going to have to be hammered out, one way or
19 the other. And I think it's a general process that we're try-
20 ing to work toward. I don't expect to reach a resolution out
21 of this workshop.

22 MR. ERNST: I certainly agree. I think it is
23 probably the intent of the staff paper that under the Appendix
24 Q, or whatever it is, which is I guess your track two terminology,
25 this early review probably wouldn't make a heck of a lot of

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1 sense because you want a decision on alternative sites. That's
2 the only usefulness of it.

3 So to go Appendix Q for an early review of alter-
4 native sites probably would not be that advantageous. I think
5 I'm agreeing with you that the intent is to go track one with
6 that, and get a decision on it.

7 - Let me moderate this now. I think we've had a fair
8 amount of discussion and I think there has been some input
9 from the moderator as to what we are trying to say, and maybe
10 not too successfully, in the document. There are two things
11 that we were trying to get judgments on and a vote on as far
12 as this panel is concerned.

13 One is whether or not there should be an optional
14 chance for a utility to come in early with the alternative site
15 part of an application, get a determination on that, and then
16 still at some later time come in early with site-specific data
17 and the rest of the information needed to so-called bank a
18 site.

19 The second thing we're suggesting as an option is
20 that should we make such an early review mandatory?

21 I would like to get a sense of the panel on these
22 separate questions.

23 MR. CALVERT: I have one question which I think
24 might be relevant.

25 Do you in the NRC have any experience of sites for

eb5 1 which the application has been made for early site review and
2 if so, what time frame -- you know, what records do you have?

3 MR. ERNST: I think our experience has to do pri-
4 marily with sites that had been in previously as part of a CP
5 application where the plant was deferred. And I'm not con-
6 vinced that that's fully a legitimate kind of experience for
7 the kind of thing we're talking about.

8 So I think the question of mandatory versus op-
9 tional, it would be difficult to sustain a position. I per-
10 sonally think of mandatory reviews, because I don't think we've
11 had that much experience.

12 As I recall the record of a couple of years ago,
13 when the same point was discussed on early site reviews, it
14 was decided to go optional rather than mandatory because of
15 lack of experience of how this would work, and a reluctance to
16 mandate something that we hadn't gotten a lot of experience in.

17 MR. BLACKMON: In answer to your question, my views
18 on it, and maybe the views of this table over here, are the
19 early site reviews should not be mandatory.

20 Secondly, you mentioned the fact of going in with
21 an alternative site review, then followed by an early site
22 review leading to a CP. The early site review and then lead-
23 ing to a CP is also optional, so I don't think that there is
24 any problem in saying that the alternative site review could
25 be followed by a CP as a second part. But it should not be a

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ebf 1 mandatory thing.

2 MR. ERNST: But you would have no objection to a
3 process that would permit an early review of alternatives and
4 then an early review of the rest of the site-specific data
5 and the proposed site and a CP review?

6 MR. BLACKMON: I'd have no problem with that. As
7 an example, the regulations do take care of a thing called a
8 LWA. Our management has made corporate decisions that we
9 will not start construction at a nuclear plant site until we
10 have a construction permit. We don't care whether it provides
11 for a LWA or not.

12 MR. ROISMAN: Would you consider any other option
13 in your options, for instance an option that would allow the
14 utility to choose to go the early site review route or not in
15 terms of the alternate sites, but if they could have gone it
16 and didn't, then they wouldn't be allowed to use any sunk
17 costs at subsequent review times, so you'd give them a carrot
18 and a stick?

19 MR. ERNST: That is what is proposed in the staff
20 Study Document as a matter of fact. If they do not choose to
21 use the option then they cannot consider costs of delay in
22 arguments regarding the changing of that particular site.
23 That is what is proposed.

24 MR. ROISMAN: In cost of the delay you're talking
25 about all the so-called forward costs?

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1 MR. ERNST: I think they're-- We're getting to a
2 different topic but I do think it deserves an answer at this
3 time. The differentiation is those kinds of costs that must
4 legitimately be borne in order to come before the NRC for a
5 decision could be counted. This is site investigation, things
6 of that nature. The cost of actually having to change the
7 site-- Also, the thing that would be counted is the total cost
8 of a facility at one site compared to another one.

9 Supposing one site had to be hardened. That's just
10 a physical fact. That could also be legitimately thrown in the
11 cost-benefit.

12 But the cost of replacement power because of delay
13 and the cost of physically changing sites, those costs would
14 not be permitted. This is the way the proposal reads right
15 now.

16 MR. ROISMAN: Are you also proposing that at the
17 time of-- If you do it at the early time that if a party wants
18 to come in and give -- and present data more detailed than
19 reconnaissance level data as an argument against one of the
20 sites, or to argue that you cannot make the choices between the
21 sites without more data, are you allowing that argument to be
22 made?

23 At Seabrook, for instance, the controversy ulti-
24 mately appeared to turn in the Seabrook case on whether you
25 had enough data to know that the Seabrook site could be

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1 operated environmentally acceptably without cooling towers.

2 Now would you be ruling out, in setting the recon-
3 naissance level data as the level of data that would be sub-
4 mitted initially by an applicant, the opportunity of a party
5 to come in and say, "For the selection process required in
6 this case among the alternative sites, reconnaissance level
7 data is not good enough," and to attempt to prove that to show
8 that there are some questions that you'd have to have answered
9 that would be crucial, that required more than reconnaissance
10 level data?

11 MR. ERNST: There is nothing that I know of in the
12 proposed criteria that would prohibit a meritorious litigation
13 of that particular point of whether you have sufficient data.

14 DR. MASSICOT: It specifically says on page 12:

15 "In some cases, detailed investigations
16 relating to specific issues may be required."

17 My understanding is, as you stated, a party would
18 be able to argue that it was necessary.

19 MR. ROISMAN: They could make the argument.

20 MR. VESSELS: Can I speak out for mandatory?

21 I'd like to indicate that I think it ought to be
22 mandatory, and I understand what you're saying about sunk costs
23 but I also understand, I think, a little bit about some of the
24 utility presidents who speak to the press. And it may not be
25 in your hearing but you're going to hear about the fact that

eb9 1 it's going to cost five hundred million dollars to shift this
2 site.

3 And I don't say that that's going to motivate some
4 people but it's going to motivate a lot of people. And I really
5 believe it has to be mandatory.

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1 M. J. GORUM: I'll keep this very brief.

2 I would like to suggest that you poll the panel
3 on these questions, that you put second question first,
4 should it be optional or mandatory?

5 My personal view is that it should be optional
6 because personally I think the State of Ohio has some real
7 problems with this. On the other hand, there are those states
8 that think it's a good thing. And you know, why not have it
9 both ways.

10 I'd simply like to raise two questions very
11 quickly:

12 Implicit in this whole thing, and I think Karin
13 got at it to some extent, is the assumption that you are
14 going to have some sort of a standardized plant design,
15 whether it is 600 megawatts, 1000 megawatts or whatever it is.
16 I personally question the assumption, the reality of being
17 able to do that, and will simply let it go at that.

18 The other thing, I think that we're not putting
19 as much emphasis on as perhaps we should, I think we're
20 looking at this whole question largely from a technical
21 point of view and are not giving due emphasis to, you might
22 say, the legal or the due process point of view.

23 I think Tony in his remarks on a couple of
24 occasions this morning already has indicated that for anybody
25 who has serious reservations either about a site itself or

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1 about nuclear power are going to use every bit of the due
2 process which they feel is coming to them in any forum in
3 which they have that opportunity.

4 So as I see it, the fact that you would have
5 an extra opportunity for that to be done is going to extend
6 both in a time and a cost sense the making of that decision,
7 possibly rather than streamline it.

8 That's simply my view.

9 With that, I'm going to simply not say anything
10 more.

11 MR. ERNST: I would like to make one observation
12 for clarity on your first point.

13 I think the standard plant design -- I don't
14 think we talk about that in the Staff study document, or if
15 we did, perhaps it was inadvertent.

16 What we believe is that we know reasonably well
17 the typical effluents and the typical environmental impacts
18 from a plant, whether it be a so-called standard design or a
19 custom design. And this particular rule is not hinged upon
20 a standard design. It is hinged upon general knowledge of
21 the kinds of impacts that light water reactors have on the
22 environment.

23 But I don't think there's a great difference
24 between those impacts between custom versus standard.

25 I think, unless there is great objection here,

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1 I think we've had an adequate display of viewpoints and
2 discussions. I would however like a sense from the panel,
3 and we can just go by a show of hands, as to whether or not
4 a -- there are going to be two questions. We're going to
5 hit the mandatory one second.

6 So if you prefer mandatory, don't let that
7 sway your vote on this first one. We'll get to the mandatory
8 second.

9 Do you think a change in the rules that would
10 permit an early review of the alternative site question, and
11 then a second bite at the apple of the other aspects of an
12 early site review would be a useful change in the rule?
13 Whether or not it's mandatory we will catch second, but do
14 you think it would be useful to have a change in the rules
15 that splits the early site review, permits the split of the
16 early site review to treat alternative sites first and then
17 the remainder of the early site review issues?

18 I would just like a show of hands of people who
19 think that that would be a useful split.

20 MR. MESSING: Excuse me, Mal.

21 I don't understand the distinction clearly
22 enough to be able to vote on it.

23 MR. ERNST: Okay.

24 MR. MESSING: We're talking about two steps
25 prior to the CP application, one being alternate site review

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1 considerations, and then what's the second intermediary
2 step between that and --

3 MR. ERNST: We now have an early site review
4 process which states that as a very early part of a CP
5 application -- your track one -- the applicant can come in
6 and discuss any issues that the applicant desires to discuss
7 all the way from a full CP level site down to seismic, what-
8 ever. That is our current rule.

9 If an applicant comes in and chooses to address
10 seismic, just to get a judgment on seismic for the particular
11 proposed site, we could take that through a process and give
12 him a position on it that has gone through a hearing, that is
13 permitted under our rules.

14 Now, that applicant cannot come in a year or two
15 later with the rest of the site specific detailed studies on
16 that site and get an early review on site acceptability before
17 he designs his plant. You know, that's forbidden. You get
18 one bite of the apple, and that's it. That's in our rules.

19 The only change we're suggesting here now is
20 allow him two bites at the early site review apple, one
21 to resolve any critical questions he would like resolved
22 before he spends a lot of site specific studies on it,
23 studies in other areas, and then let him come in with the
24 site specific studies at a later time.

25 MR. MESSING: But would you be allowing a

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1 determination that carries into the CP application in the
2 absence of the CP the relevant construction permit application
3 data? I thought that was one of the key points in the
4 existing regs, that the NRC would only decide on issues
5 justifiable by the data presented that will appear in the
6 CP application.

7 MR. ERNST: That's correct. Nothing would be
8 left out by this so-called bifurcation. Sooner or later all
9 the detailed baseline studies and everything else would
10 still have to be provided.

11 MR. MESSING: I thought the first question here
12 was the integration of the alternate site review with this
13 process, and I don't hear that.

14 MR. ERNST: All we're talking about here is,
15 to put it quite simply, is there a useful process to permit
16 an applicant to come in early with reconnaissance level data
17 and get a judgment that goes through a hearing on the ques-
18 tion of whether there is an "obviously superior" site. That's
19 all we're saying.

20 MR. BLACKMON: Correct me if I'm wrong, Mal, but
21 as I understand it in an early site review application an
22 immediate, or the first step in that application review is
23 to review the alternative siting methodology and alternative
24 sites.

25 MR. ERNST: No, sir.

mpb6

1 MR. BLACKMON: That's not correct?

2 MR. ERNST: That's not.

3 What is required under early site review
4 application is to come in and describe the early site review --
5 the site selection methodology. But it is not required to
6 compare the alternative sites.

7 In other words, if an applicant comes in and
8 wants to look at seismicity, we are interested in generally
9 how he got to that site to know whether we should expend the
10 resources in looking at the seismic question, but we don't
11 require identification of the half-dozen, or whatever,
12 alternate sites and a detailed comparison to prove that
13 he's at the right site because if you do that you're
14 requesting the same kind of information, just about, that
15 we currently look at at CPs. And he says, Well, what's the
16 sense in coming in and looking just at seismicity. I have
17 to provide everything under the sun anyway.

18 So we do require a look at his process. We do
19 not require a specific look at -- even identification of
20 the alternate sites, much less a specific look.

21 MR. CALVERT: If it is a two-step process then
22 I think I'm going to vote no. If you mean are we going to
23 look at the alternative --

24 MR. ERNST: Optional, though.

25 MR. CALVERT: What I'm saying is the alternative

mpb7

1 site issue up to this point here when we say Okay, you've
2 looked at your alternatives, we have a hearing or something
3 of this nature to say your alternatives are okay, we then
4 move on to this point and we look at the specific site. And
5 we make a decision here saying Well, another hearing process
6 saying Okay, well maybe that site is all right. Okay, this
7 now brings us to the normal start point in a licensing
8 process.

9 So we now go into this point and do 12 months
10 worth of data research. That's another two years before you
11 get to the licensing process.

12 MR. ERNST: That was done in your second step.

13 MR. MESSING: But you're assuming --

14 MR. CALVERT: But there are still two hearings
15 before your final construction permit hearing.

16 MR. ERNST: That's correct.

17 The first question is permitted, not required,
18 permitted.

19 MR. VESSELS: It seems to me that --

20 MR. ROISMAN: I think I will probably vote no
21 too for a markedly different reason.

22 I think the reason you're thinking of voting
23 no is the wrong one.

24 (Laughter.)

25 I don't want to see you make that mistake.

mpb8

(Laughter.)

You're looking at it in numbers of hearings instead of numbers of issues, and it really is numbers of issues. I mean, I can give you an argument for the fact that the current CP hearing is really 20 hearings. We break them up.

They are divided up not only into safety and environmental, but we do them by weeks. A couple of weeks we're going to spend just on tourism, and then we'll go away and come back a few weeks later and we'll have one on transmission lines. Each of those is a hearing.

Think of it in terms of issues. The proposal, if it had a certain modification which I will now suggest has a lot of appeal to it.

You take an issue that you don't want to have to litigate very late in the decisionmaking process where it can slow you down. It becomes a critical path item. But everything about it is capable of being litigated today. And you litigate it now, and you put it aside, and nobody can get it opened again. It's got to have certain characteristics; you've got to have enough data to be able to make a decision on it, it has to be sufficiently unrelated to other considerations that you are not now reaching. But you can take care of it. And that is what track one of the current early site review concept allows.

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mpb9

1 It's not clear to me even that you need a regula-
2 tion change to allow an applicant today to come in and submit
3 the data necessary to make an alternate site review at the
4 early stage. The part that makes me oppose the concept is
5 that you stick "obviously superior" in at that stage. It
6 does not seem to me that there's any logic to -- if an
7 applicant is only coming in with reconnaissance level informa-
8 tion and it's essentially equal for all of a group of candidate
9 sites, why should the applicant be able to put one forward and
10 simply by having put it forward, make the other five second
11 class sites, sites that can't win unless they are "obviously
12 superior" to that site.

13 It seems to me that at the early site review
14 stage all the logic behind "obviously superior" is gone, that
15 the applicant comes in with six candidate sites. If they
16 wish they could say Look, the one we would really like is X,
17 and this is our reason for it.

18 But it ought to be that the applicant has to win
19 on that reason, fair and square. Nobody's got their thumb
20 on the scale as the "obviously superior" standard does.

21 If that modification were made in the proposal
22 and if we were resolving issues, not issuing approvals, we're
23 just saying all the issues that relate to these questions are
24 out of the way, and if it happens that that's the sum total
25 of meaning there will never be another alternate site discussion,

mpbl0

1 good. If not, it's not.

2 But trying to make a safe harbor makes people
3 fight over whether the boat makes the harbor or not. Take
4 "obviously superior" off, and I would vote yes. Keep it in
5 and I'd vote no.

6 MR. CALVERT: I'm glad you said that because
7 my clients sometimes are watching the way I'm voting.

8 If you and I do vote the same way, it's nice
9 to have it out in public why we do it.

10 (Laughter.)

11 MR. VESSELS: Could I say something about the
12 concern of this early site review as another process? You
13 have to remember, if you're coming forward with six sites,
14 and you go through that process, and you proceed, you've still
15 got a lot more information for your next go around. You've
16 got five sites and you really know what you're doing with them.
17 So you haven't lost all that because you're now in a better
18 position the next time you come before the Commission.

19 MR. MC GORUM: Why should there be a next time?

20 MR. VESSELS: There will be a next time because
21 there will be another plant some day.

22 MR. MC GORUM: I think Tony three times today
23 has illustrated the new process thing and the fact that with
24 great tenacity he would pursue anything he feels is not to
25 his liking, and possibly persist in that, regardless of what

mpb11

1 the rule says. That's my concern.

2 I just wish, Mr. Chairman, that in approaching
3 these questions you would take the second one first. I would
4 feel much better about it, because I think my vote could
5 certainly be conditional on what is now the first one. If
6 it is optional, fine; but if it is mandatory, I have some
7 very serious reservations that it will indeed streamline and
8 improve the process.

2B

9 MR. ERNST: I think the sense of the panel is
10 that we should not difurcase the early site review process,
11 that the rule we have in is permissive enough in this area.
12 It certainly does allow the early review of alternative
13 sites, there's no question about that.

14 And the only fine structure on that was once you
15 resolve that issue, should you consider the applicant might
16 have another bite at the apple. And I think the answer is no.

17 The second question which you didn't want to get
18 to first, but we'll get to right now, should it be mandated,
19 or are the so-called carrot and stick, or whatever, other
20 aspects in the Staff's study document sufficient that it not
21 be mandated, or should some other criteria be more useful.

22 But let's first say should it be mandated? What
23 is the sense?

24 (Vote.)

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25 MR. ERNST: The sense is essentially no, and

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1 there is one vote, I believe, yes.

2 I think that winds up Topic Three. At least I
3 think we have sufficient information -- Let me ask one thing.

4 We're going to have a coffee break right now.
5 We are behind in schedule.

6 Would the panel object to going on until about
7 midafternoon on tomorrow if we run into problems? I sense
8 that we may not, unless we manage somehow to focus, which is
9 difficult with 21 people, judgments in various areas, we
10 may not get through the agenda and still do the issues respon-
11 sibly.

12 Would there be substantial problems if we went
13 on, say, to three or 3:30? Would that upset people's travel
14 plans in a bad way?

15 MR. BLACKMON: Mr. Chairman, yes, it would upset
16 travel plans. But I don't see any problem with -- we don't
17 have a dinner engagement tonight that I know of. I think we
18 can --

19 MR. ERNST: I'm perfectly willing to go on to
20 ten or eleven o'clock tonight.

21 MR. BLACKMON: I don't think everybody would
22 like to go that late, but....

23 MR. ERNST: I'd be perfectly willing. I don't
24 know what Mitre would say. I understand their facilities
25 are open in the evening, but we could check that out. And I'd

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mpbl3 1 be perfectly willing to get a quick dinner and come back and
2 wrap it up.

3 It's just a matter of certain individuals
4 staying up the rest of the night coming up with a summary.
5 But we might even forego that part just to get, at least
6 get through on the record.

7 Now I don't know....

8 MR. MC GORUM: Mr. Chairman, do you suppose we
9 could go until possibly, say, six or 6:30, and then at that
10 time see where we are, with the idea of trying to maybe
11 accelerate things just a little bit?

12 MR. ERNST: That's a good goal.

13 MR. MC GORUM: And then if necessary -- because
14 once you break for dinner and then come back, you don't get
15 started until eight, and you're into a big long evening.

16 MR. ERNST: That sounds good.

17 MR. MC GORUM: Also hunger would cause us to
18 perhaps --

19 MR. ERNST: I'll vote for that.

20 MR. MESSING: Would it be possible to combine
21 discussing of the regions of interest and resource area with
22 the selection of candidate sites?

23 MR. ERNST: I'm not sure. We did structure
24 this in a way that hopefully leads to a logical process.
25 I'm not sure whether it's useful to mix or not. We'll see

mpbl4 1 how it goes.

2 MR. MESSING: Perhaps you could give some
3 consideration during the coffee break.

4 MR. ERNST: Yes.

5 Let's be back in 15 minutes.

6 (Recess.)

2.200 7 MR. ERNST: A question came up which I think is
8 a valid question.

9 A couple of times I asked for sort of like votes
10 or something like that. These are not intended to be recorded
11 votes, nor will they be tabulated votes.

12 We have a real problem which I'm sure all of you
13 recognize, with 21 people, trying to get viewpoints from
14 everybody as reasonably as possible and still reaching some
15 kind of a decision. And when I ask for a vote like that I'm
16 just trying as moderator to get a sense of what people who
17 I might not have heard from feel about a certain subject. But
18 not as a vote as such.

19 So I hope that helps that point.

20 MR. BLACKMON: May I make one comment?

21 The question came up this morning about the
22 consideration of safety in power plant siting, and I want to
23 make sure that I understand, or that I get my thought the way
24 I thought I had it. And that was that safety is an important
25 part of power plant siting. The question about residual risk

mpb15 1 associated with whether it be Class C accidents or something
2 else is not a part of the power plant siting. And to the
3 extent available with reconnaissance level information, if
4 there is a problem with the power plant site from a population
5 density, food, hydrology, meteorological, seismological, geo-
6 logical standpoints, the utilities at least do consider it.

7 I hope that at least is somewhat more clear.

8 MR. MC GORUM: May I have another minute, Mr.
9 Chairman?

10 I would just like to make reference in the record,
11 if I might, nobody is here from Pennsylvania, to a publication
12 that recently came out from there.

13 The document entitled Low Level Radioactive
14 Waste Disposal in Pennsylvania: Recommendations on Procedures
15 and Assessment, contained in there was an appendix, Appendix
16 D, which is called A Case Study of Public Reaction to
17 Controversial Facilities - Pennsylvania's Experience With
18 Energy Parks.

19 I think for anybody who's at least interested in
20 one of the possible scenarios of early public review of
21 facilities of this kind may be interested in looking at that,
22 and I'm not making a judgment on it one way or the other, I
23 just think it ought to be referenced in the record.

24 Thank you.

25 MR. ERNST: Thank you.

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1 I think there have been one or two other cases
2 where there has been a request to provide documents to the
3 participants and I guess maybe either by not making a decision
4 on it, I sort of made a decision on it that we would not be
5 distributing things like that, because right now the panel had
6 information available to it ahead of time for this specific
7 purpose of discussion. And I didn't want to even -- regard-
8 less of the usefulness of the information to perhaps the
9 general question, I thought it might be disruptive to the
10 particular workshop.

11 And if anybody wants to make reference to a useful
12 document for people to look at, that is fine. But as far as
13 panel consideration, I wanted to try to restrict it to the
14 resources that were available at the time of the workshop, as
15 well as any other explanatory comments from the resources
16 present in this room, rather than burden with a lot of other
17 -- perhaps even extensive written materials at this time.

18 As far as availability of this room is concerned,
19 I understand that if we are out by 6:30 or perhaps 6:45, that
20 it would not disrupt -- was it 7:30? Okay. Forget what I
21 was about to say.

22 I guess we have the room until about 7:30. And
23 if we don't wrap up by then, we'll die of hunger anyway. So
24 let's just say that we do have a possibility of staying until
25 7:30 to get through the issues. And I think that's better than

mpbl7 1 breaking for dinner and coming back.

2 The next topic -- and I will state again that
3 tomorrow we will have a summary prepared by Mitre overnight
4 as to what we think happened in the day and a half, and in
5 some of these residual issues -- not residual risk, residual
6 issues -- we may well kick them around again, and maybe find
7 out that what we thought we heard we didn't really hear, and
8 we'll have a chance to discuss some of the other issues again
9 tomorrow morning.

10 The next topic is Topic Four, which is the
11 region of interest. There was a suggestion that could be
12 combined with topic five. I think at the present time, while
13 it's hard to separate these various important aspects of
14 siting and alternative siting decisions, the Staff did
15 attempt to break it apart into discrete sections, feeling
16 that would be a more useful way to go to concentrate on
17 separate aspects of it as we go through.

18 We will see at the end there are some general
19 questions that say Now that we've shot down all the trees
20 in sight on this thing, what does the entire picture look
21 like, so we will have a chance to come back and take a look
22 at the entire process that we've been kicking around in that
23 manner.

24 So let's try Topic Four, and if we find that it's
25 too intertwined with Topic Five, then so be it. We'll expand

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1 the region of interest for that particular discussion.

2 Again, in Topic Four, the basic intent of the
3 Staff was to try and devise a system that is more easily
4 understood as to when you satisfied the system. And the
5 system we're trying to devise here is how far do you go from
6 a perceived need for power before you quit going in the
7 search for alternative sites.

8 And as was stated yesterday, the basic philosophy
9 here was to assure you have diversity of environmental values.
10 And once you have diversity, then devise some other scheme,
11 which is Topic Five, to identify candidate sites within these
12 various so-called resource areas for further comparative
13 evaluation.

14 The intent of Topic Four is to provide a reason-
15 able assurance of diversity of environmental quality so that
16 the subsequent comparative evaluation makes more sense. You're
17 not just comparing apples to more apples, and you are really
18 having a diversity, or at least hopes of a greater diversity
19 of environmental values for the comparative purposes.

20 I guess another way of saying it is it doesn't
21 make too much sense to look at a site on a river and another
22 site five miles down the river because in all likelihood
23 you have similar environmental characteristics. And you
24 really don't have much of a big choice to make.

25 So that was the intent here. But the intent also

mpbl9 1 is to stop it someplace and say We've gone far enough; now
2 let's look at what we've got.

3 With those brief introductory remarks, I would
4 like to open it to the panel for comments on either the
5 philosophy or the criteria of Topic Four.

6 MR. MATCHETT: A comment on Criteria Number One.
7 It says the NRC will confine its review to the region identi-
8 fied by the radial search containing three resource areas.

9 I suggest that if an applicant chooses to submit
10 a site for consideration that is beyond these three resource
11 areas, that that be permitted. Maybe that was the intention
12 anyway.

13 MR. ERNST: I think that was the intent.

14 The intent was not to preclude the applicant
15 from suggesting more if on their own motion they wanted to
16 do so. Now I don't have legal counsel here so maybe I can
17 be helped out in this regard.

18 I think whatever you put in the rule is applicable
19 to the Staff as well as to the applicant as well as to the
20 intervenor. I'm not sure whether, if you permit more for
21 the applicant, that you also permit more for the intervenor
22 or for the Staff. It's not clear to me.

23 But I don't think if you have minimum requirements
24 in application, I don't think there is anything that prohibits
25 an applicant providing more than what's required in the

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1 application.

2 It does, I guess, if you meet the criteria,
3 prohibit the Staff or the other parties to demand more. Maybe
4 that's an improper interpretation, but I think that's right.

5 MR. EASTVEDT: Mr. Chairman, from strictly a
6 transmission system point of view, I do have a bit of a problem
7 with criterion one in that it would tend, I believe, to limit
8 the size of the area under consideration within a large
9 interconnected grid.

10 Resources and the transmission for those resources
11 in a large interconnected grid is really a regional considera-
12 tion. And it could very well be that it would be proper from
13 a transmission point of view to jump over appropriate sites
14 that are closer to a utility's service area and locate
15 resources in someone else's service area for the purpose of
16 minimizing the need for future transmission facilities.

17 In the Pacific Northwest we have a particular
18 problem in that regard because of the concentration of
19 resources in the northeastern portion of the system, and the
20 need to transmit energy to the southwestern portion of the
21 system.

22 Also it is very difficult in the Northwest to
23 identify a -- quote -- "load center" -- quote. It's extremely
24 difficult because of the nature of the system itself.

25 So I would suggest that we might look at regional

mpb21 1 considerations for transmission rather than relating the
2 sites to a particular load center.

3 MR. BLACKMON: If I may make just a few remarks
4 along a similar line:

5 Yesterday I expressed the view that I did not
6 think it would be appropriate to go radial distances from a
7 load center. Utilities reliability within that utility service
8 area was based upon a backbone, a grid, a high voltage trans-
9 mission system.

10 Of course, my experience is somewhat limited
11 with our own service area, which covers 20,000 square miles,
12 in which we have hydroelectric pumped storage, fossil and
13 nuclear generating facilities, with a primary backbone of
14 500 Kv loop transmission.

15 What we attempt to do is balance the load between
16 one area or one section of our service area and another. And
17 basically our service area is divided into four sections.
18 And what we try to do is in the timing of units, bringing
19 them online, is to not force one particular section of our
20 service area to be a net importer or exporter of energy for
21 a long period of time. We attempt to keep a balance somewhat.

22 Therefore from a transmission criteria standpoint
23 our siting is done to tie any given plant at any location
24 into the transmission grid. There may be transmission
25 penalties, line losses, extraordinary line losses by putting it

mpb22 1 one place as opposed to another.

2 15 or 20 years ago the primary siting criteria
3 was to put that plant as close to the location where the
4 energy was going to be used as possible. Currently our
5 primary siting criteria is water related, it is not trans-
6 mission related. And I think that provided the NRC is will-
7 ing to accept the methodology that various utilities utilize
8 in their own system planning, then however the NRC wants to
9 review the alternative site studies done by that utility
10 is acceptable.

11 But don't, please don't force us to site plants
12 the way that you're putting it forth in this document because
13 it's somewhat contradictory to the way that the utility
14 business operates.

15 MR. EASTVEDT: I'm inclined to support what
16 you have just said, and it certainly describes the conditions
17 that we have in the Northwest.

18 As far as where energy is used is concerned,
19 that concept has to be looked at very very carefully because
20 the energy used may not be used by the utility that is
21 actually installing the plant itself. But that utility's
22 energy on the interconnected grid system could very well be
23 served by displacement of other resources.

24 Consequently the proposed sites could be greatly
25 removed from the location of the utility installing those

mpb23 1 resources in order to minimize the impact on the overall
2 transmission system.

3 MR. ERNST: Let me make one observation to the
4 panel:

5 We are looking for explicit criteria, if that
6 indeed is deemed to be useful by the panel, to try and
7 determine when you've gone far enough." When we talk
8 considerable distances, it might be useful to know what that
9 means.

10 If we talk water resources as the primary plan-
11 ning element, I think philosophically that's consistent with
12 the Staff document, in which case what would be useful replace-
13 ment criteria -- and I would like to try and focus the panel
14 on specific suggested changes on how our review process might
15 usefully meld with the utility process and still usefully
16 protect the environmental resources.

17 MR. MESSING: To speak specifically to that
18 point, I think water from an environmental standpoint is as
19 good a primary factor as we're going to find. I think that's
20 where we should start.

21 Beyond that, I think from an environmental
22 standpoint, the Minnesota avoidance criteria offers us some
23 guidance, and what Minnesota does in their statewide site
24 inventory is they go through exclusion areas first. These
25 might be based on federal statutes, state statutes. You

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1 eliminate parks and areas that you can't or shouldn't use.
2 Then you go to avoidance areas. And they have -- let me
3 quote from two of their criteria for avoidance areas:

4 "First of all, no transfer of water
5 between sub-basins within each of the four
6 main drainage basins shall be permitted, ex-
7 cept where it can be clearly demonstrated
8 that the transfer will not have an adverse
9 effect on water supplies or water quality
10 in the areas involved.

11 "And second, the use of ground water
12 for high consumptive purposes, such as cool-
13 ing, shall be avoided if feasible improved
14 surface water alternatives less harmful to
15 the environment exists."

16 I know we were criticized yesterday for using
17 river basins as an eastern concept, but I think it is a sound
18 environmental concept and it provides a reasonable basis for
19 looking at criteria. Yes, you can look at ground water
20 supplies, but no, we shouldn't be using them for high con-
21 sumptive purposes if ground water, feasible ground water --
22 feasible surface water alternatives exist.

23 So I offer those two Minnesota criteria for your
24 consideration.

25 MR. ROISMAN: Did I understand your comment to

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1 say that you want the utility to decide what the criteria
2 are going to be for what is the region of interest, and the
3 NRC to simply determine whether those criteria are met?

4 MR. MATCHETT: No, that wasn't what I meant.
5 The wording seemed to indicate that the NRC would confine its
6 review to only three resource areas extending outward from
7 the load center, wherever that might be. And I was suggesting
8 that -- and I think going along with the transmission argument
9 -- that the applicant might wish to propose an alternative
10 site which is beyond that area or that zone, and that should
11 also be considered.

12 The NRC should not confine its review only to
13 those three areas if a proposal is made which is beyond them.

14 MR. ROISMAN: By the same token, it should be
15 open to some other party to say if you use an existing inter-
16 connection you could put this plant in a better site outside
17 of your service area and have environmental advantages and
18 not have sufficient transmission disadvantages to offset
19 them.

20 One of the problems we run into is utilities
21 demanding that the site either be in their service area or
22 that even that they necessarily have to be the -- quote --
23 "owner of the plant" -- quote -- in order to provide the
24 load.

25 My experience is mostly in New England, and I'm

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mpb26 1 sure you're familiar with the situation in New England. But
2 the idea would be if you got an area and the interconnects
3 are there so that you could service a load center outside the
4 service area of the utility on a piece of ground that the
5 utility itself may not own but another utility does own,
6 and that's a really better site to put the plant at, it ought
7 to at least be open to argue that that's the place to put it.

8 Now there will be some arguments against it
9 that could be legitimately raised. We can't get access to
10 that site, the other utility won't agree to build the plant
11 there, they want to save it for their own, and those would
12 all be legitimate objections to it. But am I clear that at
13 least what you're after is the same thing that I'm after: the
14 opportunity to be able to present all those arguments and
15 not to be determined in advance that the only region of
16 interest is some pre-determined region of interest?

17 MR. MATCHETT: It seems like both sides would be
18 fair.

19 DR. MASSICOT: I would like to third that argu-
20 ment from a different point of view, speaking against a
21 specific required pre-determination of how the region of
22 interest is defined. I think there could be reasons which
23 might involve definition of service areas, might involve
24 state boundaries, might involve transmission considerations,
25 which the way I read this criterion -- and I'm not completely

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1 sure I understand it -- would be precluded. And I would
2 much rather see -- I think this and number two, which I also
3 oppose being specifically limited to river basins, I think
4 the idea of three distinct resource areas is a good one, but
5 there could be other ways to differentiate physiographic
6 regions, ecotones, or whatever, plus the source of cooling
7 water that I think should be available if they are justified.

8 I think what you're looking for, you may be
9 looking for more certainty, more a priori certainty than is
10 appropriate if you're looking at this from a national basis,
11 both from the standpoint of defining the region of interest
12 and how to define the three resource areas.

13 So I would argue for something that unfortunately
14 will require more work, but will give people, whether from
15 Don or Tony's or other points of view, the chance to argue
16 for or against the appropriateness of the definition of region
17 of interest.

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1 MR. BLACKMON: Another point, I think in line with
2 what Paul was talking about, as opposed to a resource area
3 being limited to a basin concept or to the three adjacent ones,
4 as Mark pointed out, in Minnesota there is an exclusionary
5 criterion that has gone through. And in many cases, I'm not
6 saying in every case, but in many cases a utility goes through
7 a similar process, that there are certain areas that you are
8 just obviously not going to touch as far as the power plant is
9 concerned.

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10 What we may end up with, for example, is say five
11 different river basins. Within that river basin, one of them
12 may be totally flat water, it may be a series of four or five
13 lakes, the other basin may be two lakes separated by 40 miles
14 of open water.

15 In the case of the river basin where it is flat
16 water, then those resource areas are very, very simple. You've
17 got a flat water environment. In the case of the other basin
18 where you've got two lakes and a long stream section, you've
19 got at least two types of resource areas.

20 And I think that the consideration of the different
21 area of the country, the different needs of utility customers
22 are going to dictate to a great deal what the resource areas
23 are to be considered for power generating facilities.

24 MR. ERNST: Let me interject a comment. Every break
25 I vow I'm not going to say any more, but when I hear the

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1 conversation and when I think -- drifting to perhaps somewhat
2 of a misunderstanding of what the proposed criteria and rationale
3 are trying to represent, I feel like I do have to say a couple
4 of words.

5 Because, sitting here, I think I have agreed with
6 essentially every comment made. And I sit here and wonder,
7 Now, how are these criteria perhaps being misinterpreted?

8 What I hear on the utilities' side is they may have
9 some good reasons, and perhaps not environmentally based, for
10 going to a different resource area, and they don't want to be
11 constrained to the first three good resource areas that they
12 come to.

13 I don't think that is being precluded, but not on the
14 basis of prohibiting one party from going further but not for
15 another party. I think the criteria we tried to develop were
16 basically environmentally based criteria, not considering
17 costs or other kinds of things, because I think it is quite
18 clear that unless you have an environmentally preferable
19 alternative that you choose not to go with, cost it not a
20 predominant factor in NRCs considerations. If the Applicant
21 wants to go with an environmentally preferable alternative
22 and it costs more, I think Midland said we should not be
23 concerned about it.

24 So what we have proposed here is environmentally
25 based criteria. And so I guess the reason why it would not

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1 preclude the Applicant from going further is that, if he does
2 go further on some other reason that we are not considering
3 here and he does have an option that's environmentally good
4 and there is no superior environmental option closer in, should
5 we preclude that choice?

6
7 The second thing, I guess is that there are
8 criteria -- and maybe this is in line with Mark's statement
9 that it's going to be difficult to separate Topic Five from
10 Topic Four. We have proposed criteria that are environmentally
11 sensitive to hopefully arrive at superior sites from an
12 environmental standpoint. And so the objective is, again,
13 environmentally focused.

14 So the only comment I have is, we have stayed away
15 from the conventional way, I guess, that utilities are pro-
16 ceeding with their site selection process and said Is there a
17 better way now from NRC to make environmentally based decisions
18 as to whether you've gone far enough.

19 And that is what we're doing. We're not advertising
20 this as necessarily the way the utilities make decisions, but
21 what we are hoping to come up with is an environmentally based
22 set of criteria that make sense, give you sufficient diversity,
23 allow comparative evaluations and environmentally based
24 decisions, but not preclude the utility from having their options
25 for other considerations that, to them, are equally important
and should be considered.

agb4

1 So it is a different process. It is one that has not
2 been done before. And, to that extent, there may be some
3 missing communications between the parties, and that's what I
4 sense. If that's not a proper sense, then we'll find out as
5 the discussion progresses.

6 But it is a different way. It is not precluding the
7 utility from doing it the way they want to, as long as environ-
8 mentally sensitive criteria that give diversity and still have
9 a comparative evaluation are met.

10 So we're not advertising the utility should do it
11 this way, what we are advertising is can we establish environ-
12 mental qualities that should be met, and if they are, then we've
13 done the NEPA part of this review.

14 MR. ROISMAN: If I understand what you're doing,
15 though, and this has been -- I mean, the history of Staff
16 dealing with alternate sites has been a history of the Staff
17 trying to find out some way to deal with them less and less.

18 They looked for the hypothetical site at St. Lucie.
19 At Seabrook they looked for the sites within a defined area
20 rather than a whole interconnected region. In Pilgrim, they
21 looked to try to preclude sites which didn't already have
22 nuclear plants on them.

23 It has always been an effort to see if they can't
24 narrow it. This I would classify, perhaps, as a way to try to
25 expiate the guilt that you might feel over not doing that by

agb5

1 building into the selection process some bias toward an
2 environmentally acceptable solution.

3 What I'm troubled about is that despite a natural
4 desire to see that done, in the last analysis, this site selection
5 is a balance. I mean, the utility is going to come in with a
6 site and that has to meet environmental and other considerations.
7 If this is designed to be a premise or in any way to set the
8 stage for them to select sites a certain way, it may be that in
9 the end the total balance of all considerations will have been
10 off and that we really will have started off with a bad selection
11 of sites and moved to the selection of the best of the bad,
12 rather than the best selection of sites.

13 To me the solution is -- I mean, I think there's a
14 tendency for the utilities to look at it from sort of utility
15 management: why do we need this site best from the perspective
16 of load and transmission and things like that, and then environ-
17 ment comes in secondarily and that's why you get these conflicts
18 between the environmental groups and the utilities.

19 If you allowed the NRCs process for doing the
20 investigations to start with the candidate site selection
21 process, so that you were getting into -- that is, actually
22 beginning hearings on the mechanisms by which candidate sites
23 were selected, you wouldn't need to put in the kind of detailed
24 criteria that you're talking about here, you just start every-
25 body earlier.

agb6

1 The utility would start off with load being the
2 very important factor, and the environmentalists would start off
3 with I want to protect the river basins as being the very
4 important factor.

5 And the NRC, in the context of its decisionmaking
6 process, would be trying to say Okay, in this particular case,
7 which sites should we be selecting as the candidate sites, and
8 that would sort of be part one of the process.

9 You don't seem to be in this document, prepared to
10 go back quite that far in the planning process. But it seems
11 to me that there's a lot of advantages to doing it. It allows
12 you to be more flexible. It allows the utility to make its
13 best case for load being the criterion, and for us to make it
14 for the environment being the criterion.

15 Secondly I'm concerned that, as the NRC begins to
16 apply these factors on regions of interest, its basic lack of
17 knowledge about what's really involved is going to produce
18 problems.

19 In Seabrook, we had a staff expert -- I use the words
20 in quotation marks -- who operated on the assumption that if you
21 built a power plant somewhere other than at the Seabrook site,
22 the way to figure out what the costs of the alternative site
23 would be is to first figure that all the power would be trans-
24 mitted back to the Seabrook site and then out to the service
25 regions.

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1 The same person seemed to think that the plant was
2 located in the Public Service Company of New Hampshire's service
3 regions when, in fact, it is not. That is not meant to be an
4 indictment of the individual but, rather, an indictment generally
5 of the Staff's knowledge of all of this.

6 I'm somewhat nervous about the Staff writing in
7 advance, even tentatively, their criteria in this area. I'd
8 rather see them set up a mechanism and let the people, whether
9 it be a utility or an environmental group who, I think, are more
10 expert, to come in and argue about what those candidate sites
11 ought to be in the first instance.

12 And in some places, these criteria that are in A
13 are going to be prominent and the predominant ones. But in
14 another region of the country or another place it's going to be
15 markedly different.

16 I mean, I've certainly been impressed by that, that
17 utilities in different parts of the country -- certainly out
18 in the Pacific Northwest you have a markedly different situation
19 than you do in New England.

20 Again, I try to stay out. But I find that -- I don't
21 find a great deal of difference, really, in what we're trying
22 to do. What we have required is that two of the three resource
23 areas meet certain requirements regarding water availability.

24 We've left the third one open. And the intent of
25 leaving the third one open was to take account of situations

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1 like in the West, where you may have a very valid third kind of
2 resource area that doesn't meet these criteria and that should
3 be considered and perhaps is the best way to go. But this will
4 identify those sites, and then the diverse sites.

5 Let's take Sun Desert, for example, where you had
6 a proposed way of providing water for the facility. You could go
7 and withdraw -- or site the plant somewhere else and maybe have
8 a ocean withdrawal or maybe a river withdrawal somewhere in
9 California. So there could be three types of alternatives
10 developed, and then there would be a comparison to see whether
11 or not one of these alternatives was actually a better way to
12 go.

13 So we're looking for diverse kinds of alternatives
14 so that you can make a valid comparison, rather than have three
15 different sites within 50 miles of Sun Desert, all with
16 essentially the same kinds of ecological and other kinds of
17 concerns.

18 So the attempt here is to get diversity, but not to
19 be so specific as to require all the options to fit certain
20 guidelines and leave one of them open to the Applicant who
21 may be able to prove that, even though water is the critical
22 item, in some areas it may be a less critical concern than some
23 other concerns. So that the flexibility is there, and that
24 was the intent in developing these kinds of criteria.

25 DR. MASSICOT: Could I ask a question about a

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1 hypothetical example which is not completely hypothetical?

2 Suppose you had a utility which served an area.

3 Suppose there was a river which was the boundary between states,
4 like the Potomac. And suppose you had a utility -- suppose it
5 was a major city like Washington and on one side of the river
6 you had a utility which served Washington and the Maryland
7 side of the Potomac.

8 Does this criterion -- you're talking about radial
9 regions. Any circles you draw around Washington are going to
10 be half in Maryland and half in Virginia. Would this require
11 Pepco, who is the utility that serves the Maryland side of the
12 Potomac and Washington, to be required to have sites in
13 Virginia, for example?

14 Would the NRC say Well you haven't considered any
15 sites in Virginia, so all your proposed sites in Maryland are
16 ruled out? Or you have to go back and actually propose siting
17 a plant in Virginia, where they have no utilities in Virginia,
18 have never dealt with Virginia, do not serve Virginia.

19 MR. MESSING: They're intertwined with Virginia, and
20 the presumption is, unless the plant is being built to service
21 one state only, then you are dealing with an interstate thing,
22 and I think it has been discussed yesterday when it was said
23 that you would be considering sites in multiple states and that
24 the NRC is in a position of making some sort of a subjective
25 judgment there.

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1 DR. MASSICOT: But what I want to know is, would your
2 understanding of what you mean by this criterion require that
3 Pepco consider sites in Virginia in such an example?

4 MR. ERNST: My interpretation of these criteria is
5 that this would not be required. What would be required is
6 that the Potomac be considered as a source of water.

7 And again I guess we get back to Mark's comment that
8 maybe it's impossible to separate the discussion of Topic Four
9 and Topic Five, because Topic Five does include the environ-
10 mentally based criteria that should be met by a proposed site.
11 And if the environmentally based criteria are met, then the
12 NRC couldn't care less whether the site is in Maryland or in
13 Virginia.

14 DR. MASSICOT: So this radial -- Okay. I'm not sure
15 why -- what force this criterion has then. Why do you talk
16 about radial -- it seems to me what you're saying is the
17 importance is to have a diversity, first as tied to three dis-
18 tinct resource areas which I have no problem with. But when
19 you go beyond that to talk about radial distances and specific --

20 MR. ERNST: Maybe the choice of radial is unfortunate,
21 and maybe does not need be there. This is why, I think, you
22 know -- I think this conversation is a useful kind.

23 If the philosophy of diversity of water resources is
24 a useful environmentally based philosophy, then that's what
25 we're striving to get. We should not have a decision -- a review

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1 and decisionmaking process that is so foreign to the real-world
2 process of utilities picking sites that the two are incompatible.

3 But I see no reason why we, the NRC, under NEPA
4 can't have primarily environmentally based decision criteria
5 to make judgments on whether or not the utility, with whatever
6 scheme they use to come up with sites, came up with legitimate
7 environmental sites.

8 MR. MESSING: I would like to draw Paul out on his
9 earlier statement. My inclination is still that water is a
10 good first screening criteria. But you countered that there are
11 a number of other physiographic considerations that might define
12 resource areas that might be more appropriate.

13 DR. MASSICOT: I'm thinking of Western Maryland,
14 specifically, where you have basically only the Potomac, which
15 may not meet this criteria.

16 MR. MESSING: Okay. But if we're looking, let's say,
17 if we're looking for other physiographic criteria, how do you
18 define the factors by which you will choose resource areas? I
19 mean, can you throw out some more?

20 DR. MASSICOT: Well, what I'm saying is I don't see
21 why this has to be specified, the complete list of criteria
22 has to be specified in the rule.

23 I'm saying some things -- for example, in Western
24 Maryland you have three prominences: Piedmont, the valley and
25 ridge, and then the mountain region, which determines, from the

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1 terrestrial environmental standpoint -- is a pretty strong
2 determinant of the ecology.

3 MR. MESSING: And they all lie within the Potomac
4 watershed?

5 DR. MASSICOT: Right. The Potomac cuts through the
6 general northeast-southwest trend of those provinces. So I
7 can see one water body is the Potomac with, I don't think,
8 that many -- that great a difference in the aquatic environment
9 along the entire stretch of the Potomac, but with definite
10 terrestrial differences and environmental characteristics, and
11 that seems to be an equally valid -- you could certainly have
12 diversity -- it seems to be an equally valid way of arriving at
13 different -- at environmental diversity.

14 And I'm not sure that we can imagine all possible
15 circumstances throughout the country and have a closed list
16 that would say Well here are the seven ways that you can arrive
17 at three distinct resource areas.

18 MR. MESSING: Would you say that where you do have
19 different water basins, either major water basins or sub-basins
20 within a region, that it would be a reasonable requirement that
21 you consider sites in those different basins? But in the case
22 of Maryland, where you're all on the Potomac or -- then that
23 criteria doesn't make as much sense?

24 DR. MASSICOT: Well it seems to me to be a logical
25 way of approaching it. I'm just not sure that I can think of --

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1 that I'm knowledgeable enough of all circumstances to say that
2 yes, if you have three river basins within a region that you
3 must go to your resource areas, one each must apply to one of
4 those rivers which sounds like the first place to look.
5 But again....

6 MS. CAPLAN: Just put in wherever possible.

7 MR. MESSING: Update my previous statement to include
8 this conversation.

9 MR. ERNST: I think we have a comment here which I
10 don't want to disrupt, but I do want to point out that I don't
11 think the criteria proposed are any different from what's
12 being discussed. Because I think we say let's look at the two
13 -- that two candidates must come from a resource area, unless
14 it can be demonstrated that the resource area is so similar in
15 other characteristics as to not make a lot of sense.

16 So I think you go to water, and then you get two
17 sites that have diverse qualities, terrestrial, from that
18 particular resource area.

19 And again, the attempt is to get diversity, so that
20 when you finally compare the candidate sites, you have some
21 valid differences and can make some valid judgments as to which
22 quality is more important than other qualities.

23 DR. MASSICOT: But there's only one resource area.

24 MR. ERNST: The Potomac would be one resource area.

25 You would get two candidate sites from that. And those two

agbl4 1 candidate sites, if it exists, and you're saying it does, would
2 have different kinds of terrestrial qualities.

3 DR. MASSICOT: But do you have three resource areas?

4 MR. ERNST: You would still have to have three
5 resource areas.

6 DR. MASSICOT: That's what I'm saying, you'd have
7 to go three states away, exaggerating for effect, or in two
8 states, as in the case of the first example I mentioned, where
9 the utility has no intention of trying to find and build on
10 a site there, so they have only one resource area that they
end2c 11 would, practically speaking, be interested in building on.

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d ebl 1 How do you handle that?

2 MR. ERNST: I'm getting more to the defense and I
3 keep saying I'm not going to try and be in the defense stage,
4 but I do want to clarify that where you have a situation where
5 there are no other resource areas, then I think what we are
6 saying is you would have to demonstrate that, because the
7 requirement still is for three and you would still have to go--

8 DR. MASSICOT: Would the utility's statement that
9 "I have no interest in trying to build a plant in another
10 state" be satisfactory?

11 MR. ERNST: That would not be a criterion. We're
12 trying to get some environmentally based criteria.

13 MR. BLACKMON: But if I state I'm going to put the
14 plant over there and it's going to cost me 185 miles of 500-Kv
15 line at 12.1 acres per mile which is equal to so many acres of
16 land that is going to be disturbed?

17 MR. ERNST: We've not gotten into the criteria for
18 dismissing resource areas. We have criteria saying you should
19 do it, but I think there's also words in there that say an
20 applicant can, if reasonably demonstrated, show why he didn't
21 go three states away or why he didn't go into the next state.
22 So you're still in the same area of litigation on proving
23 points on those particular areas as you would have been other-
24 wise.

25 But what we feel we have here is, for a number of

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eb2 1 cases you have situations where, within a service area within
2 a state, you can demonstrate three different resource areas
3 and within each resource area, come up with sufficiently dif-
4 ferent qualities of sites that you have a reasonably diverse
5 set of good candidate sites that could be compared to each
6 other.

7 And if that is the case, then there's probably
8 little to be gained by looking further. In the cases where
9 you can't do that within the service area of the state, then
10 there has to be some justification, based on merit, as to why
11 you didn't go further.

12 MR. ROISMAN: But that's markedly different, I
13 think, and you're not appreciating that difference. You're
14 creating a presumption and then requiring a party to carry a
15 burden of proof in order to overcome the presumption. And what
16 utilities are saying and what I am saying are essentially the
17 same, that you ought to have a performance standard, not a pre-
18 scriptive standard.

19 What you ought to say is we expect the utility to
20 come in with a reasonable, available diversity of sites, and
21 they shall take into account all of these factors. And then
22 you can list if you want a hundred, and any others they damn
23 well want to.

24 And they come in with a reasonable group of sites
25 and they try to justify that they've got diversity. And somebody

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1 else comes in and says, "Hey, they threw out every state where
2 they didn't own land, and that's not reasonable."

3 The utility comes back and says what Don said,
4 "Well, that will cost us X numbers of miles of transmission
5 line and all this additional money, and that was fair for us to
6 do that."

7 You're setting up a presumption that there is --
8 that this is the right theory. Anybody who thinks it's wrong
9 has a chance to prove it, but they've got to overcome the pre-
10 sumption. And I don't think you've got a basis to say that
11 that presumption is valid, that it's any more valid for one area
12 of the country than it is for some other area.

13 I just think those are factors that ought to be
14 listed.

15 MR. MESSING: And from the perspective of the NRC,
16 the question, how do we, independent of utility analysis, make
17 these judgments about environmental characteristics? That
18 should be based on major physiographic regions of the United
19 States. That is, the utility may look first within its service
20 area.

21 BPA may be looking within the Power Pool or the
22 larger Northwest region. States may be circumscribed in terms
23 of their looking within state boundaries. But if you're trying
24 to look at environmental effects and your jurisdiction is a
25 national one, then your perspective on this should be I think

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1 based on major physiographic regions of the United States.

2 They will vary according to different values across
3 the United States but they should, as Tony is saying here,
4 then be performance criteria.

5 DR. KEENEY: The general philosophy of why one is
6 going through this I totally agree on, and that is to identify
7 a good slate of sites and have diversity. I think the way it
8 is proposed to do it is poor.

9 I think the concept of how the region of interest
10 is defined is poor. One doesn't need resource areas as a
11 concept; that's just a proxy, a device, trying to help you get
12 diversity. I think it is way, way too restrictive to utilities,
13 unnecessarily so, and I think we will all lose by that. There
14 can be better sites around. And I think there's a better way
15 to go about it.

16 What I think that is is in selecting a region of
17 interest, one clearly needs-- It's just another aspect of the
18 screening process on a grander scale.

19 One must set criteria. Some of them might relate
20 to the costs and the environmental impacts of a long, long
21 transmission line. So one sets that at the beginning, and
22 suppose that happens to be 200 miles, 300 miles away, whatever,
23 500.

24 And one eliminates some very scenic areas, parks,
25 et cetera. He identifies a good set of candidate sites that

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1 does have this diversity.

2 Then once those sites are evaluated, say the six,
3 one has a pretty good idea of the standard which one can reach
4 by doing that. At that stage what I'm proposing, and what is
5 much different here than what is here, is one can go back and
6 appraise the validity of the assumptions made in selecting the
7 region of interest and in selecting -- and in narrowing that to
8 get the candidate sites.

9 At that stage one can get a lot better idea about
10 were those assumption appropriate and is it likely that if we
11 went back and relaxed one of those earlier restrictions that
12 were necessary to focus our search, whether or not they're
13 appropriate. And if one needs to relax them, then there's a
14 good chance of finding sites at that stage then.

15 I see no reason why one doesn't-- That's what I
16 meant yesterday by triangulate, come back and appraise those
17 assumptions. And that would be what I would use as my standard
18 to try to identify whether the spirit -- the finding of a good
19 slate of candidate sites was carried out and what the region of
20 interest should be. And I don't think the concept of resource
21 areas needs to be handled there since the diversity is there.

22 MS. SHELDON: The Chair I think may in be
23 misunderstanding "resource area," at least as I saw it put in
24 practice in the alternate site review for Seabrook. It would
25 seem to me that "resource area," although you are of course

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1 starting with the question of water availability because you
2 have to have that in order to have a plant, you would not have
3 to have three separate rivers or three distinct types of water.

4 That resource area would be an area that represented
5 a variety of different kinds of environmental factors, and you
6 would have three or more of those. You would have an area--
7 Maybe you would have the Potomac River running through all
8 three of them, but one would be a lowland, terrestrial kind of
9 environment. Another might be the mountains. Another might be
10 something else. So that you would come up with diversity.

11 The philosophy here is to require an applicant to
12 look at a variety of environments in seeking a site, and I
13 think that's excellent.

14 The problem in practice, unless the other factors
15 such as load center and transmission and state boundaries and
16 ownership and all these other things come in early enough, is
17 that you can identify a slate of lovely, environmentally
18 acceptable sites, none of which a utility would build on.

19 This in fact was part of the problem at Seabrook.
20 A number of sites were identified, one in particular that was
21 across the state boundary from the utility that had the main
22 ownership of Seabrook. It appeared to those of us on the other
23 side that this was an environmentally preferable site, obviously
24 superior, if you will, had a whole host of advantages from
25 an environmental standpoint.

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1 We got through that. The analysis that was per-
2 formed identified that site and a number of others, and the
3 utility response was that all well and good, but we can't build
4 there; we won't build there. For one thing, the State of
5 Maine requires or would require 50 percent ownership of the
6 plant by a Maine utility and that doesn't exist. In other
7 words, there was a barrier that was of crucial concern to the
8 utility that had not come in in the environmental analysis
9 and in essence stopped that site from consideration. And it
10 was in our view the best site environmentally.

11 But that didn't resolve any of the controversy
12 that one would hope that a rule like this would resolve because
13 it didn't come in fast enough.

14 MR. ERNST: I've got to take 30 seconds and then
15 we have to open up for comments from the observers.

16 I guess my 30 seconds is that we do permit the
17 kind of thing that you just finished talking about in consider-
18 ing the lower extremities of the Potomac as being perhaps a
19 different resource area than the upper part. So that is
20 accommodated by our proposed rule.

21 We are really after environmentally based criteria
22 so that we avoid the situation of we don't propose sites,
23 the utility proposes sites. If they propose a site by whatever
24 scheme they feel is important to themselves and also is
25 environmentally sensitive, then we are interested in the

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1 envircnmentally sensitive aspects. And that's why we focused
2 on that.

3 I would like to open it up for comments from the
4 observers, and then we'll have a break for lunch.

5 MR. DERICKSON: Ken Derickson, Argonne National
6 Laboratory.

7 I must express a little bit of disappointment in
8 the panel in their decision regarding mandatory early site
9 reviews. I personally can't see how we can avoid the issue.
10 I think it almost has to be mandatory. And where I'm coming
11 from is that many states-- The federal government itself is
12 developing and planning water use and land use policies, and
13 I cannot see how they can perform their job if the utilities
14 are not involved with them at the very beginning.

15 Obviously we're going to need power in the future;
16 that's no denying that. The thing to do, though, at the state
17 and national level, is to develop good land use policies.
18 The ecologist, the sociologist are not going to be able to
19 supply all the data needs for making specific decisions. The
20 economics, the nature of the system, the variables and that
21 sort of thing are capabilities that are going to be limited.

22 What one can do is to develop these policies,
23 identify the data needs to make informed decisions. I think
24 that a lot of the litigation that has come forth was due to the
25 fact that the process for identifying sites and that sort of

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1 thing has not been a comprehensive approach to things. I think
2 litigation can be avoided.

3 There will always be litigation. There will be
4 those who will be against nuclear power, and they should have
5 the right to express that opinion. However, as long as the
6 record is clear that all factors have been taken into account
7 and balanced as equally as possible, then those people will
8 have to live with the decision and say Okay, we appreciate
9 your concerns but when we look at the over-all scheme, your
10 interests are just not appropriate. We do need the power.
11 Nuclear is the best way to go. Or we can talk about coal-fired,
12 anything you want.

13 But it's the process that I think is the critical
14 issue, not just criteria. It's a much broader thing than that,
15 and I think the State of New York has certainly made efforts
16 along these lines. I know other states have done that, too.

17 And so I go back. I think that it has to be --
18 early site review has to be mandatory to be consistent with
19 state and federal land use and water use policies.

20 MR. ERNST: Thank you.

21 Are there other comments from the floor?

22 MR. WILSON: G. L. Wilson from Public Service Company
23 of New Mexico.

24 I was glad to hear your closing comments, that there
25 are some options and flexibility here. But I did want to express

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1 my concern that something like this would not become a regula-
2 tion in selecting a region of interest. This is something that
3 we couldn't live with in New Mexico. We don't have rivers
4 that come anywhere near 20-year flows of 20 times the plant
5 consumption. In fact I think the largest river we have proba-
6 bly wouldn't even meet that during its maximum flow on, you
7 know, the recurring 100-year flood or something like that. It
8 usually doesn't flow.

9 So consequently when we look at siting we tend to
10 look at a region of interest we can justify in the State of
11 New Mexico, which is 122,000 square miles. It's a pretty good
12 size and we're concentrating in the center of the state. We
13 tend to look at finding water resources and finding sites at
14 the same time and tying them together. Quite often we're look-
15 ing at five or six water resources just to support one plant,
16 and often that's in addition to some dry cooling.

17 In fact, the newest plant we have coming on line
18 is 80 percent dry, so that will give you an idea of our problems.

19 In addition, most of our water resources are ground-
20 water and groundwater occurs primarily in basins that were
21 formed by seismically -- geologically unstable activity. They
22 are pretty active in some cases. You know, there are four or
23 five thousand feet of unconsolidated alluvium; other times it
24 is not that deep. And they are in rifts or they are in tilts
25 of various types that are formed that have filled in and remain

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1 So I just wanted to voice that concern, that the
2 flexibility will be there for defining regions of interest
3 different than something that's proposed here, that any pro-
4 posed criteria that might become a regulation would have a
5 great deal of flexibility and options spelled out in them.

6 If this was to become a regulation which would be
7 rather inflexible we would be dead as far as site selection
8 goes.

9 MR. ERNST: Let me ask a question of you.

10 Suppose you propose a site and make that statement,
11 which-- I'm not questioning the validity or the truth of its
12 merits, but doesn't that have to be proven? So wouldn't you
13 have to, in a proceeding before the NRC, demonstrate why it
14 would not be better all the way around to go to Texas and site
15 on the Gulf and transport power?

16 MR. WILSON: That is a point that we would probably
17 address. However, there are considerable problems in going
18 outside the state. And going to the states we're most fami-
19 liar with, we have the same kind of problems we do within the
20 state.

21 In going into Texas, you have to go a long ways in
22 Texas before you start getting rivers because the areas border-
23 ing New Mexico are extremely similar to it.

24 MR. ERNST: I guess my only point is that if these
25 criteria were in there, you would have to do that justification.

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eb12 1 If these criteria are not in there, you would have to do that
2 justification because it would come up as a contention, more
3 than likely, as to why you weren't there. And I think it
4 would have to be on the record anyway, the rationale for why
5 you weren't there. I'm just conjecturing now.

6 DR. MASSICOT: So therefore we don't need the
7 criteria.

8 (Laughter.)

9 MR. ERNST: Perhaps. But in areas where there are
10 many water resources, and there are many of these, at least
11 it would say when is enough, which is basically all we are
12 doing. I think you would have to meet these kinds of criteria
13 for any application anyway, just as a matter of disclosure of
14 why you aren't someplace else.

15 But at least this would set, in our view in de-
16 veloping this, reasonable diversity of environmental values
17 to be able to say when you've gone far enough.

18 MS.STULL: Libb Stull, Argonne National Laboratory.

19 It would seem to me that if a rule is proposed it
20 should apply in the majority of cases. But in every case so
21 far that I've worked on in alternative siting, these rules that
22 are proposed here would be violated. And in every case that
23 has been brought before the panel, these rules would be vio-
24 lated and substantial information would have to be brought to
25 bear on why this rule was not applied.

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eh13 1 In those cases-- I mean under these circumstances
2 it would seem then that the criterion should be severely re-
3 vised.

4 MR. ERNST: Let me understand the comment. Is this
5 a grandfathering kind of a problem, or the fact that you just
6 can't meet the criteria?

7 MS. STULL: I would say it's because the criteria
8 is probably not going to work for the purpose that it is de-
9 vised for. In cases that I know, if this criteria were applied,
10 one would not come out with the best environmental alternatives
11 that are available in the region of interest, and the staff
12 would have to prepare a statement of why they had not applied
13 this proposed criteria and proposed rule to fit the particular
14 physiographic region in which the plant was to be sited.

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3.565 15 It would seem to me that if a rule is proposed
16 it would stage a region of interest and resource areas. It
17 should be something that will expedite the alternative siting
18 procedure and will be in the best interests of both the utili-
19 ties, the intervenors, and the NRC staff.

20 MR. ERNST: I think perhaps -- not here, but we
21 need further discussion so we can understand the case histories
22 you're talking about.

23 MS. SHELDON: Why not here?

24 MS. STULL: I will take the example of Arizona,
25 the Palo Verde case. There is really only one resource area

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eb14

1 area for the siting of the plant based on water resources
2 and that is the neonix wastewater area. Otherwise you might
3 have to go to-- You might have two if you took the Colorado
4 River area. But that area does not meet, really, the idea
5 of an area which is not substantially inferior to the proposed
6 site because of litigation and commitment of the Colorado
7 River water.

8 Another example would be one I'm working on now
9 which would be in the Pacific Northwest, and that is if you
10 were to take the load center and look at the three closest
11 water resources areas which meet the criteria proposed here,
12 you would not even include the region or hardly include the
13 region in which the proposed plant is sited. You really have
14 to go out a long distance outside the major load center to get
15 an area which is considered by many to be a very good siting
16 area, which is in the mid-Columbia area.

17 Also, the criteria proposed for the flows of
18 rivers which might be used are a problem in this area because
19 of salmonid fisheries. In each area you go to you run into
20 problems with any kind of the rigidly proposed criteria. I
21 think you'd be much better off to say that we're going to look
22 at the best environmental alternatives that a region can come
23 up with, because in my mind those are not hard for a technical
24 staff to identify.

25 MR. ERNST: I'm glad you asked the question because

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eb15

1 I don't see too much inconsistency.

2 In the first case you mentioned you say there is
3 only one resource area. That may well be true. All we'd be
4 doing is saying the Colorado is a resource area, look at it
5 and if indeed, your assumption that the first resource area is
6 where you should be, it will come out in the analysis. And
7 then find one more.

8 And if you've got to go so far and have legitimate
9 reasons for not -- for saying that there is not an obviously
10 superior site, then, fine, you've proven your point.

11 I'm not sure about the Northwest. If you take the
12 Columbia as a resource area, that's a pretty long region and
13 I think we talked going a hundred miles or so down a particular
14 resource area. So I'm not sure that your site would be pre-
15 cluded in this instance.

16 MS. STULL: No, I'm just saying why propose a
17 criteria which has to be violated so often?

18 MR. ERNST: What's being violated?

19 Maybe we have a lack of understanding here. I'm
20 not sure. What we're requiring is going out and finding areas
21 and then taking a look comparatively to see whether these are
22 better areas than the other areas.

23 Thank you.

24 Any other remarks?

25 MR. WILLOUGHBY: Bill Willoughby, Stone and Webster.

eb16

1 Again I guess it's in support of the previous two
2 comments, and it looks to me like as rigidly as the rule or
3 Topic 4 on region of interest or resource area is structured,
4 where you're sort of saying you've got to find three resource--
5 distinct and environmentally different resource areas and two
6 environmentally diverse sites within each of those, it to me
7 seems you open up the area for a great deal of litigation.

8 If three resource areas were defined, did those
9 meet everybody's definition of three resource areas? If two
10 sites were found in each one, do those meet everybody's defi-
11 nition of two diverse sites?

12 Perhaps you end up with three resource areas and
13 five site selections, and you just almost can't find that sixth
14 one. Do you take the chance on the litigation, or do you spend
15 the money going out and trying to find the sixth site?

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16 The idea of asking for sites which represent
17 diverse environmental areas for consideration or perhaps even
18 sites that represent reasonably comparable environmental areas
19 is a good idea. But the plea is for not quite as rigidly
20 structured as the proposal is, with also two of the resource
21 areas to be based on major water bodies.

22 Another comment has to do with leaving or dis-
23 regarding, if you will, some of the artificial boundaries which
24 man has made for himself. These boundaries, state boundaries,
25 service area boundaries, municipal boundaries, regional

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1 planning boundaries, do represent the way in which the institu-
2 tions in the country are organized.

3 It's not clear to me that in some cases a public
4 utility has the option of going outside of its state. For
5 example, I don't know whether the South Carolina Public Service
6 Authority has the option to build a plant in Georgia or North
7 Carolina. Yet, under this criteria, you say that they should
8 consider it.

9 I guess the question really is in terms of all of
10 the topics so far discussed, it seems to have been the most
11 rigidly structured.

12 MR. ERNST: The word "consider" is an apt word also.
13 It doesn't necessarily say that you have to go there, or
14 something like that. And if there's a valid case that you
15 can't cross a state boundary and it is forbidden by law, that
16 certainly is a good reason for not considering it further.

17 I understand the problems. I think this has been
18 an excellent dialogue. I will have time for a couple of more
19 comments, but I would like charge you when we break for lunch
20 to think about the goal of environmental diversity and how
21 you get there, because I think it's important from the stand-
22 point of having different sites to compare, different kinds of
23 sites with different kinds of environmental values to compare
24 as a more responsible way of discharging NEPA than perhaps
25 the methods -- from the NRC standpoint, and yet a system that

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1 does not preclude the utility from considering those other
2 important items that they consider are important.

3 If we have the wrong criteria or something like
4 that for all the right reasons, then tell us that we've got to
5 choose some better criteria.

6 You're never going to take litigation, at least
7 in my lifetime I don't think, out of the site selection process.
8 There is no attempt in this to take litigation and honest
9 discourse of differences of opinion out of the process. What
10 we're trying to do is to get some diversity in the choices of
11 candidates and to focus the discourse on those environmentally
12 sensitively chosen sites. And that is the sole attempt.

13 There is no way you're going to be able to develop
14 criteria in this day and age that takes the discourse and the
15 litigation and difference of opinion out of site selection.

16 Any other comments?

17 MR. SHARMA: Would you permit me to go back to
18 Topic 2?

19 MR. ERNST: This is comments--

20 MR SHARMA: Since this was discussed this morning
21 I would like to go back.

22 I'm really dissatisfied to see that none of the
23 panel members made a case against reconnaissance level infor-
24 mation. It probably reflects the fact that none of you have
25 tried to work at the working level, to sit down with

eb19 1 reconnaissance level information for six sites and then do an
2 analysis, the actual working experience.

3 Without going into too many details, my concern is
4 that unless you specify minimum requirements for the alternate
5 sites, I very seriously contend that you can do an alternate
6 site analysis.

7 Thank you.

8 MR. ERNST: Thank you.

9 Any other comments?

10 MR. GURICAN: Gregory Gurican, American Electric
11 Power Company.

12 I'd just like to comment on these proposed criteria
13 for the region of interest with respect to the fact that
14 you're calling it "criteria" on one hand, and on the other
15 hand saying in the writing that it's a definition, a definition
16 that is a strict definition of a geographic region extending
2dl 17 to three distinct resource areas.

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1 Now there doesn't appear to me to be reason for
2 limiting the number to three for one thing, as a minimum or a
3 maximum. You could come up with several regions or a region
4 of interest, or you could come up with several distinct areas,
5 but not necessarily be defined radially from the principal
6 load center.

7 When a system is being planned, it's being planned
8 on the basis of balanced generation, balanced loads and
9 balanced transmission. And when you look at systems today,
10 you don't look at load centers, you look at load areas. Areas
11 may encompass 50 square miles or more. You try to define
12 something radially about that load area, and you're going to
13 come up with something that's just unmanageable and unhandy.

14 I have an example. It's something that I'm currently
15 working on right now and that's a site study for American
16 Electric Power. We've defined the region of interest. Our
17 region of interest, using the present guidelines for siting,
18 has come up with several candidate areas.

19 Each of these candidate areas could very well be
20 defined as a distinct region or a distinct resource area.
21 However, none of these resource areas could meet the guideline
22 of the 20 year, 30 day low flow, 20 times the amount used by
23 the plant.

24 So I think this criteria cannot be applied -- and not
25 only should it not be applied, if it is applied, the cost to

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1 the utilities to justify unreasonable criteria, from being
2 deleted for use would be astronomical.

3 Thank you.

4 MR. ERNST: Thank you.

5 MS. GOODKIND: Mary Goodkind, Sargent and Lundy.

6 I had a quick question on Topic Three on early site
7 review. I'm wondering whether the panel feels that a partial
8 decision on alternative sites could be reached before trans-
9 mission line corridors had been identified?

10 MR. BLACKMON: Corridors or land rights?

11 MS. GOODKIND: Corridors or probable routes.

12 MR. MESSING: Sure, a partial decision. But then
13 when you get to the decision where you're trying to look for
14 transmission corridors and there are no acceptable ones, then
15 the partial decision was, if anything, just misleading.

16 MR. EASTVEDT: I would like to respond to that just
17 a bit.

18 Quite frequently we find that we are very limited
19 in the number and size of the corridors that we have available
20 to us. In fact, in the Northwest we have a policy of rebuilding
21 existing transmission lines that are not amortized to higher
22 capacity in order to conserve corridor space. I think that the
23 availability of corridors is a critical factor in site selection.

24 Certainly, again referring to the Northwest, we do
25 have extensive potential sites that are being developed now

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1 east of the Cascade Mountain range, and these require trans-
2 mission corridors across a very, very rugged mountain range
3 that doesn't have very many passes available.

4 So that the ability to transmit power to the load --
5 and I won't use the word load center because I don't like that
6 word -- is a very critical part of the site selection.

7 MR. ERNST: Any other comments?

8 MR. WARD: Don Ward from Baltimore Gas and Electric
9 Company.

10 I believe that the proposed criteria could be greatly
11 improved by deleting most of the words in them.

12 (Laughter.)

13 To go to the extent that you say the region of
14 interest is defined by a geographic region which is of sufficient
15 size to encompass at least three distinct resource areas and
16 delete your definition of Criterion Two -- for one thing, in
17 Criterion Two, as it is now written, you have deleted some
18 major bodies of water: the Gulf of Mexico, Long Island Sound,
19 the Chesapeake Bay. And I don't know why you handle tidal
20 rivers in this.

21 For another, I believe that it is perfectly valid
22 to use a state boundary as a criterion from a couple of stand-
23 points. In the State of Maryland, a state agency is charged
24 with the responsibility of acquiring a site for each of the
25 utilities which generate any substantial amount of electricity.

agb4 1 They have to be within the state, by law.

2 For another thing, there is a tendency for states
3 to impose an export tax on electricity. Whether it will
4 ultimately be found legal or not, I don't know. But it's there
5 now, Pennsylvania, for instance, has it. West Virginia also.
6 I don't know how many other states have it.

7 But that is evidence that there are some states that
8 don't particularly want to have all the electricity for a
9 region generated within them.

10 There is also the condemnation thing which was
11 mentioned earlier, which is that, even for the utilities that
12 do have right of evident domain, it is only within that state.

13 MR. ERNST: Thank you.

14 Just one clarification: the bodies of water you
15 mentioned are not excluded from the criteria. Maybe the words
16 are interpreted differently, but that's not the intent.

17 MS. GENTLEMAN: I want to be sure I understand
18 what the limitations would be on Intervenors, the state, et
19 cetera, if an Applicant had need for early site review and
20 they had identified three resource areas going out radially
21 from the area that they wanted to serve -- which is a concept
22 that doesn't fit very well with a power grid, but we'll just
23 take it to simplify this.

24 Suppose we had gotten a ruling from NRC on an early
25 alternate site review, and a section in the reconnaissance level

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1 information indicated that they had met the candidate site
2 threshold criteria, and that candidate sites were fine and
3 everything was copacetic.

4 Later on, the state opens up a proceeding and maybe
5 the state has a site bank, and the banked sites are rated. There
6 is a preference.

7 What happens in what event? How can we reconcile
8 this problem? If the region of interest was ruled to be suffi-
9 cient in the early site review but perhaps it didn't encompass
10 some of the prime sites that either Intervenors or the state
11 or whoever feel are preferable, I'm just thinking down the
12 road, is there somewhere -- is there something missing in the
13 region of interest definition that could help preclude this
14 sort of conflict?

15 MR. ERNST: The case you described, it sounds like
16 what is missing is utility forethought. But if, indeed, a
17 state process is going on that identifies a prime site and they
18 ask the NRC for another site, something messed up somewhere
19 along the line.

20 MR. MESSING: In the case where you have a state
21 site bank -- and so far you have one state that has it, and
22 that's Maryland; and Massachusettes, I understand, feel they
23 have the authority but they don't have a site bank yet and
24 other states have tried inventories and have been attempting
25 to bank the sites.

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1 But assuming you had six or seven states that did
2 this and you had site banks, then the utility would be, I think,
3 obligated to propose in an application to the NRC to use one of
4 the sites banked by the state.

5 If none of those sites were acceptable to the NRC,
6 then the utility -- then you have to look for other mechanisms,
7 the utility has to consider joint projects with other utilities
8 and other states and may have to consider non-nuclear alternatives
9 or they may have to try and impress upon the state the need to
10 expand their bank.

11 But I think that, in any event, these sorts of
12 alternate considerations are the things that utilities are
13 going to be faced with in the future, regardless of this rule.

14 And the purpose of this rule is to structure the
15 way in which applications that follow this particular line are
16 considered, so that there is more uniformity there.

17 MR. ERNST: Exactly.

18 MS. CAPLAN: I also think the states should be in-
19 volved in that early alternative site review, so that these
20 issues could be brought up at the very beginning.

21 MR. ERNST: I would like to suggest it's lunchtime.

22 MR. BLACKMON: May I make one comment before we
23 break?

24 Several thoughts have come in my mind. Number one is
25 this: a while back you said you were not going to try to defend

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1 what is in these papers.

2 (Laughter.)

3 In that particular regard, Dennis has proposed
4 language that may settle with everybody a lot better.

5 The second thought that I had is this: the require-
6 ment of the resource area for that -- let me make sure I'm
7 reading right -- the 20 year 30 day low flow should be 20 times
8 in excess of the total consumptive water use of the station.

9 In the case of the Carolinas, we would not have
10 sites on rivers, they would all be coastal and we would import
11 power back to the Piedmont area. There are no rivers that would
12 meet that criteria.

13 MR. ERNST: This is a very conservative number. And,
14 as a matter of fact, it came from the energy -- the source was
15 the Energy Centery survey, and it was the most conservative
16 one, namely the western water -- realizing the sensitivity of
17 lack of water in the west. I think it is getting useful
18 discussion today.

19 As to my participation, I've had several comments:
20 Gee, you shouldn't talk so much, and I agree. I've tried and
21 I would like other observations of how I could stay out of
22 this process more because when I think our sense is a mis-
23 understanding of what we're about and to that extent I've put
24 in comments and maybe more than I should and I apologize if that's
25 the case.

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1 MR. CALVERT: I just wondered if you might even
2 consider the possibility of having perhaps somebody from the
3 Mitre Corporation sit in as a Chairman until a question comes
4 up which, perhaps, could be directed to you.

5 MR. ERNST: That's a possibility.

6 (Laughter.)

7 MR. AHERN: Can I take 30 seconds to constructively
8 read maybe some alternative ways which may keep everybody
9 happy?

10 MR. ERNST: Read them and we'll go to lunch and
11 think about them.

12 MR. MESSING: Where are you?

13 MR. AHERN: Topic Four, Question A1. I'm going to
14 read you some of the words:

15 "The region of interest is defined by
16 the geographic region which is of sufficient size
17 to encompass a number of resource areas. The
18 Applicant shall also explain the reason for
19 selecting the region of interest in terms of load
20 center, power pool planning, surface area, state
21 boundaries, whatever."

22 That allows the environment to be considered
23 and the utility interests to be considered.

24 A2, new words:

25 "The resource areas specified in Part A1

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1 must be chosen to encompass environmentally dis-
2 tinct areas which are geographically distinct
3 from one another."

4 Lunch.

5 MR. ERNST: Let's try and see if we can reconvene
6 not later than 1:30. Can we do it in 45 minutes, how are the
7 facilities?

8 VOICES: No.

9 MR. ERNST: Okay, 1:30.

10 (Whereupon, at 12:30 p.m., the hearing in the
11 above-entitled matter was recessed, to reconvene at
12 1:30 p.m., this same day.)
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AFTERNOON SESSION

(1:30 p.m.)

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MR. ERNST: Let's get started.

As you see, we still have the same Chairman.

(Laughter.)

I voted on it over lunch.

(Laughter.)

There's one thing that happened over lunch.

There is a different kind of a proposal, so let me briefly talk about that.

At lunch one suggestion was made that maybe the so-called resource area, the concept is adding little to solving the basic problem. What the intent of the resource area was was to force by sort of a mechanistic means, the assurance that there would be diversity of environmental values to be considered on the candidate sites. And that was really basically the sole purpose.

And it was suggested at the dinner table, at the lunch table, that maybe we don't even need the resource area concept, we could go directly to candidate sites, but make sure that one of the criteria for candidate sites is to assure diversity of environmental values. And that might solve everybody's problem.

So it seems like we had two things to maybe consider. One is the suggested rewrite of the criteria that

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1 was made just before lunch, or this other option. I don't
2 know whether it is just delaying the controversy to the next
3 topic, and we're right back in it again or not, but it looks
4 like we have two ways perhaps to go:

5 One is to consider the rewrite of the criteria,
6 and the second is to consider whether the region of interest-
7 resource area concept is that valueable. And the principles
8 of diversity should be applied to the candidate sites them-
9 selves.

10 And I would like to put that up to the panel at
11 this time.

12 MR. MC GORUM: Mr. Chairman, I wonder if I might
13 make just one general kind of a comment on that. Possibly
14 this goes to the definition of "environment", at least as
15 it's used in the NEPA statute.

16 Certainly in Ohio we use environment I guess in
17 two senses: One, the natural environment, but also in the
18 more general terminology which takes in the socio-environmental-
19 economic, the whole ball game.

20 Possibly what you might consider, I think your
21 idea of getting diversity certainly seems to be good, and I
22 wonder whether as I think the gentleman just before lunch,
23 the Stone and Webster gentleman brought out and I think also
24 Mr. Ward, the fact that institutional environmental factors
25 in some cases may be just as important and critical as the

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1 natural environmental factors, such as water resources in
2 meeting NEPA requirements. And maybe even more critical in
3 terms of the practicality of implementing a decisionmaking
4 process, and certainly in reaching a reasonably expeditious
5 decision; the point being that if you attempt on the one hand
6 to put together criteria which are totally natural in dimension
7 and then try to fit them into a process which is more insti-
8 tutional in dimension, you're simply going to set the stage
9 for a conflict which cannot be resolved.

10 So doesn't the word "environmental" also offer
11 the possibility of some of these other institutional factors?
12 And I think as the possible rewrite suggestion before lunch
13 may have suggested as well as simply the natural factors.

14 MR. ERNST: I think perhaps we could match the
15 two, have a general definition of "region of interest", but
16 then in the candidate site, identification -- well, of course,
17 that makes the "region of interest" kind of an inoperative
18 kind of a criterion if you mesh the two.

19 MR. MC GORUM: I think the word "region" has a
20 geographical connotation and maybe you want to preserve that.

21 On the other hand, I guess maybe what I'm saying
22 is that you would have possibly a blending, maybe an either/or,
23 with a preference for geographical differentiation, if that
24 appears to be feasible.

25 The the rules also offer the possibility in some

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1 of these cases, like New Mexico, et cetera, et cetera, or
2 other more institutional environmental factors -- quote, un-
3 quote -- also could be used. Maybe you need the word "also"
4 in addition to "regional", and that may handle the problem,
5 your problem and also the more practical problem, I think,
6 being elucidated by the utilities..

7 MR. DINUNNO: May I make a comment on that?

8 One of the things that I think is important is
9 that one keep focused on the objective we're trying to achieve
10 here, namely that within the concept of NEPA and the process
11 involved, the test of reasonableness is what we're trying to
12 achieve, and the test of reasonableness indicated that indeed
13 in coming forth with a site that's being offered for place-
14 ment of a facility that one has looked at a reasonable set
15 of alternatives.

16 Now this reasonable set of alternatives, that
17 definition or that universe, or whatever the case may be,
18 is really what we're trying to come up with. And the fact
19 that the environment was included in the considerations that
20 led to the identification of those alternatives is also
21 important. And that's what this rulemaking is trying to
22 address.

23 However, as I've said before, and I will repeat
24 again, in coming forth with a reasonable set of alternatives
25 one does not necessarily focus solely on the environment. One

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1 includes the environmental considerations, but one does not
2 use the environment as necessarily the determinative.

3 So if one could focus on the candidate sites and
4 a number of candidate sites as a test of or as a showing of
5 reasonable alternatives with the concept of environmental
6 diversity brought in, then I think the objectives would have
7 been achieved, and one would have avoided this rather
8 mechanistic definition of what a resource area or area of
9 interest would be.

10 If a utility is told in effect there is a defini-
11 tion through this process of what reasonableness in this
12 context represents in the eyes of the Commission, then I think
13 those of us who are involved in searching and satisfying those
14 tests of reasonableness would have no problem with coming up
15 with it.

16 But I think that one ought to be allowed as much
17 flexibility and as much option in deriving those alternatives
18 as possible.

19 MR. MATCHETT: I support your two comments.

20 I would also like to call attention to the
21 definition of environmental effects on page 6. I don't know
22 if that will cause a problem or not.

23 But it seems like the definition is rather res-
24 trictive in that it refers to the natural and physical
25 environment. I think this is in regard to environmental

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1 impact statements, the CEQ definition. It says:

2 "This means that economic or social
3 effects are not intended by themselves to
4 require preparation of an environmental
5 impact statement."

6 Are there any comments on that?

7 MR. ERNST: Well, this was just a direct quote
8 out of the CEQ regs.

9 MR. BLACKMON: There are obviously other factors
10 that are going to be involved beside the natural environment
11 that must be taken into account. An example that I have
12 continued to think about while we're sitting here today, and
13 I have just decided that it's one of those that we're going
14 to have to face and get on about our business:

15 In the area in which my company serves we do
16 not have access to the ocean, direct access. What we do
17 have is five major rivers that we attempt to utilize
18 proportionally. In that regard, then, we have several man-
19 made lakes, large man-made lakes that we would like to use
20 very much for closed-cycle condenser cooling alternatives.

21 At this stage of the siting game, the State of
22 North Carolina, for example, is on record as saying as far
23 as they're concerned, the only place open cooling would be
24 acceptable would be the ocean. But we believe that's going
25 to change.

mpb7

1 We believe, hopefully, that -- and it may be
2 naively -- that the cooling lakes will become a viable
3 alternative again without having to go through the detailed
4 316A demonstration that may be coming in again, and it is
5 contrary to our good judgment to put a plant with cooling
6 towers adjacent to this lake. Why not instead use a river
7 where you don't have the 12-, 14-, 30,000 acre reservoir, and
8 reserve those existing reservoir sites for future cooling?

9 This is an institutional factor that does affect
10 our siting program. However, in our siting program we do
11 utilize at least from a potential site standpoint those lake
12 cooled sites. It's another factor that gets in there,
13 though not explicitly outlined in any of the criteria that
14 we have seen thus far.

15 MR. ERNST: The Chair is trying to stay out of
16 this conversation.

17 (Laughter.)

18 MR. BLACKMON: Another alternative that may
19 look interesting to us is what Dennis has is excellent as
20 far as a rewrite. The only places that I might even suggest
21 a possible change would be that the region of interest would
22 be defined by load areas to be served and transmission grid
23 connections that could be made to transport the energy into
24 the area.

25 The applicant then would be responsible for

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1 identifying environmentally distinct resource areas within
2 the region, and then should select candidate sites from the
3 area that provide a reasonable diversity of sites. The
4 candidate sites then could be defined as sites that could
5 reasonably expect to be licensed.

6 MR. MESSING: I will reiterate a previous point
7 in rebuttal.

8 I think the service areas are useful for the
9 convenience of the applicant, but they don't provide a good
10 rationally determined basis for the NRC to make environmentally
11 based judgments on. And to weight it entirely on the basis of
12 service areas doesn't seem as though it would satisfy the
13 environmental views.

14 Now there may be some room for compromise nego-
15 tiation here, but I think that your addition there is too
16 limiting.

17 MR. BLACKMON: If it was, that's a mistake.
18 It was talking about a resource area. For instance, in the
19 Southeast, Duke Power may be interested in our service area.
20 However the subregion may, because of the plans of the
21 various utilities in that subregion, may indicate that they
22 believe it would be most profitable for Duke, say, to build
23 a plant or to look at a plant site in Carolina Power and
24 Light's territory, and the same thing in New England, with
25 the power pool concept. As I understand it, anyway, the

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1 location of a plant shared by many utilities as far as
2 capital investment and capacity is not therefore limited
3 to a service area boundary.

4 What we're talking about is where the energy is
5 needed and what is the size area that would be considered
6 for sites to serve that load.

7 MR. MC GORUM: Mr. Chairman, do you suppose that
8 for the benefit of Mr. Messing and others, I made the point
9 that possibly environmental is broader than simply natural
10 and physical, and I don't know whether they would agree with
11 that or not, but that is, I think, an essential basis for
12 what we are now talking about. Whether it has legitimacy or
13 not, I don't know, but at least from a synergistic point of
14 view, that's the starting point.

15 MR. ERNST: I think you emphasized the institu-
16 tional?

17 MR. MC GORUM: That there are institutional
18 factors that are just as legitimately a part of what you
19 might call environmental as are the natural and physical
20 factors.

21 Now from a NEPA, legal interpretation of NEPA,
22 I'm not sure. But at least in Ohio we view environmental
23 in one sense as being quite a broad spectrum concept which
24 does take into consideration both the natural factors and
25 others.

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mpb10

1 I also made the point that you have to consider
2 too that eventually, not only eventually, but throughout
3 this process, you have to come down into institutional do-
4 mains where decisions can be made. And this is a problem. I
5 think people have brought this up. And that siting decisions,
6 to the extent that the states get involved, they have to be
7 able to be within their ballpark.

8 And so if you set up a scenario at the beginning
9 where things are all over the place, administratively,
10 initially and legally, you really can't deal with them. And
11 this comes up, I think, to hinder everybody later on during
12 the process.

13 MR. MESSING: If that was the question or observa-
14 tion, and it was sort of directed over here, it's a point
15 well taken.

16 MR. MC GORUM: On that basis, I guess I was
17 suggesting that maybe we could get off what may have been an
18 impasse by taking the broader view of what we mean by
19 environmental, and still achieve the diversity which certain-
20 ly NRC, and I believe you, would support as being a good
21 thing in terms of alternatives. I think everybody.

22 Simply broadening out the definition and making
23 it more compatible with, as I say, these administrative
24 institutional factors which are part of reality, in making
25 decisions.

mpb11

1 MR. ERNST: Let me go back to where we were
2 when we convened right after lunch, just to bring people up
3 to date.

4 What was discussed at my table at lunch was the
5 fact that maybe we do not need to have any criteria on
6 region of interest or on resource area, that the primary
7 reason why the study document discusses it in the way that
8 it is discussed is to do two things:

9 One is to establish some criteria as to when
10 you've gone far enough in looking for alternatives. And
11 secondly, to provide some reasonable assurance that the
12 candidates that you get will have a sufficient range of
13 diverse values that you can make reasonable comparative
14 judgments between one set of values and another set of values.
15 That was the objective.

16 If the criteria proposed do not meet that objec-
17 tive or you throw so many problems into it in trying to
18 determine what those criteria mean, then maybe it's not
19 worthwhile.

20 And it was suggested at the table that maybe
21 we do not have a topic for it, but we have an additional
22 requirement of some sort in Topic Five that says we only
23 worry about the merits of the candidates, but those candidates
24 must have sufficient diversity to make a comparison a mean-
25 ingful exercise.

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mpbl2 1 Again I think we're going to be stuck with the
2 kinds of -- of what this means, but maybe that can only
3 come about in a litigative sense, I don't know. So it
4 seems to me like we have before the panel at this time three
5 possibilities:

6 One is some kind of modification to the Staff
7 study document;

8 Secondly, some kind of modification of the
9 proposal that was made just before we broke for lunch;

10 Or, thirdly, a dismissal of Topic Four completely,
11 and putting forth some kind of requirements on diversity of
12 environmental values onto the candidate site slate itself.

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1 I think I would sort of like to get off
2 of this if we can on one of these paths and proceed with
3 specific suggestions as to what might be useful in the rule.

4 MR. BLACKMON: Well, from a generic standpoint,
5 I think it would seem to me the best route we are talking about
6 is one where we say, without giving a direct definition to
7 "region of interest" or "resource area" that what we are saying
8 is indeed that candidate sites ought to show a diversity and
9 that that diversity ought to be consistent with what needs to
c5 10 be looked at.

11 In other words, if it is consistent enough to say
12 that the diversity of three groundwater areas in New Mexico
13 is acceptable, then that's acceptable. At the same time, in
14 Minnesota or in Florida or somewhere else, the resource areas
15 are going to be different as long as there can be a diversity
16 of candidate sites, and it would seem to me that that's what
17 we're all after.

18 DR. HARLEMAN: I agree. I think it would be fruit-
19 ful at this point to perhaps talk about Topic 5.

20 MR. ERNST: That is an option. We can bypass that
21 particular thing and see where we wind up on Topic 5, with all
22 due deference to Mark's comment before that we ought to have
23 4 and 5 talked about at the same time anyway.

24 It takes a while for us to get smart.

25 Well, let's move on to Topic 5. Don't let me forget

eb2 1 to come back and do something with Topic 4 before we're over.

2 Again, I do not intend to go through and read all
3 of the criteria on Topic 5. There's a number of them. I do
4 want to repeat perhaps the point that the purpose of the
5 threshold criteria that are suggested is to try and identify
6 those candidate sites that are likely to be among the best that
7 could reasonably be found. And the technique is to try and
8 identify those environmental characteristics of most importance.
9 And if a site meets the threshold criteria, that would be a
10 sufficient determination that you had a cast of superior sites.

11 Then you would take that cast of sites and compare
12 them to see if there was indeed an obviously superior candidate
13 amongst them by summing up all the values. It's merely a
14 screening mechanism to determine whether or not you reasonably
15 have superior sites before you get to a detailed comparison.
16 It's a mechanism for narrowing the field.

17 And it is a product-oriented approach to measure
18 the merits of the product rather than a process-oriented
19 approach which tries to measure the goodness of the process
20 that yields sites and perhaps sometimes you could pay more atten-
21 tion to that than almost the merit of the site that you wind
22 up with.

23 So basically that was the intent, to have some kind
24 of criteria for acceptance of a slate of candidate sites.

25 MR. MC GORUM: Can I ask a question, Mr. Chairman?

eb3

1 I was wondering with respect to Topic 5 on page
2 23, A.?, what is the significance or the reason for having
3 let's say two candidate sites from each resource area? You
4 get into what Karin referred to this morning as kind of a
5 numbers game.

6 I'm just wondering, why does that come about and why
7 is it important as opposed to having three candidate sites
8 from anyplace, or whatever?

9 MR. ERNST: I think that is certainly a good ques-
10 tion in light of this morning's discussion.

11 The intent of Topic 4 combined with 5 would be to
12 wind up in a fair number of cases with six sites that have
13 diverse environmental values. In other words, you put diver-
14 sity into the resource area to start with, and having three
15 resource areas that hopefully are diverse and then within each
16 resource area, select two sites that must have diverse terres-
17 trial or other kinds of values, so hopefully you wind up with
18 six sites that area reasonably diverse from each other. That
19 was the only reason.

20 MR. MC GORUM: I believe as Tony said this morning,
21 or somebody, this gives some kind of an ultimate omniscient
22 virtue to the resource areas themselves as opposed to having,
23 as you say, simply candidate sites which have within them
24 sufficient diversity to make a choice.

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25 So I just wonder whether or not again this ought to

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1 be questioned, whether it matters whether, in a particular
2 resource area, you have only one or maybe you have two, or
3 maybe three.

4 MR. ERNST: I think it would be under the precept
5 that you're not going to worry about resource areas, only
6 worry about diversity. It's a means for trying to come up with
7 some kind of criteria that would say when you've gotten
8 statistically a reasonable set of diverse options, so that was
9 the only reason for the numbers game.

10 MR. BLACKMON: Let me if I may continue this con-
11 versation just a little bit.

12 With regard to taking a look at it and constructively
13 trying to go somewhere with the document that we have, Criterion
14 A.1, if we can delete several words in the last sentence, I
15 think it's entirely acceptable. And I'm not sold on deletion
16 of any words. I think what we're talking about there is fact,
17 and that is that the applicants would define the methodology
18 and the NRC would check to make sure that everything is accept-
19 able.

20 With regard to Item 2, I think the numerical game
21 is a number that the applicants would not be happy with, that
22 the states would not be happy with, that most public interest
23 groups would not be happy with. The idea is to have a clear
24 diversity. In some instances there may be only four diverse
25 sites that could even be considered or, in the alternative,

eb5 1 instead of having one three-unit plant site, maybe what we need
2 is a two-unit plant site and a single-unit plant site.

3 I think that it is incumbent upon applicants, the
4 NRC staff, and the other parties to any hearing to make sure
5 that that diversity is there. If the NRC then wants to select
6 out of-- Say if the applicant proposes nine sites and the
7 NRC wants to select what they think are the six best or the
8 six most diverse, fine. But I don't see that there's a magic
9 number which must be met.

10 In answer to Question Number 5.1, my answer is
11 it's not that it's too vague, it's just that it is arbitrary
12 and unnecessary.

13 DR. KEENEY: I would certainly like to agree with
14 all of what Don said. And in connection with that, I would
15 like to see the elimination of the concept of a resource area
16 since it is mainly the means to this end, that there's a fair
17 amount of agreement that we would like to have diversity of
18 choice among very good sites, hopefully.

19 And rather than just introduce a new concept,
20 resource area, so there is one more issue to argue over, I
21 don't see the value in that.

22 MR. ERNST: I would caution the panel though, if
23 we are going to do that, then suggest some way of understanding
24 when we have sufficient diversity. I think it would still be
25 useful to be able to come to grips with that.

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1 Maybe it can't be, and maybe it is purely a liiti-
2 gative matter, I don't know.

3 MR. ROISMAN: One way to deal with it would be to
4 require that for every diverse environmental situation that
5 exists within the region of interest there must be at least
6 one representative site. It might be in one case only three
7 sites, in another it might be 12. It would depend upon what
8 the resources were like in that particular area.

9 Now again that would be a performance standard
10 and you could argue about it, and you would anticipate that
11 a utility would come in and make a very strong case for why in
12 this case it only found three candidate sites to look at, and
13 in some other case it had 12.

14 But that would enable you-- The utility would
15 know they would have to try to justify why didn't they talk
16 about any site in the state next door. Well, they're going
17 to tell you, we've got this interstate pact that prevents us
18 from wheeling power from one state to another; we can't get
19 the power from that state. If we don't get rid of the pact,
20 you can't use the site.

21 That would then allow the NRC to consider whether
22 that is, under NRDC versus Morton, a legitimate or an illegiti-
23 mate basis for rejecting a category of sites.

24 But you would continue to pursue-- I think the
25 proposal that was made just before lunch was a proposal that

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1 didn't say it had to be all the diverse environmental areas;
2 it just said that there had to be diverse environmental areas
3 represented by the candidate sites. I think if you would
4 add "all," that is, there must be a representative site from
5 each diverse environmental situation, that would cover the
6 problem that I think you're raising now with, you know, how
7 do we know we've got enough diversity.

8 What we're saying is you have to have the diversity
9 that's available, whatever that is.

10 MR. ERNST: Over what region of interest? The
11 entire United States?

12 MR. ROISMAN: No, I think you come down to what is
13 inherently a subjective standard but at least you can evaluate
14 it; that is, what's reasonably available?

15 If an applicant proposes that a certain area is
16 not reasonably available to it, it would have to explain why.
17 I don't think it would have to explain in New York why
18 California wasn't available, but it might have to explain why
19 Pennsylvania wasn't available, or why New England wasn't avail-
20 able.

21 If there is any reason to believe that in any of
22 those areas they might run into new kinds of site charac-
23 teristics-- I mean the New Mexico example that we heard this
24 morning would be a good case. It sounds like New Mexico,
25 whatever its virtues for waste disposal might be, doesn't sound

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1 like a great place for a nuclear plant.

2 If they came in and didn't include some places
3 with the quantities of water that you get in the Gulf of Mexico,
4 you might say to them, "Well, how come? Why isn't that in
5 here?"

6 And they would be expected, in making their appli-
7 cation, to point out the transmission costs or if there is
8 some state laws that are in the way, why they can't reasonably
9 talk about bringing power up from the Gulf of Mexico into New
10 Mexico for purposes of meeting a need that's in New Mexico.

11 MR. AHERN: I think from a practical point of view,
12 from a person who would probably have to do something like
13 that, and I'm talking about New England, I think very easily,
14 within a couple of states within New England, I could find
15 several dozen different types of environmental diversities,
16 or whatever you want to call it.

17 It's an extremely difficult thing to do to leave
18 it that arbitrary, also to try to find one site from a lot of
19 these diverse types of --

20 MR. ROISMAN: It's clearly going to be arbitrary.
21 The question is will you be able to make the arbitrary deci-
22 sion without any review, or will the NRC be able to make the
23 decision in the public view? In any case you're going to make
24 an arbitrary distinction. That means you're going to include
25 some kind of sites and exclude others.

eb9

1 And the question here is reviewability. You've
2 got that built into the fact that New England in your judgment
3 is rich with potential environmental areas, in terms of
4 diversity.

5 We think that means, particular New England, of
6 all the areas New England the most, because from New England's
7 perspective it's a compact region with a completely inter-
8 connected system, and it is reasonable to talk about a plant
9 virtually anywhere within the region as at least potentially
10 being available to meet a load almost anywhere in the region,
11 and you can see that in the ownership of the plants.

12 The ownerships of the plants often span the whole
13 width or height of New England because it doesn't matter where
14 the plant is for purposes of getting the load, and the Nepool
15 agreements and all of that make that even more possible.

16 I would say that, one, New England should be doing
17 regional planning anyway in terms of sites. In nuclear plant
18 siting, we should never have another Seabrook in New England,
19 or a Pilgrim. It should all be done on the basis of does
20 New England need a nuclear plant? If so, where? And forget
21 about who is actually going to be the owners of it.

22 If you've got somebody in New England who is pre-
23 pared to put up the money, someone will own it.

24 MR. MESSING: The other criterion is really the
25 service area you're talking about, diverse environmental areas

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1 within the service area.

2 MR. ROISMAN: Well, in New England that would cer-
3 tainly be a big factor.

4 MR. AHERN: No. I was just going to say New
5 England has -- I think Jerry Kline said 63,000 square miles,
6 or something like that, and there are just all sorts of
7 utilities. There's a lot of municipal utilities and private
8 utilities, I don't know, maybe 20 utilities in New England.
9 Their service areas are sometimes one town, sometimes they are
10 several hundred square miles.

11 MR. MESSING: But if a utility is buying a share--
12 Nobody is building plants for their own use now. If some
13 utility is buying a share of a project, then why not consider
14 where we are drawing the boundaries? If somebody is buying a
15 share, I'm saying you should extend your look at diverse
16 environmental areas to that geographic area.

17 Now the fact that you're talking about a small
18 town in Massachusetts which in fact is buying a half percent
19 share and is not in its entirety big enough to site the plant,
20 well, obviously that's an area that is easy to exclude from
21 consideration.

22 But if you're wheeling the power and somebody is
23 buying a share and it's interstate, then you look for sites
24 that far --

25 MR. AHERN: I'm sorry, my problem was with the

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eb11 1 original remark, bringing forward one site from each diverse
2 environment. Depending on how you define "diverse environ-
3 ment" you can bring to bear dozens and dozens of sites. That
4 is my original remark.

5 MR. ROISMAN: Other than the fact that it's a lot
6 of work, what's wrong with that? Isn't that the best way to
7 decide what the best sites are?

8 MR. AHERN: To make that as a generic rule I think
9 would be very difficult to work from.

5.175 10 DR. KEENEY: Yellowstone Park is a diverse area,
11 for instance, and I don't think in siting a plant out there
12 you necessarily need to do it, or that it's in my interest or
13 anybody else's that we spend all the time and money to examine
14 that as one diverse area.

15 There would be a lot of other reasons why you would
16 want to eliminate certain of those areas.

17 MR. ROISMAN: I don't see anything wrong with
18 identifying specific sites that you're excluding automatically,
19 like in California where you can put all the ones on the San
20 Andreas Fault off for consideration, but I think that you have
21 to go through the process of saying that, not simply come in
22 and say, "Here are six sites," and you will never know that
23 there were 600 that we looked at and rejected for a variety
24 of reasons. You can't find out.

25 It goes back to my earlier point about the open

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eb12 1 planning question. Is this going to be done in the open, or is
2 the utility going to get all its ducks in a row and then
3 present those to the decision-maker and say, "This is what we
4 want." I don't think that's the way it ought to be, so I come
5 at it from a different -- I think from a somewhat different
6 perspective perhaps.

7 MS. CAPLAN: I think you have to keep in mind that
8 you have to have the water resource there, too. If that's not
9 there it's not worth looking at.

10 The other things that-- Again because different
11 areas of the country are different, I think people should be
12 aware that utilities are sometimes siting entirely out of
13 their service territories, even where there is co-ownership,
14 that they're going into other service territories entirely.
15 So that if you had this as a criteria, where you have a pro-
16 posed site that's not in your service territory, you certainly
17 want to look at alternatives that are outside of the service
18 territories.

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1 MR. HAHN: Mr. Chairman, we're looking at the
2 Northwest. We're talking roughly 275,000 square miles.
3 We've got diversity that extends all the way from the Pacific
4 Coast ocean beaches clear to the western crest of the Rocky
5 Mountains, and the Canadian border clear down to northern
6 California.

7 I suggest that too much is too much in terms of
8 trying to pick at least one representative site for each type
9 of resource areas.

10 MR. ROISMAN: I specifically said "reasonably
11 available", and if you want to exclude an area and say it's
12 not reasonably available, that's fine. There's nothing wrong
13 with that.

14 But I don't think there's a legitimate basis, if
15 we're talking about public participation in this process,
16 for the utility to privately decide to reject it. You in
17 your mind can tell me that you've got some reasons why some
18 of those sites that you consider to be beyond the pail, too
19 much work to look at, ought not be looked at.

20 I'm asking you to put it on paper so that I can
21 judge -- and the NRC, if they're making the decision, can
22 judge whether your process was a reasonable one or not,
23 rather than simply giving the bottom line of the process,
24 which is Here's where we think the six candidates are.

25 MR. HAHN: I don't disagree with that, but I

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1 would hate to see anything in the rule that says we have to
2 look at one for each type of area.

3 MR. MESSING: The rule really should be refined
4 to do that. When you look at the Northwest any coarse
5 screening is going to give you large exclusion areas right
6 off the bat, depending upon the criteria that you use. And
7 then you go through a second coarse screening and you're
8 going to eliminate more. And before too long, you're down to
9 a reasonable -- you've done the screening process and you're
10 down to these reasonably available areas.

11 The thing of this is that we are talking
12 about power plants throughout the United States, and we are
13 talking about a process that cumulatively collects information.
14 That is this whole process isn't going to have to be repeated
15 without any background data every time a new plant is
16 proposed.

17 Everytime a new plant is proposed and somebody
18 goes through any further screening criteria, you're adding
19 to our cumulative understanding of that region. And I think
20 that the process would be reasonable. I mean, it would be
21 manageable the first time, and it would get better each time
22 it was applied after that.

23 MR. BLACKMON: I thought it was helping when I
24 started with these two.

25 What Mark just mentioned, though, is an excellent

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1 point, and that is, as Tony was mentioning, you would have
2 a site in reach resource area. Well, there are some areas
3 where you can write them off right off the top, and those
4 areas would be things where there is a national scenic river,
5 where there is a national park or forest, where there is a
6 fault zone that is well documented or active.

7 These screening processes in the utilities'
8 terminology lead you to what are considered to be candidate
9 areas. It's not a resource area, it's a candidate area. They
10 are places where it is then possible to say We think we can
11 find some plant sites in this area, provided that you go
12 through the exclusion process and end up with -- the way I
13 term it is all places on the map where there is water and
14 nothing else.

15 Then those are the areas that are -- quote --
16 your "resource areas", if you're going to put it in the term-
17 inology that we're looking at here. If we go that route,
18 then I don't think there's any problem. And then in
19 New England they couldn't say anything that is a wilderness
20 area, write it off; it's already off. We're not going to put
21 it in.

22 DR. HARLEMAN: Well, those are already covered
23 on page 24, where you list the appropriate threshold level.
24 So I think there's no problem with that.

25 I have more of a problem with Items 3C and D.

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1 For example, item 3D states:

2 "The discharges shall be in accordance
3 with state standards."

4 Now we all know that in many states these
5 important standards are expressed as temperature differentials,
6 not all states, but many, temperature increases above natural.
7 And this has traditionally been used as a surrogate for the
8 Item 3C, which says that:

9 "We shall protect the balanced indigenous
10 population of the aquatic environment."

11 We guarantee Item 3C is much more difficult than
12 to come up with a proposed temperature increase. And I'll
13 maintain that even coming up with a proposed temperature
14 increase in detail is difficult.

15 And I'm worrying about this reconnaissance level
16 data again in looking at so many different sites. I was
17 recently involved in the middle of a controversy between
18 San Onofre and NRC, where they were trying to meet state
19 standards which said that you shall have a temperature in-
20 crease of four degrees Fahrenheit within 1000 feet of the
21 discharge point, and NRC said they didn't meet it, and
22 Southern California said they did. And the controversy
23 finally was resolved with a very, very detailed analysis of
24 long term current reading meter records to prove whether or
25 not there was a net drift and in what direction along the

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1 coast of California off San Onofre.

2 That's the type of data and the analysis level that
3 would never be available in what we call reconnaissance level
4 information.

5 So I'm very much in agreement that you have to
6 have some criteria for selecting candidate sites, and I think
7 you can use reconnaissance level data to select, let's say,
8 six candidate sites. But when you get to the nitty-gritty
9 of pinpointing which of those six, and have to say that there
10 shall be no significant impacts on the spawning grounds,
11 nursery areas, and that you will meet detailed state standards,
12 which say within 1000 feet it shall be within so many degrees,
13 that's a very difficult thing to do without detailed studies.
14 And this is why I come back to the point I made several times
15 before, that I feel we would all be more comfortable with
16 perhaps two final sites which have fairly detailed informa-
17 tion. And we are still now talking about screening and
18 coming down to six.

19 But we haven't really come to grips with how you
20 narrow it down or whether you accept something as a proposed
21 site, which is what we've been doing all along.

22 MR. MC GORUM: Mr. Chairman, I'd like to make
23 another point too, if I may, going back to what I think Tony
24 just said, which discomforts me a little bit.

25 It seems to me the burden on the applicant based

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1 on the way we're heading, should be to come up with, let's
2 say, six or five or seven or whatever candidate sites, and
3 that these do have within them and do represent a sufficient
4 environmental diversity -- quote, unquote -- based on some
5 kind of criteria we haven't yet agreed upon.

6 But I do think it would be unreasonable to
7 expect the applicant to defend against Why did you not pick
8 candidate sites from the other 99.8 percent of the land area
9 which is in that state or that region, which also might have
10 diversity. It might have water, it might have other things.

11 I think that would be very dangerous. So I'd
12 just like to suggest that these things should focus on how
13 many candidates, with what degree of diversity, and something
14 about the criteria. But let's stay away entirely from putting
15 a burden of defending against Why didn't you do it elsewhere
16 than here, unless it turns out that one or two of those sites
17 simply are deficient, you know, and it's back to the drawing
18 board.

19 MR. ROISMAN: But that position has been rejected
20 by the Commission. If I understand one rule we're following
21 here, it's the rule that we'll take the law as we find it,
22 so you have not found us arguing about what he considers to
23 be the totally unacceptable standard of "obviously superior".

24 When the Commission adopted "obviously superior"
25 it rejected Commissioner Kennedy's proposal, which is yours,

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1 "any acceptable". And the premise cannot be for the purpose
2 of this discussion that six acceptable sites necessarily
3 fulfills the NEPA burden.

4 The NEPA burden at least presupposes that you
5 look at the available sites and make a choice. If you're not
6 going to pick the best, then the one that you pick is not
7 "obviously inferior" to any of the other sites, and that
8 requires looking at the full range of reasonably available
9 alternatives. And I don't think there is any legal way, nor
10 should there be a legal way around that.

11 The only way that that could make sense is if you
12 began with the premise that every site that was marginally
13 acceptable for a nuclear plant was ultimately going to get
14 used anyway, and that's a premise which I don't think even
15 the most optimistic utility representative here would like
16 to be making today.

17 MR. ERNST: I don't think that's a premise --
18 several things:

19 I don't think that's a premise for this paper.

20 MR. ROISMAN: No, I don't either.

21 MR. ERNST: Okay.

22 Secondly, you made reference to Commissioner
23 Kennedy, and I guess my views, if I'm remembering your comments
24 properly, I think what was being stated there is perhaps one
25 could make judgments regarding a proposed site based on

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1 inferior qualities. I don't think that applied to a slate of
2 candidate sites. And what we are about here is trying to
3 determine whether useful criteria can be established to
4 meet a criterion of among the best that reasonably could be
5 found, which is not the Commission's standard of "obviously
6 superior".

7 So I think it is not correct that what is being
8 proposed here has already been dismissed by the Commission.

9 MR. ROISMAN: I was speaking to the gentleman
10 from Ohio's comments, not to the Staff document.

11 MR. ERNST: I see. Okay.

12 MR. MC GORUM: I'm simply looking at it from the
13 standpoint of the layman's logic, I guess, as to whether or
14 not you should concentrate on those areas that you're
15 specifically concentrating on, or have to accept the burden
16 of defending against the other 99.5 percent that you've
17 already excluded on the basis of whatever was done so far.

18 MR. ROISMAN: All that depends upon whether you
19 accept the utility as the best one to make the distinction
20 between the selection and the exclusion, or whether you want
21 to question it.

22 Obviously we want to question it until we under-
23 stand why the utilities would not like to have it questioned.

24 MR. MC GORUM: I'm not arguing that point.

25 I think the NRC is the review agency and the

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1 hearings are set up in order to bring that contentious point
2 into some kind of a debate.

3 The point is to limit the debate to the candidate
4 sites primarily. If it turns out they're not right or if
5 they don't meet the standards, then go elsewhere. Otherwise
6 I think you set up a straw man or something, and you can get
7 into perpetual hearings, it seems to me, simply trying to
8 prove the unproveable.

9 MR. ROISMAN: I don't agree with that, particular-
10 ly if the Staff is going to use the premise of this paper,
11 which is that they will essentially rely on the data prepared
12 by the applicant.

13 We have to start with the review of the whole body
14 of available sites by somebody, so that we can have some
15 assurance that the candidate sites that we're looking at from
16 which the site is to be selected has been reasonably put
17 together.

18 Now if the NRC wants to go out and take on itself
19 the task of surveying all the available sites, or if they want
20 to give us the funds to do that, then you might come to differ-
21 ent conclusions. But the premise of this piece of paper that
22 we've been looking at is that the applicant will do that. And
23 I'm not willing to allow the applicant to pick the six without
24 having some knowledge that the way they got the others out of
25 the way is not subject to complete review.

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1 MR. MC GORUM: You're assuming in the beginning
2 some super-omniscient agency of some sort, are you not?

3 MR. ROISMAN: No.

4 MR. MC GORUM: I think you would have to be.
5 Otherwise somebody is going to start someplace and then
6 somebody, on the basis of that, will come along and review.
7 And I thought that the whole purpose of the NRC was basically
8 as a review with the applicant starting the process of, as
9 opposed to the initiation being at the other end and the
10 applicant coming along and making its selection from there.

11 I think it's a cart before the horse situation
12 here.

13 MR. MESSING: The information should be in the
14 record. It's available. It's not that it should be an
15 omniscient presence, or whatever, but it's just that if
16 somebody wants to --

17 MR. ERNST: We'd have to have some legislation
18 in that area, I think.

19 MR. AHERN: Can I ask what you mean by "available
20 sites"?

21 MR. ROISMAN: Reasonably available, I mean a
22 site that can meet the need, can provide --

23 MR. AHERN: You're not talking about actual
24 ownership of the property?

25 MR. ROISMAN: Not necessarily, unless someone can

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1 demonstrate -- I mean, in the Seabrook case they argued on
2 a site up in Maine that couldn't be owned. It not only wasn't
3 owned, but it couldn't be owned by the utility in question.
4 I mean, it wasn't reasonable for some other utility to own
5 the plant.

6 Just accepting without arguing that those premises
7 are valid, then that would be a basis for saying that the
8 other site wasn't reasonably available. The need was for
9 this utility to own a plant. It cannot own the plant that
10 is located in that state. Therefore the site in that state
11 is not reasonably available to meet the need.

12 MR. AHERN: There are many other problems of avail-
13 ability. Very often you will find attractive land and many
14 hundreds of acres which look great, or may look great, and you
15 find that one particular parcel of maybe a few acres, or what-
16 ever, are in trust from somebody to Audobon, to Sierra Club,
17 or somebody.

18 And to try and do an awful lot of work on a
19 multitude of sites without actually knowing this type of
20 information and availability is very difficult. And to try
21 and send real estate people out to try and determine the kind
22 of availability on a multitude of sites is -- very often it's
23 just not practical. It just can't be done in a reasonable
24 amount of time.

25 I think when you use the word "availability", I

mpbl2 1 just have problems from a practical point of view.

2 MR. ROISMAN: But we're coming at it from the
3 perspective that the number of sites suitable for nuclear
4 plants is relatively few, and you're coming from the pers-
5 pective that it's relatively great. That's why we want you
6 to look at a lot more sites because we don't think you'll
7 find very many that would pass muster, and you don't think
8 you need to look at a great many sites because you think in
9 looking at only a few you would have already seen a substan-
10 tial number that would pass muster.

11 That's a premise different than I think we've got.
12 I don't see any way to resolve that.

13 MR. MESSING: In terms of reasonably available,
14 I think as it was used originally, it really corresponds to
15 candidate areas as they are regarded by utilities in their
16 site searches. That is, reasonably available meaning it
17 survives first and second coarse screening techniques.

18 It's not clearly an exclusion area and it is
19 not an avoidance area. Exclusion areas, avoidance areas,
20 preferred areas, candidate areas, as it was originally
21 used, reasonably available means a site that falls within
22 one of those categories, preferred, non-avoidance, something
23 of that sort. And when you get down to the site level, then
24 you get to this higher level of the questions you're now
25 bringing up.

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1 MR. ROISMAN: I guess the only place where that
2 would be different is if the candidate area happened to be
3 an area in which there was only room for one possible plant
4 within that site, a lake with just enough water and enough
5 space that it could take one plant, and that's a unique
6 candidate area and there is no other one like it, and you
7 have to come in with that, presumably you would want to know
8 is there any reason to believe that we will ever be able to
9 site on this lake.

10 You find out the lake is owned by the Audobon
11 Society and you're not going to be able to site there
12 unless they tell you Gee, that's just the thing we've been
13 looking for for the birds.

14 (Laughter.)

15 MR. ERNST: I would like to bring the panel back
16 to a point that I think is germane, and probably there is a
17 difference of opinion here.

18 The attempt in the Staff document was to deter-
19 mine reasonably when one had gone far enough in the search
20 for candidates, and then they're relatively ready to compare
21 the candidate sites. What I hear I think is a difference of
22 opinion about whether or not one can reasonably understand
23 when one has gone far enough.

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3' 19bl 1 The technical precept on which the numerical values
2 were set were to get some diversity of qualities and the feeling
3 that, if you had diversity of qualities and also met prescribed
4 threshold values of environmental goodness in critical areas,
5 that you would have a slate that is among the best, and that
6 an order of a half a dozen or so would provide statistically
7 good -- would be statistically significant and provide reasor-
8 able protection to the environment and that going much further
9 than that would start looking like you are really trying to
10 find the best site, which is the premise and, I think, upheld
11 in the courts that it is not the necessity for NEPA to find
12 the best site.

13 And I would like the panel to focus on the underlying
14 philosophy for a minute to what we think we're trying to do
15 and whether that's the right thing to do.

16 If we are philosophically wrong, then the procedure
17 or process aimed at doing that is not every going to succeed,
18 clearly.

19 I see a philosophical difference there.

20 MR. BLACKMON: One thing, if I may. I'm not going
21 to sit here and say that, even after reconnaissance level
22 information, even after site specific information, that it is
23 not possible to find a better site. I'm not going to say that.

24 But I'm going to say that, based on the value of
25 the information that is utilized in the site selection process,

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1 candidate sites should represent the best diversity of sites
2 that could be utilized by an Applicant. We may not find the
3 best site this time, but we might next time.

4 The other thing about it is that siting is changing.
5 Criteria are going to be different three years from now than
6 they are right now, and sites which would not be acceptable
7 today may be acceptable three years from now. I think we need
8 to keep that in mind.

9 From the standpoint of the three resource areas
10 and two sites in each area, that gives us the number six to be
11 evaluated. Whether it is six, whether it is seven, whether it
12 is eight, as long as there is a diversity which can be looked
13 at, I think that is the most important thing that we do indeed
14 need to look at.

15 I'd like to see us -- I'm afraid that the meat of the
16 thing that we are on on this particular criteria is the
17 thresholds. And I think those are going to be -- as
18 Dr. Marleman pointed out, those are going to be the things
19 that we need to question.

20 I think that what we are all saying is that there
21 needs to be a diversity and we really don't want to lock onto
22 one particular number as the number of sites that has to be
23 evaluated by NRC.

24 MR. MESSING: I agree with everything Don just said.

25 DR. KEENEY: I do too. But he not only said

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agb3 1 diversity, but not diversity among bad sites. As Don said,
2 he wanted the best sites, or a set of good sites.

3 And I think that can be determined once you've got
4 that set of six or so and examined them reasonably well, that
5 sets the standards to then go back and reappraise the judgments
6 you made in the screening much, much earlier in the process
7 to try to determine whether it is very likely that you missed
8 a very good site in the screening process and perhaps one that
9 is much better than was screened out based on judgment at one
10 time which is updated, based on the judgment that you have
11 learned through the process. And that would then better address
12 the whole area and tie it together by coming around again.
13 I'd like to see that done.

14 MR. BLACKMON: We have recently found, through
15 a screening of our region of interest which was not just our
16 service area but was more than that, the identification of 100
17 sites. These were not paper sites, as I have been led to
18 believe that some people may be doing.

19 In other words, a site that is at River Mile 271 and
20 a site that is at River Mile 270, as far as I'm concerned, that's
21 the same site.

22 But we had 100 sites, and through rational logical
23 reasons, 62 of those sites were used off the board, excluded
24 if you will, without going into any detailed analysis of
25 information.

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1 There was reconnaissance level information utilized
2 to screen from those remaining 38 down to 15. That included
3 both fossil and nuclear plant site alternatives.

4 Those 15 were then screened down to 10 that we said,
5 we haven't got but two hands, therefore, we can't carry but
6 10 notebooks at a time. All we're looking for is one plant
7 site, so let's go to 10, carry it from there down.

8 That's where we are right now. And on the basis of
9 the decisions that we have made, I think every single decision
10 that was made can be supported.

11 MR. ROISMAN: And you don't have any problem with
12 doing so, assuming there was a process by which the selection,
13 by which you got down to those 10, was an issue in defending
14 them.

15 MR. BLACKMON: I think the screening process, the
16 site selection process is going to be an issue. It is talked
17 about in Reg. Guide 4.2, the Standard Review Plans, the Environ-
18 mental Standard Review Plans do require the Applicant to address
19 the methodology, to see if it's an acceptable or unacceptable
20 methodology. I don't have any problem with defending them.

21 MR. DINUNNO: I would like to comment a little
22 because we've gone through similar exercises as described here,
23 where we dealt with numbers in the order of hundreds of possible
24 sites.

25 The objective, of course, is to narrow it down to a

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1 handful from which a preferred site could be selected.

2 And we have documented these cases so that, indeed,
3 that decision process, if it were challenged, one could lay
4 it out and explain the entire process.

5 The concept of diversity that has been kicked
6 around bothers me somewhat in the sense that the end of the
7 search, in effect, environmentally speaking is to come up with
8 a site that minimizes or would minimize the environmental
9 impact, and so that the end number that you distill out of this
10 process are a group of candidates that have the potential of
11 minimizing the impact.

12 That was one of the major purposes of the whole
13 search, other than the functional requirements that had to be
14 fulfilled. But in the end, you're looking for viable candidates,
15 all of which are good potential but they're all aimed at
16 minimization of environmental impact.

17 So that the diversity you may have in a set of very
18 good sites -- good in a sense that they do minimize the impact
19 -- may not be very great.

20 I think the process of looking at diversity to narrow
21 down to those candidates, indeed, is a viable one and a very
22 important concept, but I'm not so sure in the end that you're
23 going to see diversity in the last couple that you are really
24 comparing in a very serious way.

25 DR. KEENEY: You might have diversity, though not so

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1 much as to the value of those sites. And I agree very likely
2 that all have hopefully high values and may be roughly
3 equivalent, but the diversity might be in terms of different
4 types of environmental problems, for instance, if they were
5 two different water sources. And I would consider that to be
6 diversity, if it means diversity in value, then I agree with
7 your comment.

8 MR. MATCHETT: I would like to say what Joe just said,
9 too, having been through a number of site selection processes.
10 I feel that it probably would not result in the best handful
11 of sites to select them on the basis of diversity.

12 I think the systematic screening process is much
13 more apt to result in six -- if you like that number -- sites
14 which are among the best. And not only among the best, but
15 probably are more likely to be better than six sites that were
16 selected by going to six diverse regions and selecting the
17 best site from each region.

18 MR. DINUNNO: That's exactly the point I was trying
19 to make.

20 MR. VESSELS: That's what's bothered me through the
21 whole discussion. I'm sitting here, sitting stupid, I don't
22 understand what this infatuation is with diversity. I don't
23 really understand it.

24 Everyone talks like it's the motherhood thing. And
25 being in the environmental area, having been an Environmental

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1 Biologist for over 25 years, I don't understand it. I mean, I
2 think you're going to end up with the candidate sites being
3 quite close to each other, every one I've ever seen is
4 quite close. If there is some infatuation with diversity, I
5 would like to know what it is.

6 MR. ERNST: Let me explain a second, and it ties in
7 with the numbers and things like that, how we got on the kick
8 of diversity to make sure that there was not an area that had
9 been overlooked that clearly had better value sites.

10 For example, if you are in a river area and you have
11 to go 100 or 150 miles to get to the coast, one could probably
12 find eight or ten sites within 50 miles and call them candidate
13 sites, and essentially completely overlook a diverse water
14 source. And maybe it would be worthwhile to go 100 or 150
15 miles to get to the other water source. And that's how, at
16 least, the Staff started talking in terms of diversity.

17 Now I will agree that if all of your areas are
18 reasonably good areas and you come up with reasonably good
19 sites, you may well find that all of your sites, regardless of
20 the resource area, so to speak, that they come from, may turn
21 out to be somewhat equivalent. But you may find that not to be
22 case, too.

23 And it's just a mechanism to come up with a slate
24 of candidates that says you've looked at different areas and
25 then come up with a comparative evaluation.

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1 So it's not necessarily true that the diversity will
2 wind up with equivalent sites, it may happen, but it's to
3 insure that you had, on a statistical basis, samplings from
4 different areas, good samplings from different areas and then
5 finally compare them.

6 MR. CALVERT: There's one problem about the diversity
7 of sites which I think people are missing. If you take the
8 State of Ohio, for example, it's got two obvious water sources
9 which are the Ohio River and Lake Erie.

10 If you don't draw water from either of those two
11 sources and you want to stay within the State of Ohio, you've
12 got to go to some form of a storage reservoir on one of the
13 inner streams.

14 And when you start doing the evaluation of a small
15 cooling tower type of site with a very large cooling pond or
16 storage reservoir to artificially get your other region of
17 interest, the Applicant can get accused of putting up a straw
18 man type of site to make his other site look good.

19 Because you can, by engineering, make the system
20 work within the different regions. And I think this is another
21 fact that the panel is overlooking.

22 MR. MESSING: One more statement on diversity, that
23 is that I think it's a hypothesis of ecology as a science, that
24 there is an inherent value in diversity.

25 And that has been interpreted as an axiom of

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1 environmen+alism, so that if you come in, if you go forward
2 with a rule that doesn't require a look at diverse siting
3 alternatives, you know that you're going to encounter them in
4 terms of Intervenor's considerations and concerns, that is,
5 people are going to come in and ask why not? And so if you
6 can anticipate the question in advance, you might just as well
7 address it.

8 MR. VESSELS: But diversity has to do with the
9 diversity of a species, it has nothing to do with diversity of
10 power plant sites. I don't understand why we want to impact
11 on every diverse environmental species, it doesn't make any
12 sense to me.

13 MR. MESSING: I'm not justifying the logic, but I
14 think that I'm identifying a logic train or an event train that,
15 in fact, exists, that a hypothesis of science gets converted
16 into an axiom of popular interpretation and then gets applied
17 to something else and you know it's going to be there.

18 MR. DETER: It seems to me there certainly needs to
19 be some sort of criteria in either Topic Number Four or Topic
20 Number Five. It does require the Applicant to come up with
21 alternatives that are true alternatives to each other.

22 If you don't have some sort of diversity criteria,
23 I would hate to see you end up in the situation which may have
24 brought up this rule in the first place, which is Sun Desert
25 and the Applicant came in with three alternative sites which

agbl0 1 all used the Colorado River water for its cooling water which,
2 in fact, were not true alternatives to each other.

3 If this had been in effect, it probably would have
4 required the Applicant to go to the ocean as an alternative
5 source, and allowed the decisionmaker to make trade-offs on
6 those different impacts. They've got definitely different
7 impacts against using, you know, using different water sources
8 and would have allowed decisionmakers to make those trade-offs,
9 the value judgments and the values against each other. So I
10 think it is required in here someplace.

11 MR. ROISMAN: I think it's also important to under-
12 stand from our perspective what the history has been. I have
13 thought that we could arguably abolish the Wild and Scenic
14 Rivers Act of the United States Geological Survey's search for
15 earthquake zones by simply allowing utilities to site nuclear
16 power plants and be sure they would find all the earthquake
17 zones and all the wild and scenic rivers.

18 Because if you look at the history of the siting
19 of nuclear plants, it does appear that some of them -- who
20 could have picked a worse place to put a plant than Con. Ed.
21 did when they put Indian Point at a very point where the
22 saltwater and the freshwater of the Hudson River were mixing
23 with each other, and where all of the striped bass that spawn
24 in that river were going to come down in their larval state.
25 I mean, the odds of them having picked the exact point are

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1 really quite slim, but they did it.

2 So we covered this very suspicious of the process.
3 We don't think it was -- we're sure it wasn't done intentionally,
4 Con. Ed. is not opposed to striped bass, at least as far as we
5 know.

6 But other considerations seem to always be dictating
7 the environmentally-least desirable site. So if we seem to be
8 asking for more scrutiny and more surveying than seems even
9 reasonable, try to understand where we're coming from, we're
10 coming from a long history of having been knocked around with
11 a lot of really bad siting decisions.

12 And maybe -- you all are making it sound very
13 reasonable and rational and, you know, you're doing it this
14 way and that way and isn't that acceptable, and maybe, in fact,
15 it will be.

16 And therefore, even if you adopt standards like
17 what we're urging, their practical application won't cause any
18 trouble.

19 Despite what you might think, environmentalists --
20 not only the five of us here but most of us in general -- are
21 not inherently unreasonable. We do understand when a process
22 is done, it makes a fair effort to come up with something.

23 What Don said before, it is not the purpose of the
24 process to guarantee that you will always pick the best. It's
25 the purpose of the process to make the best process for trying

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1 to pick the best, with a full understanding that the process
2 never is perfect, whether it is a court system or a system of
3 selection of sites.

4 So we've been burned too many times to be willing
5 to accept the principal that you will do the screening down
6 and down and down and down and what the NRC will review it,
7 what we will see in the licensing hearing is, in effect, a
8 debate over the five places that will kill all the striped bass
9 in the Hudson River, and that's what we don't want to get
10 into.

11 MR. VESSELS: Incidentally, that's not true about
12 the Hudson River and, furthermore, if you're that concerned,
13 you should be worried about reconnaissance data because, when
14 Indian Point was built we didn't have reconnaissance data that
15 would have told you what you're talking about.

16 MR. ROISMAN: We didn't have NEPA, that was part of
17 the problem.

18 MR. VESSELS: If you're going to do it on a recon-
19 naissance data basis, you're not going to get the answer you're
20 looking for because the answer doesn't exist, we don't have
21 that kind of data. So they can tell you you don't have that
22 kind of data for Long Island Sound, and that's a fact.

23 MR. MESSING: We'll support you on that.

24 MR. VESSELS: I'm just saying what we're saying here
25 is that it seems to me that if we're talking about diversity

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1 in terms of cooling source maybe we're talking about, I don't
2 know -- because I keep saying to myself, Well there's always
3 the gas cooled reactor too and I don't think they use water,
4 as I recall, or very significantly. But you're looking for
5 that kind of diversity and you really want to look at the broad
6 scale of things.

7 But where I get hung up is on this concept of
8 differing environmental qualities. I can think of all kinds of
9 differing environmental qualities and I don't know anybody
10 who's going to buy it. I mean, you know, maybe a certain bird
11 species isn't there but that's a differing environmental quality
12 of a sort. But what are you going to get from it?

13 MR. MESSING: Obviously, we're not trying to get
14 that down to the species level. That's why I was pushing Paul
15 earlier.

16 MR. VESSELS: What I'm trying to understand is
17 what is the differing environmental quality? There has to be
18 a point at which it has got significance, also a point where you
19 apparently think it is very significant.

20 MR. MESSING: I don't think that's going to be
21 determined here, and I hope that the Staff will have a good sense
22 of the direction that we're pushing.

23 MR. VESSELS: Can I ask you this other question?

24 One of the thoughts I've had earlier, that I didn't
25 interject, but when I listened to your talk I think maybe a part

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1 of the problem is that what if the utility planning process,
2 you know, the decisionmaking that they're talking about where
3 they're going to come and -- I think they're envisioning,
4 you won't see it until it hits NRC, then you'll get involved --
5 what if that process is open to that community where, you know,
6 they deal with that work.

7 If that's really an open process and they're going
8 through their thinking in front of you and you're a part of
9 it, I think the utilities would die first. But I think there
10 are some utilities who do try to do that. Then doesn't that
11 mean that we don't have to worry as much about this diversity.

12 MR. MESSING: That's right. I think that's one of
13 the advantages of the early site procedure, even where you
14 don't go to value determinations, and it also leads you to an
15 area in which information can be exchanged which can take
16 care of a lot of things informally without going through --

17 MR. ROISMAN: Early participation is a useful
18 substitute for a review.

19 MR. ERNST: Is that a subject I should put in the
20 rule? If it is done early you don't need a rule?

21 MR. VESSELS: No, no. Why don't we put in the rules
22 that you're trying to formulate that the utility, in presenting
23 the proposal for the early site review, has to show how the
24 public was brought in or has to have it set up so the public
25 is brought in at that point, as a better way to do it.

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1 MS. SHELDON: One of the points I was trying to make
2 yesterday was if this rule was going to provide a process for
3 the prehearing stage, why the only time we would or the first
4 time that Intervenors or environmentalists or whatever would
5 see the results would be in the hearing after the Applicant
6 and the NRC Staff had worked out this slate of sites, and it
7 was a foregone conclusion that I wouldn't think the rule would
8 advance us very far because we do want to participate in that
9 winnowing process.

10 I would like to defend diversity a little from our
11 standpoint. What we're trying to get at, what we think is
12 important, is that a variety of environments be looked at so
13 that you would avoid some where the impacts would be greater
14 than in others.

15 I'm thinking of if you looked only at coastal sites
16 -- well, let's say you looked at a variety of sites that were
17 basically the same, and you decided that one site was the best
18 out of that group and it happened to be that you had looked at
19 only sites that were all salt marsh. You had a very long salt
20 marsh along the coast, let's say, and you looked at several
21 potential sites, all of which had the same characteristics.

22 You would have, in our view, more environmental
23 impact than if you had looked at a salt marsh site and some other
24 sites where that impact would not be there because the
25 environment would be different.

-gbl6

1 What we're trying to get after here is to make sure
2 that utilities look at a variety of types of environments, so
3 that you can avoid those areas that are sensitive, where you
4 have either sensitive species, if that's your worry, or if
5 you're going to be interfering with some kind of very important
6 biological processes, such as you would in an estuary situation,
7 so that you could hopefully avoid a repeat of the Indian
8 Point 1 experience.

end3D

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JE mpbl

1 You have to understand that most of us are not
2 -- I'm sure you do understand this -- most of us are not
3 trained biologists, ecologists, and so on, and we're probably
4 not using these terms very precisely, which I'm sure drives
5 you crazy.

6 But Mark is absolutely right, if the utility
7 comes in and says Look, we've looked at all the river basin
8 sites we can, the response of the intervenor is okay, what
9 about the mountains, why didn't you look there. And the
10 motivation of that is just to be sure that we can avoid the
11 decrease amount of environmental impact, avoid problems
12 wherever possible, and arrive at the best site from an
13 environmental standpoint. And that's why we emphasize diver-
14 sity.

15 MR. MC GORUM: Could I just say something here,
16 Mr. Chairman?

17 Maybe I'm out of order, but I must say that I
18 somewhat abhor what I see happening here, which is a polar-
19 ization and the we versus you syndrome which seems to be
20 creeping in which has only recently arrived. It seemed to me
21 up until just recently we were talking pretty much as a panel,
22 all dedicated toward a common objective of minimizing environ-
23 mental impacts, finding a way to go about it.

24 Now very quickly we've gotten into a very kind
25 of polarized situation where we think this and you think that.

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mpb2

1 I would like to urge everybody if we could to get off that
2 pitch and get back onto where we were I think this morning.

3 MR. MESSING: I started out by concurring
4 completely and entirely with Don's opening statement on this.
5 We could read back the record on this.

6 MR. ERNST: Is that the opening statement after
7 lunch?

8 (Laughter.)

9 MR. MESSING: I think as the Staff unravels that
10 you can --

11 MR. MC GORUM: I think there was a point where
12 we were in a pretty good situation. I think we're getting
13 a little bit emotional and getting polarized. And maybe we
14 should get back into a common stream that I think we can agree
15 on.

16 The objective I think is --

17 MR. BLACKMON: I don't think there is going to
18 be polarization as much as there is. As an example -- and I
19 want to take a look at the first one we start with. It says
20 that:

21 "Consumptive water use would not cause
22 significant adverse effects on other water users."

23 There is a substantial amount of information that
24 is available for taking a look at this one particular question,
25 among others. The USGS has recently come out with a memorandum

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mpb3

1 and a part of that memorandum talks about a power plant sited
2 at any location should not utilize for consumptive purposes
3 more than ten percent of the average stream flow. Okay.

4 Then you also have a situation where state water
5 quality requirements, if an impoundment is built, whoever
6 builds that impoundment must maintain a 2Q10 flow release
7 from that impoundment.

8 The 7Q10 flow is normally going to be somewhere
9 in between the ten percent of the average stream flow and
10 the average stream flow, just from a hydrology standpoint.
11 If the power plant is sited on a reservoir, we've got a
12 different problem there than we do if it's located on a river
13 and the plant is utilizing the river's water for consumptive
14 water use.

15 I don't know that we are going to be able to
16 determine from a technical standpoint if there is a fix we
17 can put on this question, among others from the standpoint
18 that if you impound a small stream, say where the average
19 stream flow is 110 cubic feet per second and the plant is
20 going to consumptively use 50 cubic feet per second, is that
21 good or is that bad. If you're pumping water from the river
22 into that impoundment so that you can maintain the level of
23 the impoundment and at the same time make the 7Q10 release
24 and you're obviously going to be consuming more than ten
25 percent of the stream flow of the creek but not of the river,

mpb4

1 where does it all fit together?

2 I don't see that we're going to be butting heads
3 with one another as much as we have got to come to some kind
4 of a rational decision as to whether or not that can be a
5 threshold, and if so, how can it be treated?

6 MR. MESSING: I have a procedural suggestion
7 that not try to resolve what the threshold should be, but
8 if there is consensus on the panel that, you know, the rules
9 should address these, that we take it back to the Staff for
10 further deliberation.

11 I think if we look at our remaining agenda
12 we can spend our time fruitfully on the question of
13 acceptance and rejection, and then the reopening of hearings.
14 And it's hard for me to perceive resolution coming out of
15 discussion of the particular threshold.

16 MR. ERNST: I would agree with that.

17 However, if there is a suggestion, you know, for
18 the Staff to consider, I think we would appreciate that, but
19 not to debate the various ones. But if there are two or
20 three suggestions that we can consider, that that shouldn't
21 be too time consuming.

22 DR. HOOVER: Threshold C as it's included in
23 the study document says that there will be no significant
24 impacts on spawning grounds or nursery areas of regional
25 significance. I think we should add "national or local",

mpb5

1 so you can include such things as the Hudson River striped
2 bass fishery controversy at Indian Point.

3 On Threshold F, it says:

4 "There would be no destruction or
5 severe alteration of wetlands larger than
6 50 hectares in size."

7 You could have several small wetlands sub-50
8 hectares in size, and the total disruption of hectares
9 acres could be larger than 50 hectares. I think that word-
10 ing needs to be revised to include disruption of a significant
11 total acreage of wetlands.

12 I have another one, but I have to get my
13 thoughts together.

14 MR. DETER: I have one quick comment.

15 On Item g you used the term "unique", "eco-
16 systems which are unique to the resource area." And in
17 3a you use "important aquatic species". And I was wonder-
18 ing why you changed the terminology.

19 It seems to me there ought to be some sort of
20 rationale between those two terms.

21 MR. BLACKMON: What was the second one?

22 MR. DETER: 3c, you use "important aquatic
23 species". On 3g they use "unique". It could be -- theoretic-
24 ally it could be unique to a particular resource area but not
25 be important.

mpb6

1 It seems to me if you want to use "important",
2 regional, state, local importance, significance rather than
3 necessarily unique.

4 MR. DINUNNO: I would like to make some comments,
5 not necessarily as to the detail of the threshold criteria
6 because I think we'll have to send back to the Staff to look
7 at, but I think in the process of doing that a little bit of
8 philosophical aspect, if you will:

9 In the first place, these threshold criteria
10 are set as if one has made a determination that these things
11 do in fact, or can be confirmed at this stage, and they cannot.
12 I think Don Harleman picked out C and D, which says that
13 particularly with reconnaissance type data you will not have
14 made this kind of a determination, and even if you had,
15 particularly in the case of D, this is a permitting require-
16 ment and a condition that has to prevail at the time any
17 particular site is authorized during the construction permit
18 stage. But it is not a determination that one makes on this
19 candidate site selection stage.

20 What one does do is through indicators of the
21 kind of criteria that have been mentioned, ten percent flow
22 or others, and also examination of the existing water quality
23 and knowing what effluents come out of this plant, you can
24 make a determination based on that that it's not likely that
25 these conditions will be -- it's likely that these conditions

mpb7

1 will be fulfilled. But you can't make this kind of a finding
2 at this stage of the game.

3 And this holds throughout this document. As
4 we talked here earlier, at this stage you are making an
5 assessment of the data and are making a determination that
6 it's highly probable that all these conditions will prevail.
7 But you're certainly not in a position of being able to
8 defend this with the certainty that these threshold criteria
9 indicate.

10 For example, even on item E, although one is
11 taking a look at consumptive uses that are in the literature,
12 I think that a more detailed examination would be required
13 before you could make the finding of A as it is written. On
14 the other hand, I can tell you from reconnaissance type
15 data and check with state authorities and those responsible
16 for water resources, that the allocations that would be
17 required for use in this plant, one is likely to be met and
18 in some cases a determination could have been made in advance
19 that that allocation would be made for the plant. That's
20 possible.

21 Item I deals with costs for some reason or other
22 which is a new ingredient, and H deals with safety. So we
23 seem to have a conflicting set of threshold criteria.

24 Whether cost goes in here or not, in the context
25 of environmental criteria, I guess I question -- not that I

mpb8

1 question cost is a reasonable indicator of suitability of a
2 site, but I think we have to be consistent in the approach.
3 You either put cost in as a factor which you're considering
4 in siting, or you do not.

5 MR. ERNST: I think we're being consistent. I
6 may give a word on that.

7 H merely is a repeat of 4.7.

8 And as far as I is concerned, what that is is a
9 judgment that if you start having mitigative kinds of costs
10 that approach this order of magnitude, then it's sufficient
11 to start putting on the scale an overall project cost in the
12 cost-benefit balance.

13 And that's basically the rationale there,
14 because in the final weighing of sites we do consider costs,
15 and this just gives some idea of the kinds of costs that
16 may start weighing heavily in the consideration of one site
17 versus another.

18 MR. MATCHETT: To further comment on the same
19 vein, I don't believe any utility would put forward as a
20 candidate, that is as a serious candidate, a site which did
21 not meet all these threshold limits that have been listed
22 here.

23 However, it would be impossible to demonstrate
24 beyond a reasonable doubt that the candidate site did in
25 fact meet these limits at the time of identifying it as a

mpb9

1 candidate.

2 So I think the big question is what sort of
3 validation or demonstration would be necessary in order to
4 satisfy the Commission.

5 MR. ERNST: I think that's a good question. I
6 said earlier you're not going to take the controversy out of
7 siting, you're just going to focus it. And the places we'd
8 be focusing on is whether there is reasonable determination
9 that you're at a pretty good site before you start proceeding
10 with it.

11 MR. DETER: There seems to be another factor left
12 out of here.

13 In Topic A2 you include socio-economics, includ-
14 ing aesthetics as important considerations to be included in
15 the siting analysis, and it's not included as one of the
16 threshold criteria here, and I was wondering why that was
17 left out?

18 For example, boom/bust, and so forth.

19 MR. MATCHETT: Probably because it's so difficult
20 to establish criteria in this area.

21 MS. CAPLAN: I have a problem with the way the
22 criterion for the population is stated. I don't know if there
23 is any precedent for this that I'm not aware of. It seems
24 average, and out 30 miles is not the appropriate way to do it
25 because the concentration of population in the immediate

mpbl0 1 vicinity of the plant is going to assume an importance as
2 well as the average population in the 30 mile radius.

3 MR. ERNST: Yes, I think it takes -- I had the
4 same problem the first time I read it. It's a direct quote
5 out of 4.7.

6 If you read it carefully, it says over any
7 radial distance out to 30 miles. So if you went out a mile
8 and a half and had an average of 500 or greater than 500,
9 you would trip the criteria.

10 MR. MC DONOUGH: Just for a point of clarification,
11 that particular criteria is actually in Appendix A of
12 4.7, which is safety related site considerations, rather than
13 B in the environmental considerations.

14 MR. ERNST: I apologize, I missed that.

15 MR. MC DONOUGH: I have a copy of 4.7, and the
16 population density experience, the 500 people per square mile
17 and so on is actually part of Appendix A, which is safety
18 related site considerations for assessing site suitability
19 for nuclear power stations rather than Appendix B, which
20 are the environmental considerations.

21 So it really is in 4.7 listed as a safety feature
22 rather than as an environmental.

23 MR. ERNST: But doesn't it also say that if you
24 trip that that then you will begin looking at alternative
25 sites more closely?

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mpb11

1 MR. MC DONOUGH: Well, I saw that in your
2 Perryman decision, the ruling on --

3 MR. ERNST: Is it in 4.7? I think it is in
4 there.

5 MR. MC DONOUGH: I will look.

6 MR. ROISMAN: Is it your intent that for sites
7 -- for all sites when you're doing the comparative analysis,
8 you will assume that all the candidate sites have met this
9 criteria, so they are all under 500? Do you factor in the
10 population density?

11 We've run into the problem where at least under
12 existing practice it's essentially neutralized below 500.
13 You do not -- a site with 400 is considered on that criteria
14 to be equal to one that is 50, and no effort is made to quan-
15 tify what that means either as a risk factor or as a dollars
16 and cents in terms of dollars per man-rem factor, or something
17 like that.

18 Are you proposing in this to change this policy
19 in some way to make it a factor which will really be consider-
20 ed in a comparative site analysis?

21 MR. ERNST: No.

22 This is a threshold point that if it is exceeded
23 then one would determine how to weigh that particular item.

24 Yesterday it was mentioned that the Staff is
25 looking at the overall question of whether and how safety

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1 matters might be considered in alternative site comparisons,
2 and we're in the process of looking at that at the present
3 time. And we'll be discussing this with the Commission
4 hopefully some time this summer.

5 MR. BLACKMON: I might propose that another way
6 of maybe stating a similar thing, rather than putting it in as
7 a threshold right now with the 500,000 would be that the NRC
8 could, I think, look at population density within five miles,
9 population density within 30 miles, and see if they are well
10 within the boundary of acceptable sites.

11 MR. ERNST: Let me exert the prerogative of the
12 moderator on this one. That just chose to quote what was in
13 guides at the present time, realizing that this could change
14 in the future. But I don't think our workshop session will
15 be long enough to cover this particular point in any useful
16 degree.

17 DR. HOOVER: Number 4 on page 26 covers some
18 additional requirements of the applicants if the threshold
19 criteria are not satisfied.

20 It appears to me that it would be possible for
21 an applicant to have a site accepted if it met some of these
22 additional criteria, even though he may be doing some very
23 unreasonable damage. And I would suggest that even if the
24 applicant were to demonstrate that he would have to go to
25 additional cost to avoid wiping out a site of a threatened or

mpbl3

1 endangered species, that there may be a trade off factor
2 involved where you would want that additional expense incur-
3 ed. And therefore some of these criteria should be -- or
4 threshold criteria should be separated into categories in
5 which the applicant would either have to demonstrate meeting
6 the threshold criteria or could not use the site.

7 MR. ERNST: I think I feel pretty comfortable
8 with the statement down there that said that the problem is
9 not so much meeting the criteria but proving it. If that's
10 the case we feel much more comfortable without really studying
11 the entire country, region by region, we could not make a
12 determination whether these criteria were reasonable and
13 appropriate for all siting situations.

14 So we thought up some ways by which one could
15 waffle the criteria if it could be demonstrated responsibly
16 that it were necessary to do so. If it looks like it's not
17 necessary to do so, then these particular options would
18 never come into play, which hopefully would be the case.
19 And I think the thrust of the criteria here would be to
20 come in with good sites to start with and not have to start
21 worrying about justifying why you didn't.

22 But that's basically the rationale.

23 MR. BLACKMON: I saw one thing, and I'm looking
24 for it right now. I don't see where it is right now, but
25 there are some words in the document that discuss site

mpb14

1 suitability from areas other than those that we've just gone
2 over with respect to population and the hazards of the
3 "ologies", and they relate primarily to safety and I think
4 they ought to be included in here if they aren't.

5 MR. ERNST: Where are you looking?

6 MR. BLACKMON: Particularly on page 25, at I.
7 If there's going to be a consideration, for example, of
8 pipelines, petroleum product pipelines with regard to indus-
9 trial and military facilities, if there is going to be a
10 threshold set, then this is where it ought to be as opposed
11 to somewhere else. That's what I'm saying.

12 In other words, if we're going to consider
13 population in these other "ology" effects and are going to
14 set thresholds, they ought to all be together, which includes
15 the site suitability and the environmental.

16 MR. ERNST: Okay.

17 I think that would be useful, but maybe I'm not
18 quite understanding the thrust.

19 As I mentioned yesterday, I believe, we are
20 considering the safety questions and whether or not they
21 should be considered in the alternative site analysis, or
22 the so-called residual risk kind of thing.

23 What is reflected here in I is a go-no go
24 determination that something is safe. And if that requires
25 a substantial amount of money to make the facility safe, then

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1 those funds should be certainly thrown in the cost-benefit
2 balance. That's as far as we've gone in this document.

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3 We'll have a brief recess.

4 (Brief recess.)
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1 MR. ERNST: We'd like to begin.

2 I think we have moved forward usefully again, after
3 considerable discussion for an hour or so, at least not seeming
4 to go anywhere as a panel. I heard some comments on the
5 proposed criteria, but I don't think that I heard any comments
6 saying that any of the criteria proposed, without getting into
7 the nitty-gritty wording and things like that, that any of
8 the areas covered by the criteria were inappropriate, or that
9 there should be other areas included in the criteria, the
10 threshold criteria.

11 DR. KEENEY: I think you should include socio-
12 economics.

13 MR. EASTVEDT: I do have one other area we might
14 look at and that is that there is no reference in the threshold
15 criteria for transmission systems. This might be an area for
16 an Item J.

17 MR. ERNST: In definition? Maybe it's included
18 there. The so-called site is including whatever offsite
19 requirements are for transmission so I think it is inherent
20 in that, but not explicit in the criteria. But I think there
21 would be a consideration of transmission corridors in the
22 consideration of sites, and how they would impact in these
23 areas, A through H criteria.

24 MR. EASTVEDT: My thought here is actually that
25 there may be significant differences between the transmission

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1 requirements for different sites but it would be very difficult
2 to establish some sort of a rigid criteria for what is accept-
3 able transmission because of the differences in geography
4 of different areas in different parts of the country.

5 Certainly it seems to me that the utility should
6 have the option, perhaps under this Section 3, to use trans-
7 mission considerations in writing the candidate sites and also
8 the proposed site.

9 MR. MESSING: This isn't a ranking. We're not
10 getting into ranking here, are we? Isn't this just establish-
11 ing thresholds? I don't understand how you would apply a
12 threshold criteria to transmission lines.

13 MR. EASTVEDT: Well, let's say that we have two
14 different sites that meet all of these criteria here. One of
15 them requires \$100 million for transmission and the other re-
16 quires, say, maybe \$10. Those are reasonable numbers. That
17 should be taken into account somewhere, and maybe throwing out
18 the site requires the 100 million bucks for transmission.

19 MR. ERNST: Okay. I see what you're talking about
20 here.

21 Let me throw something out for consideration by
22 the panel, as to whether-- I hate to get into cases and say
23 whether it was appropriate or not, but as I recall, in the
24 Perryman case the staff did consider, I believe, about a 100
25 mile radius around the Baltimore area. I think that was what

1187 347

eb3 1 it was, and considered that outside that may be getting a bit
2 far as far as transmission is concerned from a cost standpoint,
3 and let's look inside that area and see if there's a fair
4 number of -- and diverse, I guess, kind of resources available
5 to the applicant for siting.

6 And I believe that was sort of the philosophy,
7 if my recollection is correct.

8 DR. MASSICOT: The applicant used a hundred million
9 dollar incremental cost, I believe, as a cutoff for his choice
10 of --

11 MR. ERNST: A hundred million? Well, I knew it
12 was a hundred-something.

13 There was a criterion on how far to wheel elec-
14 tricity into the area.

15 Is that the kind of criteria you're talking about,
16 and would that be a useful kind of criteria perhaps to even
17 limit the region of search for these diverse kinds of sites?

18 MR. EASTVEDT: I feel that in some parts of the
19 country where the average transmission distances are rather
20 short, this may be appropriate. In other parts of the country
21 where the transmission distances are very long, like 150 to
22 200 miles, the average distances, that it would be very diffi-
23 cult to establish a maximum wheeling distance.

24 But we should look at it on a comparative basis,
25 or the utility should be able to have the option of recognizing

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1 significant differences in cost for transmission.

2 MR. ERNST: Cost, and environmental impacts of
3 transmission; right?

4 MR. EASTVEDT: Well, environmental impacts grossly
5 discussed, not the nitty-gritty environmental impacts asso-
6 ciated with transmission systems.

7 VOICE: I don't think cost --

8 MR. MESSING: Does the NRC have proper authority
9 to consider costs in that context? The cost of transmission?
10 It seems to me that's a State Public Service Commission deci-
11 sion, and that the NRC's responsibility in consideration of
12 transmission corridors is in terms of the environmental im-
13 pacts. I'm not sure-- I know there is a valid consideration
14 here that has to be taken in. I don't think it should be at
15 this screening level, and I don't see a clear way to make that
16 threshold.

17 MR. DINUNNO: I think that's an engineering -- an
18 economic cost in an engineering sense, as to what it costs.
19 These things also vary. You're really dealing with a question
20 of the environmental impact.

21 If you'll look at environmental considerations
22 you'll find great variability. A 50-mile line in a highly
23 productive area could cause greater environmental impact than
24 a 200-mile line in a desert-type of regime. We've run into
25 this in the West where in effect we're told, "Hey, running

eb5 1 transmission lines 100 miles is not an unusual situation." It's
2 done with a minimum of impact in that sense because of the
3 human environment, as well as the economic environment.

4 So that distance, even distance itself is not a
5 criterion. It has to be related somehow to the environmental
6 implications of what that is.

7 MR. MESSING: You also may have secondary socio-
8 economic or social impacts that are greater than the principal
9 environmental impacts. I'm thinking of the case of the trans-
10 mission corridors that were studied in connection with the
11 Pennsylvania energy centers in which there would be some dis-
12 ruption of deer herds, in terms of vegetation, but for the
13 most part I think deer in that part of the country are viewed
14 as pests, for one thing, and as hunting targets for a second.

15 And it's not that there was a critical environ-
16 mental issue there but socially, the people in the area who
17 depend on hunting in part for a food source as well as part of
18 their way of life saw a disruption of that and saw the influx
19 of new populations as competing hunters.

20 So that was a principal consideration in terms of
21 the transmission lines, in terms of people concerned with the
22 energy centers.

23 I know it's an appropriate concern for siting
24 decisions, but I don't think at this level.

25 MR. ERNST: Let me make one observation and then I

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1 will drop out and listen for a few instants again.

2 In the consideration of the resource area concept
3 in Topic 4, and I think it is getting to your point, there was
4 another thing that is inherent when you do something like that.
5 One is you do get diversity, and that was a basic staff attempt.

6 But the second thing that you do in moving radially
7 or whatever outward from the load center or power-deficient
8 area or transmission or whatever -- and let's not argue about
9 those terms -- but from moving outward from something, you
10 do inherently consider added environmental impacts of trans-
11 mission lines and the added costs. It's an inherent considera-
12 ti . rather than a specific.

13 Now if we eliminate Topic 4, namely, the region of
14 interest or the resource area, we are I guess talking in terms
15 of putting diversity somehow back into the candidate sites.
16 But do we also need to put some kind of criteria into it that
17 does recognize that the further out you go, you start becoming
18 less and less cost-effective from the standpoint of protection
19 of the environment and protection of the over-all public pocket-
20 book?

21 MR. BLACKMON: Yes, I think you do, and let me try
22 to indicate how, at least from the utility viewpoint, how we
23 are handling that in our siting studies.

24 What we have done is given to our transmission
25 planners the location of 38 plant sites, and we have asked them

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1 to assume that the next plant to be built after Perkins would
2 be at that site. So individually they factored that site into
3 our transmission grid.

4 We have told them that we want to maintain the
5 same system reliability that we now have. On that basis then
6 they come back to us and tell us how many miles of 230 Kv
7 line, how many miles of 525 will have to be built. We know
8 what the right-of-way widths are. We do take a look at the
9 land usage involved.

10 The cost element also comes in in that there is
11 an increase in penalties, transmission penalties, the farther
12 away from the necessary load or wherever they're going to tie
13 into the transmission grid with that. And what they have
14 given us is a dollar value which, in our evaluations, we sum
15 up dollar values for things that we cannot handle from an
16 environmental standpoint and things that we can handle from an
17 environmental standpoint. So we have somewhat of a hybrid
18 evaluation process.

19 We do not make the dollars equal to points. We
20 evaluate them strictly on the basis of what they are, and on
21 that basis we cull the 38 or however many it is down to fewer
22 than that.

23 So the transmission is handled, but at the screen-
24 ing stage. I think what Joe is saying is right. It is an
25 engineering/economic type thing in the final analysis.

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eb8

1 There can be some decision, though, from the en-
2 vironmental standpoint, down on the basis of land use and
3 reliability.

4 As long as the utility is willing to spend the
5 money from a monetary and from a land usage viewpoint, to make
6 sure that that system is as reliable with that new plant as
7 it is today, then you are at least taking the reliability of
8 the system into account.

9 MR. ERNST: I think what we're saying then is that
10 costs of transmission would probably belong in Topic 6 where
11 you make the final comparison of the sites, but these screening
12 criteria, which are really environmental goodness, it's just
13 the land you take or whatever that would be-- Well, I guess
14 it would just be my first statement that inherently the site
15 is considered to also include transmission corridors, and if
16 the transmission corridor would somehow violate some of these
17 criteria, then that would make it a somewhat worse site from
18 an environmental standpoint.

19 Is that how we are coming around, that these are
20 still environmental criteria and not economic kinds of cri-
21 teria? What am I hearing? Somebody help me out.

22 MR. HAHN: Mr. Chairman, I think in a sense you
23 may have both of them involved here, particularly out West
24 where you've got the State of Washington, probably 48 percent
25 of the state, owned by the United States government. Some of

eb9

1 the other states are even higher 75 to 85 percent I guess.
2 Nevada is even higher than that.

3 But there's a substantial amount of federally owned
4 property. And in our case we do have a federally operated
5 grid system, but on a 500-Kv line, as an example, you're taking
6 out of production, in terms of particularly timber production,
7 about 25 acres per mile. And we're getting probably 16,000
8 board feet per acre out of some of those timberlands, a lot
9 of them even higher than that.

10 So we're looking at both a substantial amount of
11 cost of public lands taken out of service, as well as a lot of
12 jobs taken away.

13 MR. MESSING: Could you suggest how that could be
14 phrased in terms of a threshold criteria?

15 MR. HAHN: I think at some point you have to look
16 at that as part of the balance in terms of trade-offs between
17 sites.

18 MR. MESSING: But I haven't heard any suggestion of
19 a threshold criteria. I'm sort of anxious to get on to the
20 next topic, unless, you know, we've got something more specific
21 here because there is --

22 MR. ERNST: I think the thing we're thrashing with
23 is the fact that we sort of left the region of interest alone
24 and we have not had any way to bound the thing, and now this
25 topic comes up and we start worrying about bounding the field

eb10 1 of interest again.

2 And we really haven't wrestled with that problem.
3 We said we were going to go back to it after Topic 5, so let's
4 finish Topic 5 and then see if we have any fresh thoughts on
5 that.

6 MR. BLACKMON: Let me offer two comments before we
7 get finished with Topic 5.

8 On page 33, the first full paragraph, the last two
9 lines, if and when this gets printed up for final rulemaking,
10 I would appreciate it if it would talk about:

11 "....costly both to the applicant (the
12 ratepayers) and the NRC and other government
13 agencies (the ratepayers)."

14 We are all the same.

15 A comment was made concerning environmentalists. I
16 like to consider myself one. And I think in the siting process
17 that we have indeed gone through and are continuing to go
18 through. When I get on the battleline and have to testify
19 about something that I did six weeks ago associated with power
20 plant siting, which I am involved in deeply, I appreciate the
21 fact that there are concerns associated with siting that are
22 not environmental.

23 And I think that as long as we can make the neces-
24 sary value judgments when they need to be made we can continue
25 to make some progress.

eb11

1 One of the things that occurs to me on page 35,
2 in Paragraph Number 4 there, it says:

3 "The site selection study shall be inter-
4 disciplinary and shall include natural, social, and
5 environmental sciences."

6 We have seen, I think in the last eight or nine
7 years that I have been associated deeply with power plant
8 siting, much more emphasis on the interdisciplinary role than
9 what was in the past. I think that the documentation that is
10 now going into power plant siting is much better than it was
11 before.

12 I am still not convinced myself that the decisions
13 that are being made are any better but I know that they are
14 well documented.

15 In doing this there are many of the natural, social
16 and environmental sciences that, from a power plant siting
17 standpoint, cannot be directly identified, and I hope that any
18 rule that would come out of this would not get to the point where
19 we are identifying people and their background and where they
20 got their degrees from, and whether they have been counting
21 critters for the last 12 years or fish for the last five years.

22 What we're talking about is an over-all siting
23 analysis made by people who are involved, who have experience
24 in that field, not people who are new at it.

25 I think that the criteria of the type where we say,

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1 "If such quality standards are imposed as criteria,...." any
2 utility who would offer a site or a potential site for licens-
3 ing that had been not adequately selected from the standpoint
4 of the interdisciplinary rules or interdisciplinary teams,
5 from the standpoint of the rules and regulations not only of
6 the NRC but also of the states involved, or the other federal
7 agencies that do have some say-so, and there are other ones
8 in the siting process, is doing nothing but hurting themselves.

9 The utility has no self-serving purpose by pro-
10 posing a plant site somewhere where they know it is not going
11 to be licensable.

12 I think that attitude is one that is finally in-
13 filtrating through utility management and I think it is some-
14 thing that, as we continue working in this, we can keep a
15 handle on. We can keep looking at it from the standpoint that
16 the rulemaking that this may go into is going to lead us down
17 a productive path, rather than trying to straighten out things
18 that may have gotten fouled up before.

19 MR. MC GORUM: Could I make a comment about trans-
20 mission lines, Mr. Chairman?

21 Excuse me, Ruth. Go ahead.

22 MS. CAPLAN: I wanted to go on to the final para-
23 graph under the primary thing we're considering.

24 MR. ERNST: Which page, please?

25 MS. CAPLAN: Page 25, where it says that some of

eb13

1 these criteria may not be appropriate and therefore, the appli-
2 cant may propose for NRC consideration other criteria to re-
3 place hose.

4 I didn't see any language that talked about on what
5 basis the NRC would decide whether or not to accept those, and
6 I think that's a very important thing to address.

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1 MR. ERNST: I think this is probably generated more
2 in case we had not expressed it properly or, for some reason,
3 some region of the country, as I mentioned before, that maybe
4 a particular criterion could not be met reasonably, that there
5 is, you know, that we haven't thought of everything so there
6 is an escape clause.

7 We can't think of any real reason why you shouldn't
8 meet them, and I think it was expressed down at the other end
9 of the table that the problem probably would not be so much
10 meeting of but probably proving that they have been met.

7.250

11 So it would be difficult to put in exactly what
12 we're talking about and I think what you're talking about is
13 whether the Applicant makes a good case and can defend it in
14 front of the NRC and defend it to the Intervenors and the Board.

15 MS. CAPLAN: I guess as long as it stays in language
16 as vague as this that I would certainly prefer to see it taken
17 out altogether.

18 And if for some reason, you know, the threshold
19 criterion cannot be met, then that should be in the record as
20 to why it can't be met. But not just sort of a general sub-
21 stitute.

22 MR. ERNST: I think that says about the same thing,
23 but I'm not sure.

24 MR. DETER: Given that thought, is there any reason
25 then why an Intervenor or a state agency or somebody else

agb2

1 couldn't come up with criteria in addition and propose to the
2 NRC for consideration?

3 For example, you've got a lot of different parts of
4 the country and there may be unique characteristics in different
5 regions that should have been considered and weren't considered
6 in the general acceptance criteria.

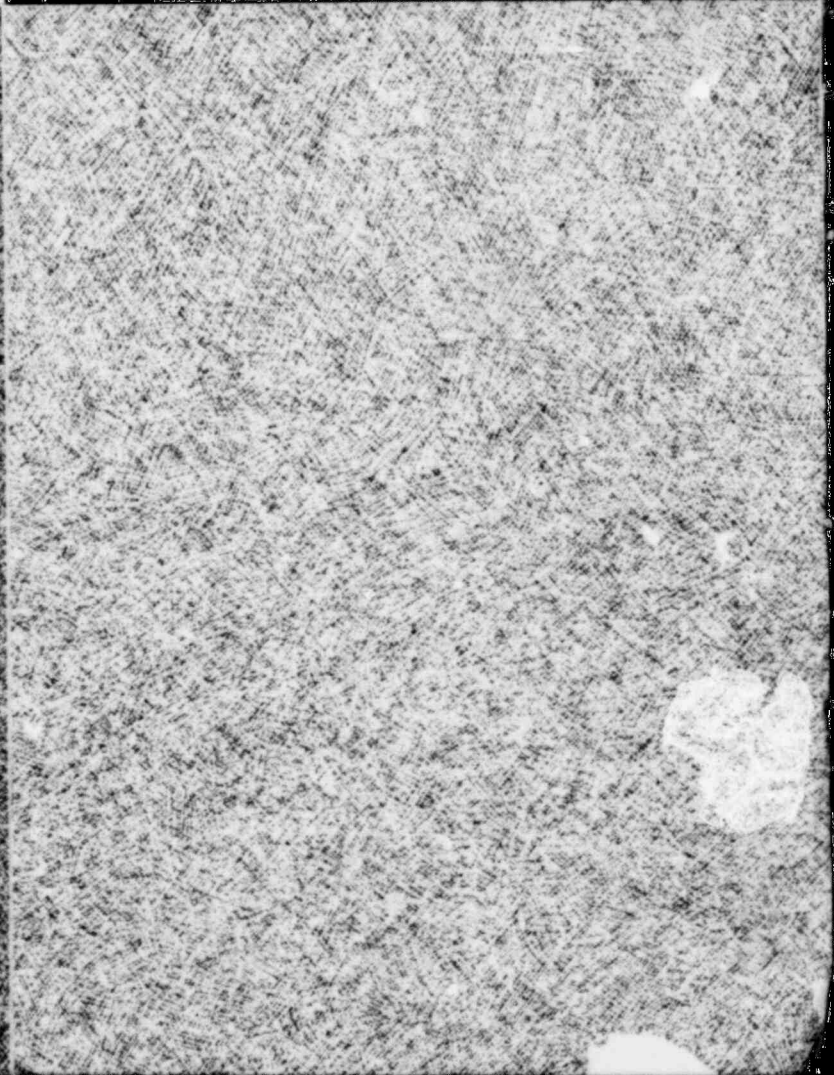
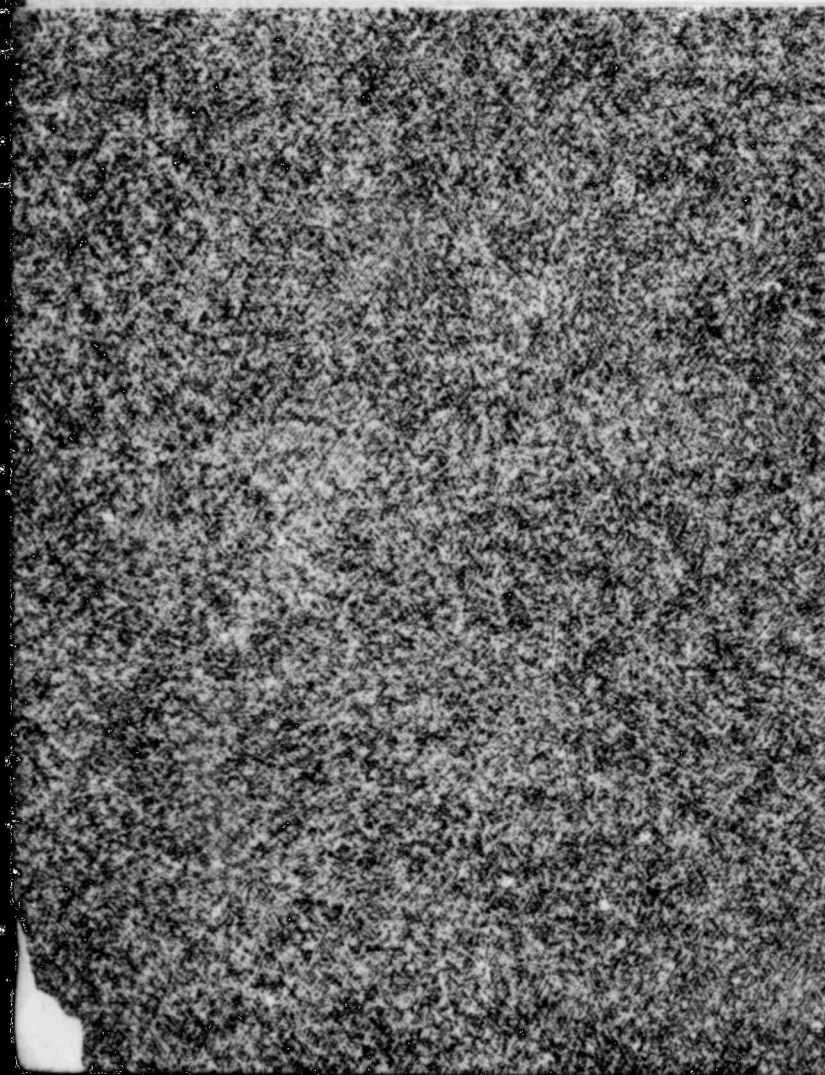
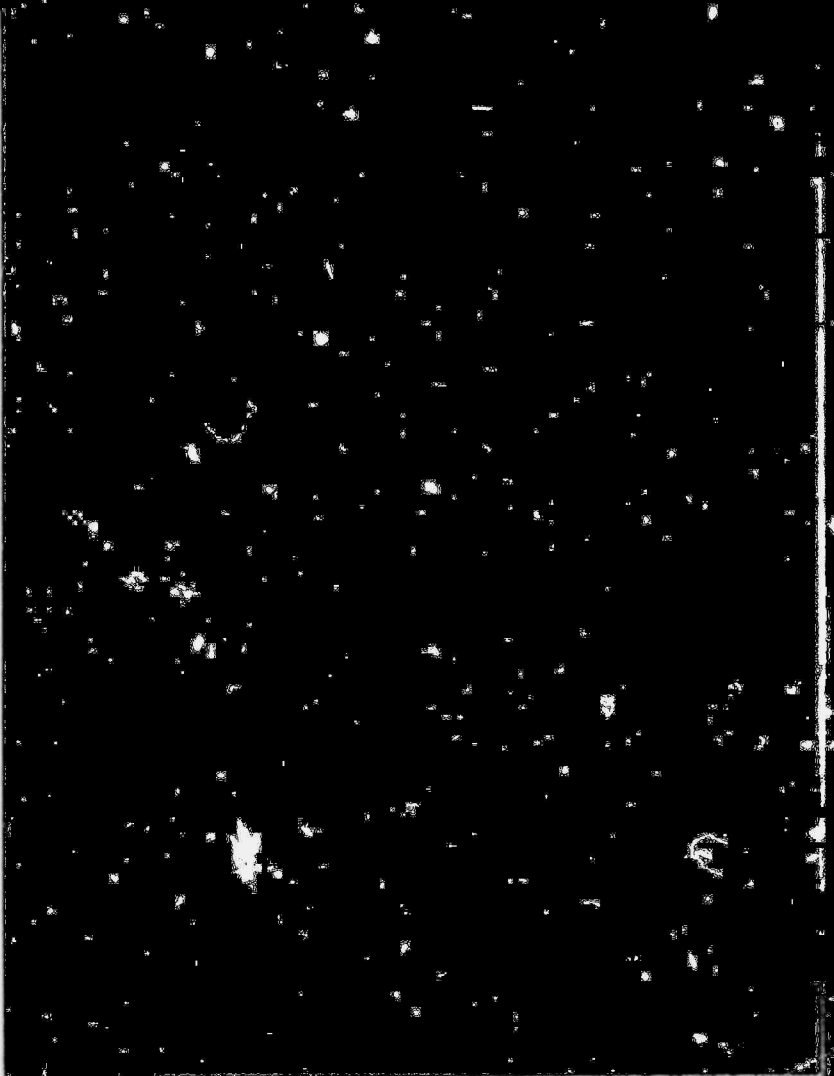
7 MR. ERNST: You mean after the rule is in effect,
8 or --

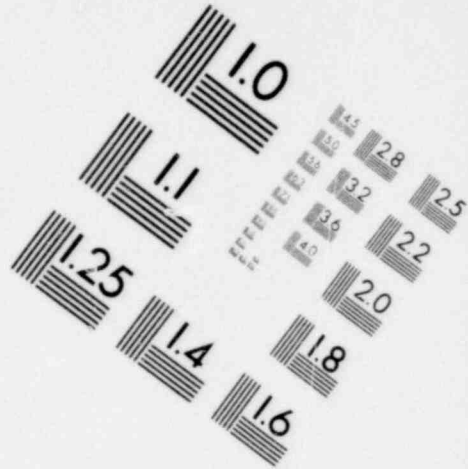
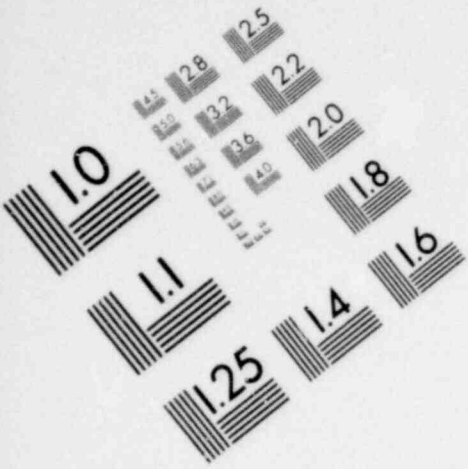
9 MR. DETER: You say the Applicant may propose. The
10 Applicant, Intervenor, et cetera, may propose, as well as the
11 Applicant.

12 Could somebody else propose some threshold criteria
13 that would apply in that unique geographic area?

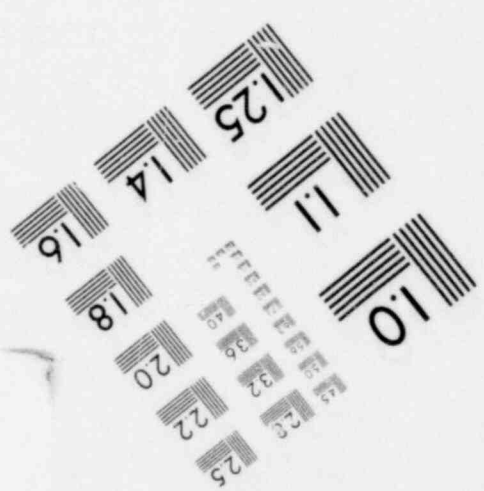
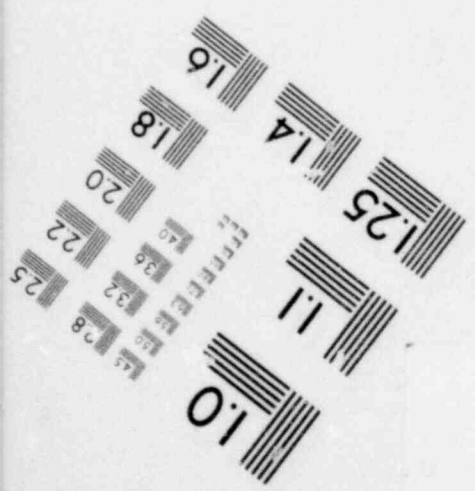
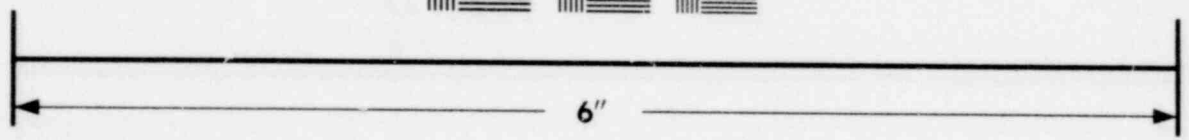
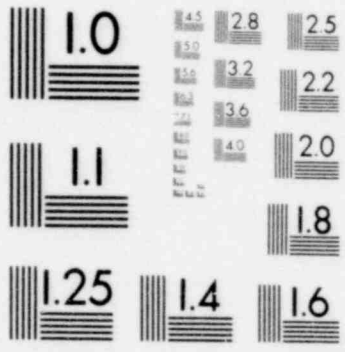
14 MR. ERNST: I think we're in an area of process here.
15 What this says is here are criteria that must be
16 met by an Applicant. The Applicant is the proposer of a certain
17 action, and the NRCs role is to accept or reject.

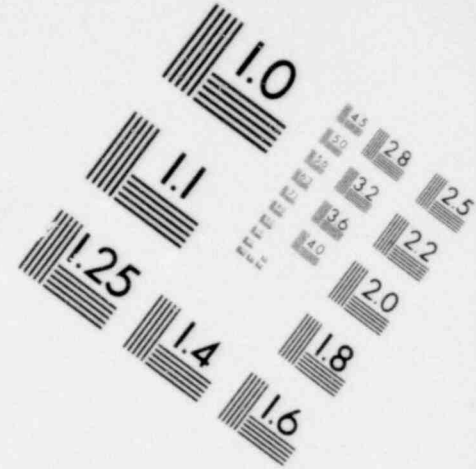
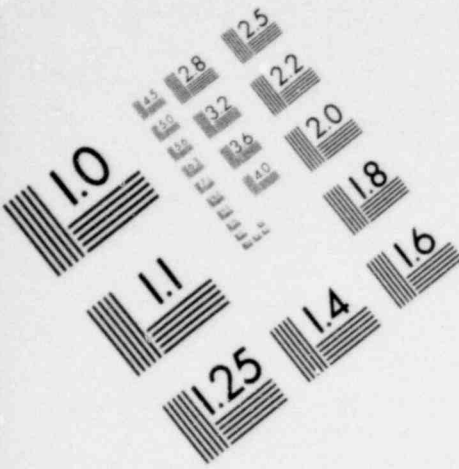
18 So if the Applicant determines that he can't meet
19 the criteria, then obviously the question is well why not?
20 And all this says is that if you reasonably can't meet any of
21 the above criteria with any of your candidate sites, then you
22 should propose to us why you can't and that will be looked
23 at in a litigated kind of sense. So the Applicant really is
24 the motion in this particular case. I think it's a process
25 problem.



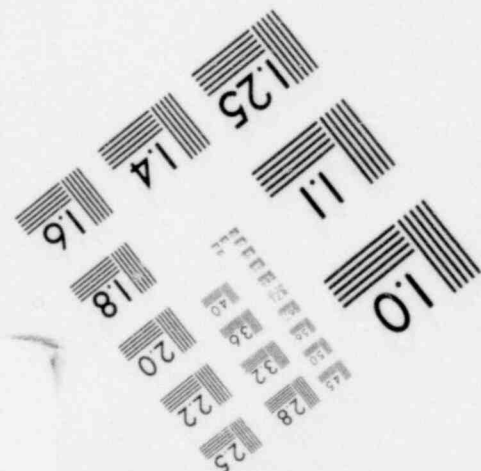
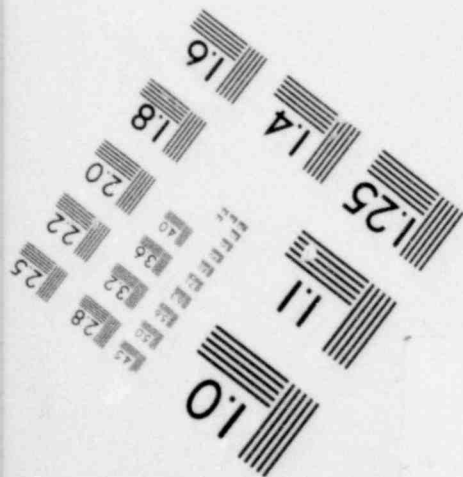
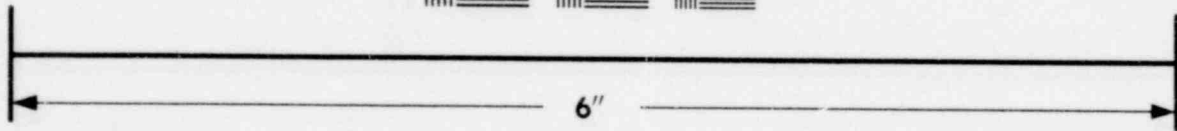
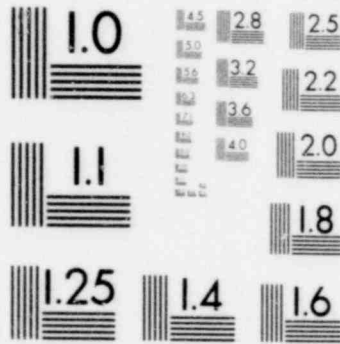


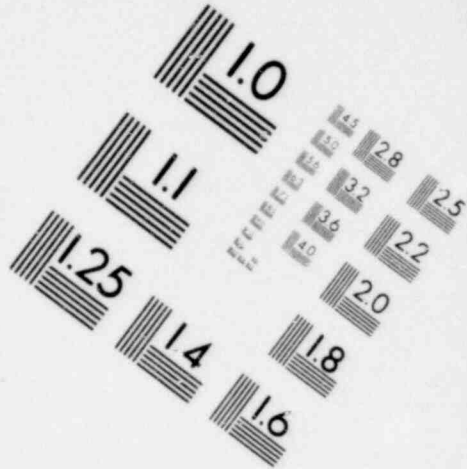
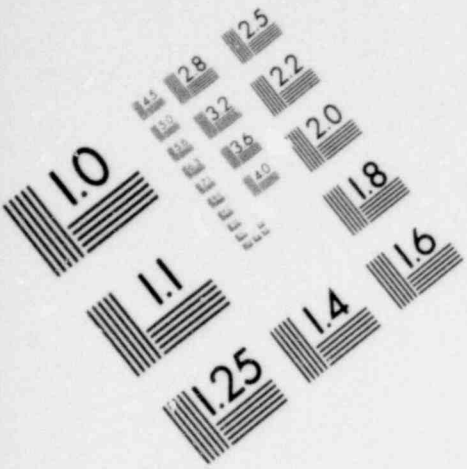
**IMAGE EVALUATION
TEST TARGET (MT-3)**



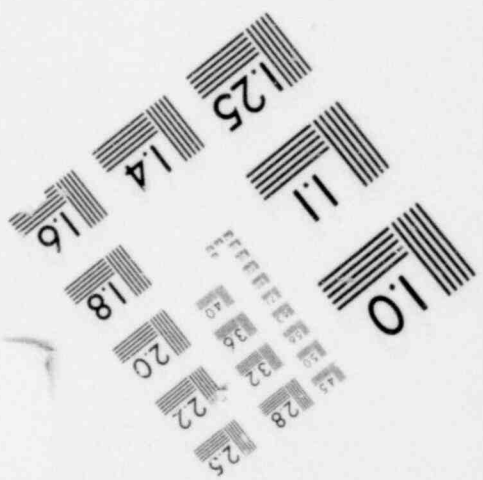
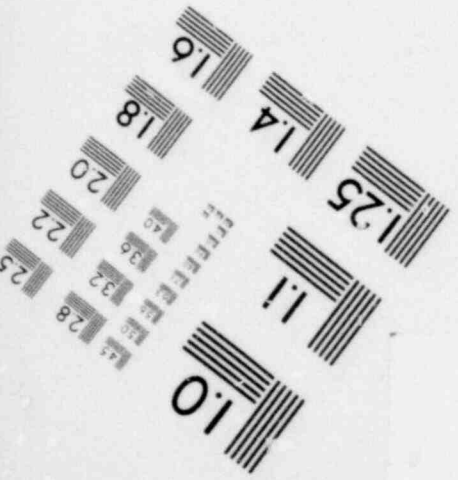
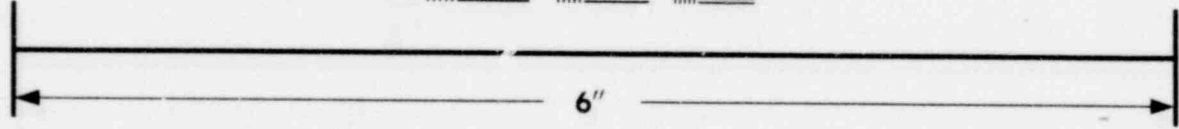
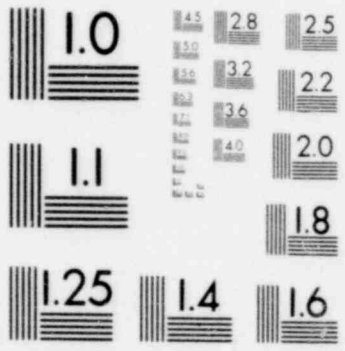


**IMAGE EVALUATION
TEST TARGET (MT-3)**





**IMAGE EVALUATION
TEST TARGET (MT-3)**



agb3

1 If you meet all the criteria, you're okay. If you
2 don't meet all the criteria, it's the Applicant that didn't
3 meet it and he has to justify why he did not meet it, and that
4 has to be proven.

5 MR. MESSING: The opportunity for rehearing or
6 litigation at that point should be made explicit.

7 MR. ERNST: That's clear.

8 Let me rephrase that.

9 MR. MESSING: No, if it's clear it's clear.

10 (Laughter.)

11 MR. ERNST: If this were a rule, then -- Okay, I
12 understand the point and it is a litigative kind of a matter.

13 MR. ROISMAN: But I do not understand why the
14 Applicant --

15 MR. ERNST: It clearly was not clear.

16 MR. ROISMAN: If the Applicant is entitled to
17 demonstrate that it's all right to meet less, then why can't
18 another party demonstrate that it's only all right if you
19 meet more or different? I mean, why shouldn't that opportunity
20 work both ways?

21 You're asking -- what you're doing is you're asking
22 one party to this process to tell you it's okay, we'll sign
23 off forever, and the other party to say we'll sign off unless
24 we can prove better. Either side ought to have the same
25 opportunity to make their proof.

1183 001

-gb4

1 MR. ERNST: I think we're attempting to have a generic
2 rulemaking that sets forth standards that, if you meet them,
3 then you have demonstrated a responsible consideration of
4 environmental qualities. If there is something that has been
5 left out, then that should be handled in generic rulemaking.
6 If something comes up that it looks like that rule or some
7 reason was wrong, then that rule can be amended. But --

8 MR. ROISMAN: That won't help you in a licensing
9 case, to tell me that I can get the rule amended. By the time
10 I get the rule amended, that and five other plants will already
11 have been licensed.

12 MR. ERNST: That sounds like a challenge as to the
13 usefulness of rules, period.

14 MR. ROISMAN: No, no more than the exception given
15 to the Applicant. All I'm saying is, why don't you do it with
16 even handedness. Let us both have a crack. We're both being
17 asked to sign off on a generic rule and we both can imagine
18 but we can't articulate a specific possible exception.

19 I think it's reasonable that an Applicant should
20 have a chance to say to you in an individual case, Hey guys,
21 when we said the generic rule is all right, this hadn't occurred.
22 Now it has occurred and clearly it doesn't make sense here.
23 And you want to write in the statute they should come forward
24 and, in the licensing process, be able to have the exception
25 written in.

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1 We want the same thing, that's all. It's no less
2 or more generic either way.

3 MR. MESSING: The alternative is that if all
4 candidate sites fail to meet their threshold, they should not
5 be considered.

6 MR. ERNST: Well that's an option, I think, that has
7 already been kicked around a little bit, and I would like to
8 hear a comment on that with no escape clauses and all.

9 MR. MESSING: It is symmetric and you have no
10 escape clause. If you put in an escape clause, then Tony's
11 point is you must make that symmetrical as well.

12 MR. MC GORUM: May I comment, Mr. Chairman?

13 MR. ERNST: Yes.

14 MR. MC GORUM: Of course, I think regardless, this
15 whole threshold question I think is made more difficult by the
16 fact that especially at that level it's very difficult to be
17 quite specific as to what goes in and what goes out, so you
18 have this judgmental area.

19 And I think it is always going to be, to some extent,
20 unclear until you get into kind of a contentious debate as to
21 who prevails, and maybe that's the purpose of this hearing.

22 I would just like to make a comment, too, about the
23 transmission lines. I think they properly belong in a
24 threshold consideration, as has been discussed.

25 I would simply sound the cautionary note that

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1 transmission lines themselves can become the subject of long
2 and litigious hearings. And I would simply say use some care
3 in what threshold criteria would be used for transmission lines
4 and also keeping in mind that it is more easy to zig and zag
5 and move them around if necessary, and then possibly it is a
6 power plant once you have determined where it's going to be.

7 So not let the transmission line, the things that go
8 out from the octopus, become a matter of contention indirectly,
9 if you will, related to the central issue of where the plant
10 itself should be.

11 MR. ROISMAN: There's an allied part of this same
12 thing about equity or balance of considerations, and that's on
13 Page 27, paragraph five, which says that any party who wants
14 to propose an additional candidate site beyond the candidate
15 sites submitted has to meet a more stringent standard than the
16 candidate site itself met.

17 It seems to me that, providing you say that that
18 party must come in and demonstrate that the candidate site is
19 comparable to the other candidate sites -- in other words,
20 they are carrying a pretty heavy burden of proof anyway, and
21 until the law changes for the citizen groups anyway, that means
22 carrying that on a zero budget, also including that they have
23 to prove that the proposed site exceeds one of the thresholds
24 and a reasonable demonstration made that the candidate site
25 does not exceed a threshold is really carrying it a little far.

-gb7

1 It just looks like you're throwing as many barriers
2 in our way as possible, and all we want to do is to expand the
3 consideration of candidate sites to a site that we have done no
4 more for than the Applicant had to do when it submitted its
5 candidate sites.

6 Now you're not really thinking that we're going to
7 come in with 100 candidates to add to the thing and if we
8 could, if we actually had 100 sites that met all the same set
9 of tests the Applicant sites met, they probably ought to be
10 looked at without all the roadblocks in the way.

11 MR. ERNST: Now, let me see if I understand that.

12 What was trying to be gotten at here was, if the
13 proposed site does exceed the threshold and it appears that
14 another candidate site would not, that should be considered.
15 And your suggestion that --

16 MR. ROISMAN: What I'm saying is, in the order in
17 which things are done, the Applicant will come in with a list
18 of candidate sites. The first thing that might happen is that
19 a party to the proceeding would say We think that three other
20 candidates should be included among the list of candidate sites
21 that we look at. We're not even yet to deciding obviously
22 superior, all we're doing is figuring out which ones we're going
23 to look at.

24 They come in and they make the initial showing
25 as an Applicant would make, that they've got three sites that

pwb8

1 also appear to meet all the threshold criteria. That ought to
2 be sufficient to expand the number of sites that will be looked
3 at in the alternate site review to include those three.

4 It ought not to be necessary that the proposed site
5 flunks one of the threshold criteria and prove that the new
6 sites are obviously superior. You're going to get new candidate
7 sites that will have met every criteria an Applicant would
8 have had to meet, they're just ones that the environmental
9 group thought of or the state thought of that the Applicant
10 didn't think of or didn't think enough of to want to put it
11 in with the candidates. And I don't see why it should be
12 objectionable to include those in, if the threshold showing is
13 made.

14 MR. ERNST: The only point is how far is enough, is
15 the question here.

16 MR. MATCHETT: I would like to respond to that.

17 If we were only talking about environmental concerns
18 related to siting, I think I could buy your point. But the
19 Applicants' screening process considers factors beyond the
20 environmental factor.

21 And a good screening process will have gone down
22 through the list and excluded first candidate areas or found
23 candidate areas and then selected potential sites and
24 candidate sites which, not only satisfied these threshold
25 criteria, but also satisfy other criteria which relate to cost

gb9

1 and other -- systems analysis, engineering and things like
2 that.

3 So you may well bring in a site which he would have
4 considered from the standpoint of environmental attributes
5 but was not suitable in his evaluation from the standpoint of
6 these other factors.

7 MR. ROISMAN: Okay. But, if it is obvious that it
8 wouldn't be considered, you wouldn't go to the trouble of
9 putting it in. And if it is debateable--in other words, your
10 evaluation of the cost consideration said no, and our evaluation
11 of the cost consideration said yes, that's an issue that ought
12 to be litigated.

13 It ought not to be the case that your judgment on
14 that is controlling. So we might want to argue with you about
15 -- and argue with you in the context of the licensing hearing --
16 about whether or not Candidate Site Number Seven really was as
17 bad from the cost perspective as you thought it was.

18 If it clearly was off, we would know that we couldn't
19 get anywhere with it because it would always flunk the reasonable
20 availability test under NRDC vs. Morton, and you could knock us
21 off very easily on that.

22 We would have spent a lot of money drawing up the
23 candidate sites' criteria and show that it met it and you would
24 knock it off by saying, Yes, but that's in Alaska and we're in
25 Florida. And then where would we be?

agbl0 1 So there's a built-in process by which we would not
2 be inclined to want to put in frivolous sites, frivolous in
3 terms of these non-environmental factors, and we would end up
4 arguing over those marginal sites where you felt the factors
5 threw it out and we felt they shouldn't throw it out.

6 MR. BLACKMON: We did run into such a case, Tony,
7 and this particular site was proposed by the state as opposed
8 to the Intervenor in this particular case. The Intervenor
9 was supporting the state call for a review of that site.

10 The way that that one came up was that the state,
11 in their review of the DES, said why don't you look at this
12 site and told the NRC that it should be looking at it. The
13 NRC immediately came to us and said give us the information on
14 this site.

15 In doing that what we found was that due to, not
16 to environmental -- quote, unquote -- but for flooding reasons,
17 the site was not going to be acceptable from the criteria that
18 we used. It did go through litigation.

19 I think from the experience that we have had anyway --
20 yours may be entirely different -- if somebody brings up
21 another site, we're not going to be able to get through a
22 hearing until we evaluate it.

23 MR. ROISMAN: Yes, but this Criteria Number Five
24 would give you a basis to avoid that. I mean, I think as a
25 lawyer, you certainly --

agb11

1 MR. BLACKMON: I'm not a lawyer.

2 MR. ROISMAN: No, I'm saying, from my standpoint, I
3 would advise you that under existing practice, you certainly
4 wouldn't want to fail to look at a site that somebody came
5 forward with which, on the surface, appeared to be reasonably
6 attractive.

7 This Provision Number Five, though, on Page 27
8 lays down some tough threshold tests that would have to be met
9 before you would have to take account of it. And the tendency,
10 I think, in those instances would be, because we're trying to
11 get through the process as quickly as possible, to apply the
12 restrictions that are now being proposed in this Number Five
13 so that the site wouldn't have to get looked at.

14 I mean, the one that the proposed site exceeds one
15 of the thresholds, in fact, is a criteria which you might not
16 even know if you had met or not until you were a long way down
17 the hearing process.

18 To find out, when you were a long way down the
19 hearing process, that a new candidate site had just passed the
20 last hurdle would mean that you would have to go back and
21 start some of the balancing all over again.

22 If you want to do it at the outset, start the hearing
23 and know how many candidate sites do we have to look at, you
24 have to take out that the proposed site exceeds one of the
25 threshold criteria and take out the obviously superior standard

a-12 1 because those are ultimate conclusions that we won't know the
2 answer to until the process is over.

3 If I understand what you're saying, you're saying
4 you wouldn't object to looking at the other site, and I'm saying
5 I think that paragraph five makes it very difficult to get it
6 into the process, and I would like to see the paragraph changed
7 or eliminated.

8 MR. MESSING: There's another issue here which seems
9 to be important. That is, what we're trying to do is establish
10 a process in which we have the information so you've got
11 public participation in the planning process. And now there
12 is a suggestion that we establish threshold criteria for
13 candidate sites. But these aren't really all the criteria,
14 well let's get out on the table what all the criteria are. I
15 mean, we don't want hidden criteria as the basis for making
16 these evaluations.

17 Now once we establish the threshold criteria, we
18 might have additional things that determine which is the
19 preferred site. And that we discussed earlier.

20 But in terms of meeting threshold criteria, let's
21 establish what they are and what they should be and then, if
22 somebody proposes another site which meets that, it should be
23 considered equally as a candidate site, although not necessarily
24 elevated to preferred site status.

25 MR. BLACKMON: Well, let me -- and Don, correct me

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-gbl3

1 if I'm wrong -- but the environmental siting study is one of
2 many phases of siting studies. There are other decisions,
3 management decision, utility decisions that have to be made
4 concerning such things as where is our load? If it is in two
5 states, where is our spread of capability, et cetera, what are
6 the taxes going to do and so on and so forth.

7 From an environmental standpoint I think -- as we
8 discussed before the coffee break -- what we're looking for is
9 a methodology that is going to promote early input from every-
10 body into the siting process.

11 If another site comes up and that has not been done,
12 then probably it should be looked at. But if the open process
13 is there then, after the site selection for candidate sites
14 is made, then the option ought to be closed.

15 In other words, if early input is available, then
16 let's get them all out and evaluate all of them. After that
17 decision is made, if we go on then we're okay.

18 I think I understand what Tony is saying. I think
19 what we have all got to recognize is that there may be other
20 things than just the environmental review that are taken into
21 account in siting.

22 And from my personal standpoint, I do not have a
23 problem with evaluating any site that somebody wants to bring
24 up. If we've already looked at it and as long as they're happy
25 with the answer, we have looked at it, it was not considered

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1 because of Reason Y.

2 MR. MESSING: You're saying it should be earlier
3 than this step, that consideration should be earlier than this
4 step?

5 MR. BLACKMON: I didn't want to talk about this
6 but let me talk about it just for a minute.

7 We are involved in a siting process that does
8 involve early public participation. One of the problems that
9 we see in it is, the biggest problem we're having is convincing
10 the public that we are indeed serious about public participation
11 and, therefore, we're having a distinct problem getting input
12 from them.

13 MR. ROISMAN: Give them money.

14 MR. BLACKMON: They won't take it.

15 MR. ROISMAN: Offer it to us.

16 (Laughter.)

17 MR. BLACKMON: Let me go a step further: when the
18 public process says, or when the public says, Well, you know,
19 we understand that you're looking at a site in our county and
20 that's also in our state and so we've got all the interest
21 groups involved, we are getting their -- we're asking them to
22 evaluate that plant site as well as the other plant sites to
23 make a determination as to should a plant be built at this site,
24 if not, why not? Should it be built at another site?

25 The givens are that ultimately, sometime in the

p-b15

1 future, we may need more energy. Right now we're not saying
2 whether its fossil or nuclear, we don't know, we don't care.
3 All we're looking for is plant sites. If there are more sites
4 brought up at that stage, fine, they ought to be reviewed.

5 If, when we get into the position that we now have
6 10 sites, we screen that down to, say, four sites and with the
7 public input, et cetera. And then they come back up and say
8 well wait a minute, how about a site way over here? Then I
9 think that's going to be a difficult burden until we can say
10 we did look at that.

11 MR. MESSING: But the thing is, you're talking
12 about a process that you've initiated in your company, and that
13 is not bound or mandated or even guided by law. And what we're
14 talking about is an NRC rule here, and we do want something
15 akin to that in the rule.

16 And in the rule, this seems to be the earliest step
17 in the game. And so this is where we're saying you should have
18 the opportunity. If you're going to build in another process
19 into the NRC rule that allows that earlier screening, then
20 you're slightly changing the nature of the candidate level
21 screening, and then I subscribe to what was said earlier about
22 the consideration of additional factors.

23 MR. ROISMAN: Well, Don, would you be amenable to
24 the concept that this process -- I'm not talking about putting
25 another process in, but this process that the NRC is proposing

agbl6

1 would be giving the time that you would normally begin to involve
2 the public in the candidate selection process, it would being
3 by your filing with the NRC a statement that you're beginning
4 the candidate selection process for sites and so on. Here is
5 this criteria that you're going to be starting to use to develop
6 these, you're trying to end up with X number of candidate
7 sites that meet whatever NRC proposes to be the candidate site
8 requirements, you've got the public involved in it, and the
9 public has the opportunity in the context of the NRC proceeding
10 to, if they want to more formalize it, to ask you interrogatories
11 or to do discovery or to have your -- you're starting to use
12 the criteria for exclusion that they think is questionable.

13 They would like to right then get it out of the way,
14 have the NRC Board say Uh-uh, you can't use that criteria or
15 Oh yes, that's a permissible one to use, and not wait until
16 after you've got all your candidate sites selected and are into
17 the hearing process and then for the first time somebody comes
18 in who participated in the earlier process and says, Well you
19 threw sites out using this standard and we think this standard
20 is not a permissible one to use, and then you learn maybe a
21 year or two into your planning process that it was wrong.

22 Would you be amenable to starting it back earlier
23 so that, as you made your decision, you were getting NRC
24 signoff on and citizens were foreclosed from further litigating
25 with you each of those decisions just as you went along the way

1183 014

agbl7

1 in making your process? Would that work better for you in
2 terms of opening the door and shutting it when you got through
3 so that your process didn't get slowed up by your decision-
4 making and then a review?

5 MR. BLACKMON: My particular answer to that is no,

end4B

6 and let me see if I can explain.
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4c mpbl

1 We believe it is very important to have the public
2 involvement, the public input. We do not want to put the NRC
3 in the position of decisionmaking. We want to do that decision-
4 making ourselves with the input from the state agencies, the
5 other federal agencies, and the public interest groups.

6 I think if I understood what you said, and I
7 may not have understood it correctly, but if I understood what
8 you said, it would be akin to us starting three months ago
9 saying NRC, we have now screened down to 38 sites. How about
10 letting us file an application and getting you to help us
11 get down to the next ten. We don't want to go that way.

12 But what we are amenable to doing is once we
13 get down to the sites, we know our next plant site will be
14 one of these because we've had public input, we've had agency
15 inputs from the states and other federal organizations. So
16 I don't see any problem.

17 MR. ROISMAN: But we're trying to make the
18 public input have rights and responsibilities. We would
19 not consider it reasonable to ask us to give up our right
20 to the future in an NRC proceeding, say, to present a new
21 candidate site if we didn't have any right before -- right,
22 and I stress that word -- to make sure that that candidate
23 site was considered if it deserved to be considered.

24 One place we think you have to give us the
25 right, we are amenable to being early planners as utilities

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mpb2

1 are, so that we don't get in the critical path. But we have
2 to have the right to be a useful participant as an early
3 planner, not merely that it is given to us and therefore can
4 be taken away from us or restricted without any review.

5 If you're saying ever when you don't mind the
6 review but you would rather that it be a state level review,
7 I gather from people who were here yesterday that there was
8 a pretty good consensus on the thought that the state level
9 reviews, if they are comparable to what you would get under
10 federal level reviews, would be preferable in some of these
11 areas.

12 MR. DINUNNO: I might remark a little bit on
13 that.

14 One of the things that has bothered me over
15 the years was this question of right of public interest
16 groups is you seem to be demanding rights but you have no
17 responsibilities. And to me, I've always been accustomed
18 to the fact that if I have a right to do something, I also
19 have a responsibility for my actions. And I cannot -- and I
20 don't want this to sound like you don't have a role and that
21 there isn't a place at all, and that there must be a way of
22 factoring the public views in.

23 But in the end, rights and responsibilities
24 have to go together. And I don't know how you can legislate
25 a responsibility of a group that isn't institutionalized in

mpb3

1 such a way that you could hold them responsible for what
2 they've done.

3 MR. ROISMAN: Well, within limits you can hold
4 them responsible by lowering down limitations on future rights
5 by giving them earlier rights.

6 Now, forgetting about people who choose to break
7 the laws -- utilities occasionally do that too -- but just
8 focusing on people who are going to abide by the law, we now
9 have the right -- you may not like it, but it's there, it's
10 in federal law -- to challenge your choice of a site for a
11 nuclear plant, and to fight the hell out of it.

12 What I'm saying is we exercise that right under
13 the existing structure sufficiently late in the process that
14 to the extent that we win -- see Green County -- it may cost
15 you a bundle.

16 Now if you can get us in earlier and then tell
17 us you don't get any later right, you don't get to come in
18 later when we're \$800 million or \$80 million or \$8 million
19 into the hole, then we give up that later right, which we
20 don't particularly like anyway because it means that there
21 are far fewer Green Counties because of that money.

22 We will take the earlier right and accept the
23 responsibility that we speak then or forever hold our peace.
24 But what we won't do is give up that later right in exchange
25 for a non-existent prior right.

mpb4

1 MR. MC GORUM: Could I suggest that this con-
2 versation be continued in the hall, and meanwhile, back on
3 A5, it seems to me that we have some language that really is
4 a problem, possibly, and is there something that could be
5 done with the language specifically which could get us off
6 this?

7 MR. VESSELS: I have a suggestion for language.
8 If you start on line 3 and drop all the -- on
9 page 27.

10 MR. MC GORUM: I believe that is the point where
11 we started 20 minutes ago, and is there some solution to that?

12 MR. VESSELS: My suggested solution was on line
13 3, where you started the comment, drop all the words on that
14 line, all the words in the next line up to the end of "and"
15 and substitute the word "after". And it reads on down to A3,
16 and you drop the rest of the line.

17 MR. ROISMAN: Fine.

18 MR. VESSELS: And I support that idea.

19 MR. MESSING: Would you repeat it, please?

20 MS. CAPLAN: Read it the way you want it to be.

21 MR. VESSELS: "Candidate sites proposed
22 by any party, including the NRC, other than
23 the applicant, will be considered in the NRC
24 review of alternate sites after a reasonable
25 demonstration is made that such a candidate

mpb5

1 site does not exceed the threshold cited
2 in Criterion A3."

3 MR. ROISMAN: That's fine.

4 Thank you.

5 MR. ERNST: Now let me ask in the context of
6 what this might mean, and I may have to call on Jerry Kline
7 for an instant, because I guess what we are striving at, and
8 slowly but surely these criteria are being changed, and I
9 want to make sure that what we're trying to do also isn't
10 being lost.

11 The underlying thought was that there likely
12 are a number of sites with similar characteristics and let's
13 go to the site at what the 103rd mile versus the 104th mile
14 or whatever the example was.

15 If there indeed are in a given area a number of
16 sites with similar characteristics, would this mean with this
17 particular change that you would be required if you wanted
18 to unreasonably extend the privilege here to look at 100
19 candidate sites on a comparative basis?

20 MR. ROISMAN: I was told earlier, and I thought
21 it was a point well taken, by Dennis, that having to put in
22 the threshold showing on that many sites for a utility would
23 be extremely burdensome. Imagine it for an environmental
24 group.

25 I'm not kindly disposed to the creation of

1188 020

mpb6

1 artificial absurdities. No environmental group is going to
2 propose a 104 mile site in lieu of the 103 mile site if there
3 is no substantively important difference between the two.

4 If the snail darter is at 102 and not at 104,
5 we might propose it. The applicant might have missed it.
6 I don't think it is likely to create a burdensome situation
7 if we put those sites together.

8 MR. ERNST: I'd like to go back in the record
9 and perhaps even delete that because I think I'm reading too
10 fast or it's getting late in the day, because the words that
11 "if the proposed site exceeds one or more of the thresholds"
12 is still in there.

13 So you have a --

14 MR. ROISMAN: No it is not.

15 MR. ERNST: I'm not keeping up. I apologize.

16 I guess my question still is -- and I guess
17 you've answered the question.

18 But there still is a question mark in my mind
19 as to whether that is perhaps not too lenient in the rules.

20 MR. BLACKMON: Well, let me respond to this.

21 I think Tony's point is well taken. Let me also
22 say this:

23 We are fully aware that what we are doing with
24 this public involvement thing is not going to do away with
25 controversy at the licensing stage, and we hope that as a

mpb7

1 result of this early involvement which will be documented
2 when we file our application that when somebody somewhere, if
3 they do come in and raise a question, that that will support
4 a firm basis for the board or for the Commission or whoever
5 saying You've already tried it once; go back home and sit on
6 your hands.

7 So I think Tony's point is well taken: as long
8 as it is a good substantial site, it should be reviewed.

9 MR. ERNST: Well, I think we can handle this
10 internally.

11 My only concern is -- I think his point is
12 well taken also. I'm not debating the point. I'm more
13 looking at the legality, the exact words in the rule. And
14 maybe I'm just going a step too far because it looks like it
15 would permit, if one were so inclined, just to put in a
16 number of sites and force you to go back and do a Topic 6
17 kind of comparison. And that legal possibility would be
18 there.

19 DR. HARLEMAN: Could I propose that this might
20 be a help:

21 To impose a condition at this stage that these
22 additional sites proposed by intervenors might have to
23 significantly increase the diversity. And I notice -- I'm
24 going back to Topic 4, but I have perhaps a new idea on
25 diversity.

1188 022

mpb8

1 I think the problem is we've been trying to
2 define diversity of environmental impact in an abstract manner,
3 and if we leave out the safety issues relating to population,
4 seismic, and flooding. at the risk of oversimplifying, I would
5 maintain that there are only two aspects that provide diver-
6 sity in environmental impact: one related to the type of
7 cooling system, and two, related to transmission corridors.

8 And the types of cooling systems are well known.
9 They are the closed-cycle systems. We can have natural draft,
10 forced draft towers, and cooling ponds. They have varying
11 visual impacts. They have rather minimal water impacts because
12 we're only dealing with blowdown problems.

13 We have, on the other hand, the fully open systems,
14 the open oceans and estuaries and Great Lakes and a few major
15 rivers, which we can treat when they are within the context of
16 the geographical area. And we have the intermediate systems,
17 which are the cooling lakes, which have characteristics of
18 both open and closed systems, depending on the size of the lake.

19 So I think you can define diversity not in terms
20 of how many river systems or what-not by simply saying that
21 you would like to have among the candidate sites a diversity
22 in terms of cooling systems and a diversity in terms of
23 transmission corridors which allows you to move in or out
24 from the load area.

25 And it seems to me that you will then want to

mpb9

1 consider by other groups, including NRC and intervenors,
2 additional sites only when they contribute to this diversity
3 that may be lacking in the candidate sites proposed by the
4 applicant.

5 MR. ERNST: I think we perhaps have a sufficiency
6 on the record now. I think this conversation, the past hour,
7 has been extremely helpful. I think we do have some thinking
8 to do, and appreciate the thoughts that have come forth.

9 Clearly this group can't write a rule, and
10 that isn't the charter, but I appreciate the comments.

11 DR. HOOVER: Before we leave Topic Five, I
12 would like to make sure something I said a little earlier is
13 clearly understood and considered for any rewrite of this
14 document.

15 In Item Four on page 26, it implies that if an
16 applicant can provide a rationale that he probably couldn't
17 do any better as far as site selection is concerned, then
18 that site is going to be okay, be accepted by the NRC as a
19 candidate site. And that to me is not very reasonable.

20 If there is a possibility of severe damage that
21 may be done to the resource -- and I'm talking about specific-
22 ally the ecological resources, fish and wildlife -- then it
23 seems to me that substantial additional effort should go into
24 a search for additional candidate sites and not just have a
25 site accepted because of a rationale presented by the

mpbl0 1 applicant that they probably couldn't do any better.

2 I'm talking specifically about threshold
3 criteria B, C, E, F, G, and I would specifically like to
4 have those looked at more closely in consideration of what
5 I just said about Item Four on page 26.

6 MR. ERNST: I think I recognize the point. The
7 intent is not to permit something that's going to have a
8 substantial adverse impact because I don't think such a
9 thing need happen.

10 I think we're looking more in a situation where
11 there are some clear cases where the impacts are very low, and
12 therefore they meet the threshold and have essentially a small
13 impact.

14 There is also very high impacts, and these will
15 be unacceptable. There's a gray area where you have interplay
16 of -- you know, maybe you can't meet all the thresholds but
17 you do have a measureable and perhaps significant impact, but
18 not a large impact.

19 I understand your point, and maybe we can take
20 care of it that way.

21 DR. HOOVER: It is really not what it says. I
22 would really like to make sure it is given additional con-
23 sideration.

24 MR. MESSING: I don't think we've resolved the
25 issue raised by Tony regarding the opportunity to impose

mpb11

1 another threshold criteria, and I do have a proposed
2 amendment to this amendment by striking language.

3 Shall we try it?

4 MR. ERNST: Let me make one note here.

5 (Pause.)

6 MR. MESSING: This is on page 26, item four.

7 I would simply strike the language on line 2
8 after "A.3" through the colon, and then strike the first
9 two lines of subparagraph a, up through the words "the
10 applicant" -- to the words "the applicant", so that it reads:

11 "If any candidate site substantially
12 exceeds one or more of the threshold stand-
13 ards provided in criterion A.3, the appli-
14 cant must be able to provide a reasonable..."

15 Here I would say "explanation", and then just
16 continue to that point. That is, continue through subparagraph
17 a. I would drop paragraphs b and c all together. And in
18 view of what Ken Hoover just suggested, I might then add a
19 sentence to the effect that 'ultimately a substantial damage
20 may be done to an environmental resource, then additional
21 research should be done on the subject', something to that
22 effect.

23 But I still feel very uncomfortable with
24 excusing applicants from all the threshold criteria without
25 the symmetry of opportunity that was discussed earlier.

mpb12

1 MR. ERNST: I think I understand your point.

2 The problem I have is that what you've done is
3 you've taken out the only criteria that would require the NRC
4 to go back and look at the actual site selection process in
5 one measure of proving that you have a slate of sites that
6 might not look to be the best or good, one way of proving
7 that is to go back and actually look in depth at the site
8 selection process step by step. And you may well come to the
9 realization that what resulted was a legitimate process and
10 those sites are -- I think what you have deleted there is
11 the process of going back and looking at the site selection
12 process.

13 MR. MESSING: We decided that issue earlier,
14 though.

15 MS. CAPLAN: What is of concern, and I was going
16 to get back to this point too, is that you may end up with
17 a slate of candidate sites that you are then going to consider
18 in hearings, none of which may be the kind of site that
19 should be considered for a nuclear plant.

20 MR. ERNST: If it meets all the thresholds?

21 MS. CAPLAN: No.

22 This is talking about what happens when it
23 doesn't meet the threshold.

24 MR. ERNST: Right.

25 And one of the things that this fourth criteria

mpbl3 1 did was set the stage for going back and looking at the
2 applicant's site selection process in depth, and that's what
3 has been suggested be deleted.

4 MS. CAPLAN: The process of looking at the site
5 selection -- the applicant may have done an admirable job of
6 site selection. He may have come up, or she may have come up
7 with the best possible method of looking at sites. And they
8 may have come up with the best possible candidates.

9 The fact may remain that you're in the middle of
10 Arizona and none of those may be acceptable sites for a nuclear
11 plant. And from the way I read th's, this 4A may allow you to
12 go into the next step with a slate of candidate sites which
13 may in serious ways not meet threshold requirements, and yet
14 still, because there aren't better sites, you'd be in the
15 position of considering them for a plant.

16 And that's what I would want to be sure to avoid.

17 MR. ERNST: Okay.

18 Let me say that I think that is the situation
19 you're in, and you're in a slightly different process than if
20 indeed for valid reasons there is no better slate of candidate
21 sites, and I really think we're talking about a set of circum-
22 stances that can't exist because you're going to go far enough
23 away to find a better site if it is that bad, but let's assume
24 that it was that bad. Then if there are no other options as
25 far as sites, you have the cost-benefit determination to make

mpbl4

1 as to whether or not you build a plant on that site or just
2 don't provide the electricity. But that is a different
3 decision than this.

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1 If you have really gotten to the only possible
2 slate of candidate sites, then your decision is whether or not,
3 on a cost-benefit balance, you can supply the electricity at
4 that site, or just don't supply electricity.

5 MR. MESSING: In the sense that it is a choice,
6 it's the triangulation that Dr. Keeney has been talking about.
7 We may have determined that we want to generate more elec-
8 tricity and that we should go ahead and find a site, but it's
9 parallel to the waste disposal issue. Waste disposal no
10 longer appears to be a technically simple issue. It's dragged
11 on for 30 years.

8.250

12 And in this case we may determine that there should
13 be nuclear sites and find that there are no acceptable sites
14 in the region. Well, at that point perhaps we should go back
15 and determine what the alternatives were in the first place.

16 MR. ERNST: That's in essence what-- I think we're
17 saying the same thing.

18 MR. MESSING: There's one comment I have with re-
19 gard to Topic 5 and that is, given the way it's written, one
20 has to be able to implement 2 and 3. That is, A.2 and A.3,
21 if that's the case, and if not, maybe move to 4 because
22 presumably the NRC must have competence to do that.

23 So given that, I can imagine plenty of cases with
24 the wording -- particularly of the criteria, with words like
25 "significant," "no further endangerment," "would not adversely

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eb2 1 affect," "several alteration," "unique," and all that. It
2 would be a terrible process to go through and just litigate
3 what the meanings of those words are.

8.250 4 The utilities and the applicants might sometimes
5 prefer to go through the alternate process of demonstrating
6 the rationale of the process they followed, and proceed using
7 that method as their main method. And I think there's no
8 reason why at least both options shouldn't be available and
9 could be chosen.

10 And if they do choose that, it would require alter-
11 ing A.1 slightly to say that the choice could be made and it
12 would follow A.4, very much the way that Mark just slashed
13 out, saying the process should be open, the value judgments
14 made clear, where the data came from specified, what the pro-
15 fessional judgment was about how much uncertainty existed
16 in those data, et cetera.

17 So in other words, it's an option to go either way,
18 and I think little would be lost and something gained.

19 MR. ERNST: I think that's a good comment. Thank
20 you.

21 That doesn't mean there haven't been a lot of good
22 comments, but I think that is a point that hasn't been dis-
23 cussed earlier.

24 I would like at this point to go back through the
25 criteria, one by one, and hopefully quickly, and give maybe

eb3

1 several minutes on each one and see if there are some suggestions
2 as to ways one could tighten up the use of the various adjec-
3 tives that exist in the criteria, some kinds of numerical
4 kinds of things.

5 Or in your comments at the end of this workshop
6 some week or two from now, maybe written suggestions as to
7 usable criteria would be helpful to our process. I'm willing
8 to accommodate you either way. If the panel things that a
9 little more consideration and coming to us in writing with
10 suggested values would be the most --

11 MR. MC GORUM: I'd vote for that, Mr. Chairman.
12 I think we're a little groggy in terms of getting down and
13 sharpening these up at this point.

14 MR. ERNST: Fine. I would appreciate that very much,
15 if the panel would be willing to provide us with their sugges-
16 tions as to more definitive or more useful criteria.

17 MR. MATCHETT: I have a basic question about apply-
18 ing the criteria. What does it mean when it says "sites
19 that meet the criteria"? Would, for example, professional
20 judgment be adequate to demonstrate that they will meet the
21 criteria, or must it be demonstrated by analysis and fact?

22 MR. ERNST: I think that's an awfully general
23 question.

24 MR. MATCHETT: I think, in order to try to define
25 the criteria, you have to know the answer to that question.

eb4

1 MR. ERNST: It gets to the basic problem of what
2 kind of reconnaissance level information, what kind of ex-
3 pertise, and things like that, and I don't think we're pre-
4 pared to get to that degree of specificity in the rule. It's
5 certainly an important question but I think you cannot take
6 the litigative aspects of site selection away.

7 All we're trying to do is come up with a process
8 that focuses on -- identifies the crunch points where we can
9 sit down and litigate, and this is probably one of them.

10 MR. BLACKMON: One comment. On page 25, Paragraph
11 Number F there, this is the only one of the items that we're
12 looking at that today we have a numerical value on. And I
13 imagine that when this thing comes out as a proposed rule,
14 there will be a substantial amount of comment on that, as well
15 as the five percent of the total project capital cost.

16 I guess my thought is that with the thoughts we've
17 had here today, I think staff should rework these.

18 MR. ERNST: I think we also agreed the staff would
19 appreciate input on other numerical criteria that could be
20 included so these don't stand out so strongly.

21 MR. CALVERT: Has the decision been made then to
22 use specific numbers in the threshold criteria?

23 MR. ERNST: I think that's a good goal.

24 MR. CALVERT: Yes, I recognize it's a good goal,
25 but my question still remains.

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eb5

1 (Laughter.)

2 MR. ERNST: I acknowledge your question.

3 (Laughter.)

4 MR. CALVERT: Because I guess, having gone through
5 this, I am beginning to understand why you had reasonable
6 areas.

7 DR. KEENEY: I would like to make a statement
8 against some of the specific criteria and I think there are
9 some inherent value judgments in them that are basically four.
10 I think "f" gives a good example of how to draw that out.

11 I can imagine a plant in theory using this set of
12 criteria, "a" through "i," which didn't have any snail darters,
13 didn't have any deer hunters, no striped bass, no one lived
14 near the place, however the main grid for the whole system
15 went right over the top of it so interconnection was relatively
16 easy, had a large source of cooling water a half a mile away,
17 it just happened there was 51 hectares right on that site, and
18 it may really be the case that everybody agreed that that site
19 was substantially better than any of the alternatives.

20 So whenever you have very definitive screening
21 criteria like this, it sets up what is called a lexicographic
22 evaluation system where one criterion out of all the things
23 you would like to consider on such a site can just knock it
24 out. And I would not like to see one locked into that. It
25 has implicit value judgments that 50 hectares is equally as

eh6 1 bad as five percent over the base cost.

2 That's just a difficulty that I think should be
3 recognized and thought about.

4 MR. MC DONOUGH: I think what he's picking up here
5 is one thing that I'm hoping I'm hearing, and that these are
6 not exclusionary criteria. These are just things that say
7 well, let's take a look and look at other factors. Maybe
8 that's when you get back into the part that has been p'd out.
9 Then let's look at the whole siting thing.

10 But I certainly will fight to the death if some-
11 body says these are exclusionary factors. They are not.

12 RM. ERNST: They're not exclusionary. And I think
13 ther has been a lot of food for thought for us here and it will
14 help us to come up with a better sensitivity in taking another
15 cut at what we're trying to do.

16 MR. ROYSMAN: Do you understand his concern about
17 exclusionary? It's identical to ours about the inclusion
18 area.

19 MR. MESSING: To go back to the sentence which
20 introduces these criteria, it states that:

21 "Sites that meet....all of the following
22standards will be accepted....without further
23 justification."

24 If it doesn't meet the standard then it requires
25 further justification.

1188 035

eb7 1 MS. SHELDON: I have a question about why everybody
2 reads that sentence without reading what's in parentheses,
3 which raises a concern that I've had on page 24, number 3:

4 "Sites that meet (with appropriate
5 mitigative measures, if reasonable)...."

6 Now maybe I'm overly worried about this but I
7 would think when you're looking at alternative sites you're
8 essentially looking alternative pieces of ground or alterna-
9 tive environments to come up with a slate of candidates that
10 is at that square one level of acceptable.

11 This parentheses says to me, because I've seen it
12 happen, that it is possible to backfit a site to accommodate
13 a nuclear power plant, and that that is a sort of a very im-
14 portant kind of engineering tinkering thing that can be done,
15 and you can fit any plant into any site that you want to, de-
16 pending on which site you choose.

17 I would think that your site analysis and your
18 alternative site analysis ought to look at the situation that
19 exists on the ground and not, you know, well, if we move the
20 discharge out four miles and we tunnel under this particular
21 salt marsh and we do such-and-such, gee, we can put this plant
22 here.

23 You ought to make a decision on whether that site
24 is a good site without thinking about how you can backfit a
25 plant on there.

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eb8

1 I worry about including this in because I think the
2 tendency will be, particularly if it is a site that is already
3 owned by a utility or for some other reason it's more easily
4 available to the utility, to look toward engineering as the
5 way to solve the problem, rather than toward an analysis of
6 alternative sites and the choice of the environmental and the
7 preferable one.

8 MR. ERNST: I appreciate the comment. Basically
9 mitigative measures as considered for the consideration of
10 alternate sites as described early in the document is aimed
11 primarily at the type of cooling system, and I think that's
12 what was being aimed at, not some of the other kinds of miti-
13 gative schemes but basically the cooling system, and it is not
14 a backfit. Hopefully we're in an early process where any kind
15 of mitigation you're talking about is a frontfit problem, a
16 predetermined situation, and if it is costly, you know about
17 what it's going to cost. And that is considered as part of
18 the solution.

19 MR. ROISMAN: But look at "i" on page 25 where,
20 in a comparable situation, namely where it's safety as opposed
21 to an environmental consideration for which you have to do
22 some mitigative things, you're concerned that the cost of the
23 project would go up by, in this case, five percent, and that
24 that would therefore be a disqualifying factor.

25 Why wouldn't you want to similarly indicate in some

eb9

1 way, not necessarily dollars and cents but perhaps dollars and
2 cents, that if the cost of the project would go up, either
3 dollars and cents or environmental values in some way, to over-
4 come one of these threshold problems, that, too, would turn
5 into a disqualifying factor?

6 For instance, you do not have aesthetics down as
7 a factor, but it is aesthetics that the cooling tower issue
8 at Seabrook got debated over. And there were trying-- Assum-
9 ing there had been imposed a condition that you had to have
10 a cooling tower on the plant, you would have been fighting that
11 issue.

12 Indian Point in the Town of Buchanan wants to
13 fight aesthetics. And I gather that the logic of "i" is that
14 if the site is such a tough site that you going to really
15 have to do something fairly substantial with it to get it up
16 to snuff, a safety factor, and I would say the same thing
17 should be true for environmental, you ought to probably not
18 bring it into the candidate site area.

19 It's going to be one of those really tough sites
20 any way you look at it.

21 MR. BLACKMON: Let me ask a question here for
22 clarification to make sure I understand. Let me give you two
23 for-instances and tell me how they should be considered.

24 One for instance is that you have a plant site
25 that is adjacent to a river. Upstream three miles from

038

eb;-10 1 the plant site is a 125-foot high dam.

2 For safety reasons, in order to meet the 10 CFR
3 requirements, Reg. Guide 1.59, you have to assume that that
4 dam disappears and the floodway comes downstream. In order
5 to make it such that that plant site is not inundated, you
6 have to move the plant site two miles off of the river.

7 Okay? That's one for instance.

8 The other for instance is that you are using as a
9 criterion-- One of the givens is that you will not restrict
10 stream flow if-- Let me revise that: that you will maintain
11 or you will not cause stream flow in the river adjacent to a
12 plant site to drop below 125 percent of the 7Q10 flood.

13 In order to maintain that, because of the varia-
14 bility of flow, you determine that that plant, which should
15 also have constructed with it a water storage reservoir--
16 Assume that the size of the reservoir ends up being 30,000
17 acre-feet; it's 1,000 acre surface area. Those are two for-
18 instances, both of which are true and accurate accounts that
19 are factored into the siting process.

20 In my opinion, both of them are mitigating actions.

21 MR. ROISMAN: Yes. Both are, and both should be
22 considered. In other words, they create their own problems.

23 One, let's just assume that moving off the river
24 bottom only creates an economic problem and nothing else for
25 the moment. The other one certainly creates an environmental

1188 039

eb11

1 problem. And I would think in both cases that in judging
2 whether using that mitigative factor to meet one of the threshold
3 tests is acceptable you should have to factor in what's the
4 price of the mitigation, what would it cost us?

5 The impoundment, that's Tox Island Dam. Philadelphia
6 wants to do all its nuclear plant -- to build a Tox Island
7 Dam project. Maybe that's a good thing to do but it has an
8 enormous environmental implication to it in doing it. It ought
9 not to be the case that the Philadelphia sites would be auto-
10 matically approved on the basis that we'll deal with the
11 environmental implications of Tox Island Dam when Tox Island
12 Dam is complete. You ought to look at the total consequences
13 of what you're doing.

14 I don't object to "i." I think the concept of
15 having that in there makes sense, but I think it ought to also
16 include something that when you're taking mitigative steps
17 and their implications are much more environmental than dollars
18 and cents, you also might say Hey, if that's what we've got to
19 do to get this site up to snuff, it's not worth the candle.

20 MR. BLACKMON: Okay. I guess my comment there is
21 this:

22 In both of these instances those are the only two
23 things, other than the virgin land on site, that had to be
24 done in order to make them good sites. In both cases they are
25 acceptable. The reservoir that's being built is open to public

ebl2

1 recreation, et cetera.

2 I think that is the kind of mitigative action that
3 we're talking about. We're not talking about hardening for
4 safety and this kind of thing.

5 MR. ROISMAN: I guess the only question is how do
6 you make the determination with respect to-- I mean one of
7 the problems with the concept in "i" is that it somehow begins
8 with the base design. You come in with the plant and you've
9 already accommodated a safe shutdown earthquake of Modified
10 Mercalli IX. Well, that's going to make it highly unlikely
11 if you're on the East Coast that you're going to have to do
12 anything to the plant to make it any better from a safety
13 consideration or a geologic consideration.

14 The identical plant proposed at the identical site
15 to Modified Mercalli VI is going to exceed the five percent
16 number if the real safe shutdown earthquake is IX. So it's a
17 manipulative factor. It doesn't necessarily get the NRC any-
18 thing by doing that.

19 And I was troubled somewhat from the utility
20 standpoint because if you don't want to run into "i," all you
21 do is build all the safety into the plant in what you call the
22 base design and then you'll never run into any problem with
23 "i" because there won't be any additional factors that you have
24 to put into the equation.

25 But I just think mitigating steps can create

1183 041

eb13 1 problems. There ought to be something in the threshold tests
2 that take account of what those problems are.

3 MR. MC DONOUGH: I would like to make one comment.

4 First of all, when we go into siting we come up
5 with a base plant we try to apply to the sort of candidate
6 sites that we're coming up with. The first thing we do is we
7 come up with what we call a standard plant.

8 We also tell our engineers when we come up with a
9 standard plant you'd better be ready to build that. And they
10 are not going to hide \$100 million worth of extra hardening
11 or something on the standard plant because by God, they're going
12 to wind up building it and needing 100 million, and they're
13 not going to do it. That's our internal check.

14 We don't put in phoney numbers just to prove out
15 a site. We say here is the plant and this is what our base
16 is. Does this design have to be modified for a particular
17 site? And before we go into modifications for a particular
18 site for the mitigation, there has to be some other redeeming
19 feature; other than all other sites being equal, we're not going
20 to go into mitigation. We'll take the other one that is equal,
21 that doesn't require the extra cost.

22 So I think that comes out okay.

4d

1188 042

4e mpbl 1 MR. ERNST: I wind up with a thought, and maybe
2 we'll just have to retire and think about it. Maybe we can
3 chat about it tomorrow.

8.515 4 The thought I have on this is whether cost should
5 be in these set of criteria at all, or perhaps in your case
6 where you have to build an impoundment or something like that,
7 you have the environmental impacts of any mitigative measures
8 certainly considered.

9 Maybe we're a step ahead of the game because cost
10 really is part of the "obviously superior" criterion and all
11 these are threshold criteria. It makes me wonder whether we
12 aren't one step ahead of the game here.

13 I have to give it a little bit of thought. I
14 understand the problem, however.

15 There are a number of questions, I guess, in 5,
16 and I think we've probably discussed everything enough that
17 maybe -- does the panel think we should go through it ques-
18 tion by question?

19 (Chorus of no.)

20 It seems to be unanimous as to not.

21 Is there general consensus that we move on to --
22 we have two options. We can move on to 6 -- let me solve all
23 the options. I think we've past the time for comment from
24 the observers. I think this is the time we should accept
25 comments from the observers.

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mpb2

1 MR. HILL: Jerry Hill, Southern States Energy
2 Board.

3 I have one comment or observation I would like
4 to make. In the conversation and exchange there was something
5 in the substance that seemed to bother me, and I think that
6 when it comes to rulemaking we have to be very clear about
7 what we're looking at. Are we looking at the process, or are
8 we in fact looking at sites.

9 Now the point came up over here, and I think it
10 started with a slate of six sites, and the intervenors said
11 that perhaps a seventh site would be better than one that had
12 been proposed. The problem comes in with the intervenor may
13 find themselves in a situation where if they proposed very
14 early on in a situation where you have public participation,
15 proposed that a particular site is better, they may end up
16 seemingly wed to that site.

17 And I would suggest that as a way of looking at
18 this and as perhaps a way of going forward with the rule-
19 making that rather than be concentrating on another site that
20 may be better, perhaps we should be backing all the way up and
21 taking a look at the criteria.

22 You are filling a very valueable slot as a
23 reviewer, and maybe you should be commenting on the criteria
24 and keeping it strictly tied to criteria. So that if the
25 criteria that is put forward by the applicant is of concern,

mpb3

1 you can go back and challenge a particular item and open that
2 spectrum up and then when you go back through the situation,
3 you end up with a new slate of sites perhaps.

4 In other words, what you're doing is proposing
5 that the process open up and let itself go forward and several
6 sites will fall out, as opposed to going in, recommending a
7 site, and suddenly finding yourself wed to that site very
8 early on, because I think what may happen is that if we're
9 working at a reconnaissance level and the utilities haven't
10 really committed too much to that, and suddenly an intervenor
11 comes in and says this site is better, well, if there isn't
12 too much difference, if that would have been your number seven
13 site, it's very easy to flip all the way from number one back
14 to number seven. And suddenly your whole role has changed
15 and you may find yourself in a position where you're trying
16 to justify that site as it moves along rather than filling a
17 role as reviewer, looking at criteria, judging the criteria,
18 judging the process, and not selecting or suggesting specific
19 sites.

20 MR. ROISMAN: Let me say, I think that's an
21 interesting point, but it goes to what Joe mentioned, where
22 is our responsibility in all this?

23 I mean, as I mentioned at the outset, I think
24 that there is this question of whether the alternate site
25 issue ends up getting caught between the two wheels of the

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mpb4

1 pro and anti-nuclear debate. There is some virtue to taking
2 it out of that by trying to resolve before you got to the site
3 question, whether the facility is needed and it ought to be
4 nuclear, so that those considerations aren't there. Everybody
5 knows they've had a shot at that, and won or lost as the case
6 may be.

7 When we get down to a site it seems to me that
8 the responsible thing for an environmental group to be doing
9 is to be advocating. If they know a plant has to be built and
10 that -- I mean know it at least in the sense that the law has
11 now said it must be and there is no legal recourse, but that
12 it should be built, the best thing to do is to say where is
13 the best damn place we could put this thing.

14 I don't know anybody who wants one of these
15 power plants where they are; but they are essential where
16 that need has been established. And an environmental group,
17 if it really thinks there's a better site, ought not shy
18 away, ought not stand on the sidelines and review, which is
19 short of like jabbing at the applicant, but ought to go in
20 there and be willing to say to the applicant, Hey, this is
21 the right site, and we'll go with you all the way to the
22 Supreme Court if you want this site and somebody tries to
23 get you away and stuff that other site down your throat.

24 MR. ERNST: I think we note the points here.

25 MR. HILL: But it seems to me like the process

mpb5

1 will allow you to do that by looking at the criteria; with
2 the process you should be able to achieve that end.

3 MR. MESSING: Could I give another example?

4 That would be the example of a utility or perhaps
5 a municipality or perhaps private industry that is sitting by
6 while the process is going on, and somebody realizes, Well,
7 maybe we can go ahead with our own co-generation facility
8 and by locating it we propose that. Well, that wouldn't
9 come up in criteria, and yet any number of different parties,
10 not necessarily environmental or public guys, citizen inter-
11 venors, might want to put forth a candidate site of that sort.

12 I can't think of a way to provide for that in the
13 criteria. And yet if they come up with the idea I think we
14 ought to consider it.

15 MR. HILL: I think you would want to provide
16 for that in the criteria. The criteria has to be flexible
17 enough to give that any weight that is in line with the other
18 weight to be assigned to the other criteria, so that you can
19 again use the process rather than selecting a particular site.

20 MS. SHELDON: I think that's a good suggestion.
21 Certainly if the groups saw that there was some factor that
22 hadn't been considered in the applicant's analysis and
23 selection, then that group should say, Hey, look, you didn't
24 consider the impact on fisheries here, and if you did you
25 would find that you could choose Sites 1, 2, and 3, because

mpb6

1 there aren't any fish left in those rivers anyway.

2 So I think that both of those things should
3 come in in the process if there is an opportunity for the
4 group to do that. If we are foreclosed from either suggest-
5 ing alternative sites or alternative factors, then we don't
6 have any role to play. But that's part of what we see as our
7 responsibility as participants in the process, not merely
8 to object across the board, but to offer where we can construc-
9 tive alternatives or suggestions.

10 We all represent various kinds of groups. Some
11 were opposed to nuclear power, period. Some were opposed to
12 sites at certain locations. And depending upon those motiva-
13 tions, you'll get different responses.

14 But as long as there's a definite role that we
15 can play, we try to do that.

16 MR. ERNST: Next, please?

17 MR. MILLER: Stan Miller, New England Power.

18 Ms. Sheldon's point is exactly my problem, with
19 Mr. Vessels's change to the criterion A5 on page 27, in that
20 if an intervenor can come in and propose another site during
21 the hearing process, then you have to go back and review it.

22 Now what Don was saying was Sure, we could take
23 a look at it, but he's talking about reconnaissance level
24 information, I think. And if our friends at Argonne are
25 reviewing it, and they're asking for detailed data, then

mpb7

1 you could go back in the process and you'd have to re-
2 evaluate the site, do specific detailed studies, and then
3 our friends representing perhaps some environmentalists
4 that aren't as responsible as these appear to be, then they
5 can suggest another site, and we could continue on and on
6 and on, instead of in the Seabrook case where we just go
7 back and the Staff did a five month evaluation looking at
8 reconnaissance type data.

9 We could get into a process that takes years
10 and years and years. And therefore the wording as it was
11 should be left that way.

12 MR. ERNST: Thank you.

13 MR. LEONARD: Dennis Leonard, Detroit Edison.

14 I think there should be a separate criteria for
15 wetlands. I think the criteria E and H adequately address
16 the various land use concerns.

17 The problem I had with the wetland criteria
18 involves the broad definition that is often given to wetlands.
19 For instance, many lowland forests are wetlands. Substantial
20 areas of many states would be accepted with this broad criteria.

21 The executive order that was cited in the Coastal
22 Zone Management Act I think weren't properly cited. Carter's
23 executive order for wetland protection applied to federal
24 programs rather than federal actions. The Coastal Zone
25 Management Act, while providing for protection of wetlands,

mpb8

1 also provides for protection of -- I'm sorry, also provides
2 for development of energy sources.

3 What is requires is a balancing of the two
4 interests.

5 I believe that we can protect wetlands, wetlands
6 that have unique attributes, and important wetlands, in
7 Criteria E and H. I don't think that a separate designation
8 under Criteria F is necessary. We can get around this issue
9 of whether 50 hectares is appropriate or not by putting it
10 in the categorization criteria E.

11 I would appreciate comments from Mr. Hoover on
12 that approach.

13 DR. HOOVER: I really can't address the wetlands
14 issue. I'm not qualified to address that, I'm sorry.

15 MR. LEONARD: Another problem with the wetlands
16 definition, states like Louisiana, Florida, they won't be
17 able to come up with six candidate sites, I don't believe.
18 Substantial service areas in the country would automatically
19 be excluded from coming up with six candidate sites. They
20 would have to go through the more rigorous investigation.

21 MR. ERNST: Thank you.

22 MR. WATSON: Ed Watson, Battelle Memorial
23 Institute.

24 Regarding the environmental diversity issue, I
25 suggest that this could probably best be resolved on a regional

mpb9

1 basis by generic studies.

2 You know, you can group quite a few states or
3 quite a few regions and by such a study point out that a
4 mountainside is obviously out of question, or a marshland
5 site may be out of the question. So I think these could be
6 done in a generic way.

7 MR. ERNST: Thank you.

8 MR. WILLOUGHBY: Bill Willoughby, Stone and
9 Webster.

10 Many of the comments I had have been well
11 discussed already, so I won't cover them again.

12 However, a couple I do have. The first I would
13 like an answer to is in the criteria 3e where it talks about
14 no preemption of specially designated land uses, what is in
15 the mind of people when they're talking about preemption of
16 the land use? Are you talking about don't set it down on that
17 piece of land?

18 I don't think there's any problem with that
19 definition. Don't put it where you -- right next door where
20 it's overlooking; don't put it someplace off in the distance
21 where you might see it.

22 The reason for the question has to go back to
23 an example of Green County in that I believe that this is
24 probably one of the major questions relative to Green County,
25 is does the siting at Cementon preempt the use of the historic

mpb10 1 site. Now that's six miles, seven miles away. Therefore,
2 what do you mean by preemption?

3 I'd like some comment.

4 MR. ERNST: Without commenting on the Green
5 County case, I think the answer to your first question is
6 yes, and not facetiously.

7 I think we are in a broad spectrum kind of
8 impacts, and somewhat case specific. I think it would be
9 unfair to try and answer your question even if we just took
10 one area and tried to answer the question. I think it is
11 case specific and I think there will be arguments pro and
12 con as to whether one meets the criteria.

13 I would be very grateful if some more explicit
14 definition of what might be meant would come forth from the
15 panel, but I think we're not prepared to take a crack at that
16 at the present time.

17 MR. WILLCUGHBY: Part of my question is how site
18 specific do you mean? Apparently in the Seabrook case you
19 looked out in the area five miles. In Green County you
20 obviously went beyond looking at items beyond five miles.

21 So the criteria there appeared to be ten miles.

22 If we are going to be site specific to that
23 extent, it makes it very hard for any person doing an
24 evaluation of whether or not it meets the threshold standards
25 to come up with a reasonable answer that has any chance of

mpb11 1 standing up in the hearing process.

2 I will leave that as a comment unless somebody
3 wants to remark.

4 MR. ERNST: We'll leave that comment.

5 The problem I see, I guess, is if you get to
6 the stage of saying you have a slate that meets these, and
7 then it turns out that one or more doesn't, does that put
8 you back to square one, or what?

9 MR. WILLOUGHBY: I think it comes back perhaps
10 to the question you asked us to provide you some input on, is
11 what do some of these active words in A through I mean in
12 terms of definable criteria.

13 The second comment has to do with perhaps an
14 addition of consideration that should be made, and I think
15 probably it came under 3E. And having lived most of my life
16 in areas where agriculture is very high in the minds of people,
17 I feel that you should consider as a part of the threshold
18 impact upon unique or prime farmlands.

19 Today probably this country produces more food
20 than we can eat. But 50 years from now we may regret every
21 piece of the farmland we gave up.

22 MR. ERNST: Thank you.

23 ba flws

24

25 A-1 eral Reporters, Inc.

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5A wbl

1 MR. GURICAN: I'm Greg Gurican from AEP Service
2 Corporation. I have a couple of comments.

3 One of the first comments I have is that the
4 purpose of this grand round table appears to me to be to
5 come up with some guidance on developing a rule that's going
6 to apply to alternative siting. And you are applying the
7 rule to alternative siting on the point and discussion
8 issues that come at the end of what seems to appear to be
9 a long screening process which is conducted by utilities
10 and/or by the environmentalists, if they're working on
11 finding candidate sites.

12 And the criteria that's applied I think must
13 be the same for utilities and must be the same for environ-
14 mentalists if it is going to work. If a rule is going to be
15 a rule it should be the same for everyone involved. What's
16 good for the goose is good for the gander, as they say.

17 With respect to diversity and with respect to,
18 and, again, the criteria, under Item 5, Topic 5, it appears
19 to me that if you go to Point 4 and there is one threshold
20 criteria which is not met by this slate of candidate sites
21 that any utility has come up with, this is where you have
22 your diversity of sites in the fact that one of these sites
23 actually is a candidate site yet it has not met one of these
24 threshold criteria.

25 With respect to intervenor action in that regard,

wb2

1 I would like to see that paragraph on the criteria deleted
2 from pages 25 and 26, and on page 27 I'd like to make the
3 criteria for an intervenor to include an alternative site
4 at this step in the process more stringent, in that I think
5 it should be along the lines as the wording suggested
6 before, but it should be something that's obviously superior.

7 The reason I say that is because in the process
8 of doing the screening the utilities have spent a lot of
9 money, done a lot of studies and a lot of analysis, even on
10 the basis of surveillance data. And coming up with ten
11 candidate sites, or whatever number of candidate sites at
12 this point, represents a significant amount of work which, if
13 somebody is going to add to the licensing process more delay
14 by this legal action, they should have a significant
15 reason above and beyond the work that has already been
16 done by another group, especially when the criteria has
17 been applied whereby they've met certain threshold levels
18 of acceptance by the NRC and by whoever else has impact on
19 this rulemaking.

20 I'd like to go back to one other item under
21 Topic 4 with respect to region of interest. I believe that
22 Mr. Ahern's change in the paragraph is rather acceptable.
23 I think also it's an important aspect of the whole screening
24 process that a region of interest be established and that
25 certain criteria be developed to reach a region of interest

wb3

1 where one studies the potential area to determine candidate
2 sites, because there's a wide area within which it could
3 include the utility's service area and/or outlying areas
4 in which a person can put a plant. And in our case the
5 American Electric Power System is a seven-state system.
6 Certainly if we had a load area on one end of the system
7 that needs power we would like to maybe only consider one
8 state or two states that's part of our service territory and
9 maybe not part of our service territory. We wouldn't want
10 to consider the whole seven-state system.

11 But the need for power in determining a region
12 of interest, and the other factors -- the safety factors --
13 in determining candidate areas per Reg Guide 4.7 and the
14 definitions of region of interest in Reg Guide 4.7 and
15 NUREG 0292 I think adequately provide criteria which estab-
16 lish a region of interest from which you could get candidate
17 area, and then eventually potential sites and candidate
18 site in the alternative screening process.

19 MR. ERNST: Thank you.

20 MR. MESSING: Could I ask the gentleman a
21 question?

22 I don't really understand how the introduction
23 of additional candidate sites at an early stage, such as is
24 being proposed, would introduce delay into the siting process,
25 particularly when it is regarded as something in the order

wb4

1 of a 12 to 14-year process.

2 MR. GURICAN: It's considered a 12 to 14-year
3 process, the siting process?

4 MR. MESSING: Yes.

5 To what extent do you consider the addition of
6 additional sites at this stage, how much delay would that
7 involve?

8 MR. GURICAN: If it involves the work of the
9 utility itself on analyzing that particular site and applying
10 criteria in the screening process to go from a candidate
11 site to a preferred site to the site where the plant is
12 going to be built, it could involve many, many months.

13 MR. MESSING: That would only occur if the NRC
14 were to find at that time that this additional site was
15 obviously superior. If it's not, then I don't see where the
16 utility has any obligation to conduct the additional analysis
17 on it.

18 MR. GURICAN: Well that's my point. I believe
19 it should be an obviously superior site.

20 MR. MESSING: Where do you make the determination
21 of "obviously superior" if you don't make it when you're
22 considering the other candidate sites?

23 MR. GURICAN: That's a good time to make it.

24 MR. ERNST: Let me interject. I think we have
25 the viewpoints. -- unless you want to continue.

wb5

1 Okay. Thanks.

2 Any other comments?

3 MS. GENTLEMAN: I'm Mary Beth Gentleman,
4 Massachusetts Energy Facility Siting Council.

5 I have three suggestions I'd like to offer, and
6 then a definition of region of interest, not entirely new.
7 But I would suggest that the region of interest in general,
8 for general use, generically speaking, is the outer geographi-
9 cal boundary of the most distant service areas to which the
10 benefits of the plant might accrue.

11 What I'm getting at is a distribution of costs
12 and benefits, some sort of an equitable siting approach.

13 Now in a pool setting the region interconnected
14 by the grid would be the region of interest in general.
15 And the rationale for this would be that if transmission and
16 distribution planning is done on one basis, be it pooling or
17 not pooling, the basis for the transmission and distribution
18 planning, should that not also be the basis for site planning,
19 for siting in general?

20 MR. ERNST: Could I ask one question?

21 If such is done-- I hear here a mesh between
22 generation planning and site planning. --what credit should
23 be given to this planning? In other words, if this parti-
24 cular site were chosen and there plants -- I don't know
25 whether hard plants or soft plants or whatever -- that the

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1 next site would be somewhere else to take care of this
2 particular combination of service areas, what credit should
3 be given to this kind of planning?

4 MS. GENTLEMAN: Can you ask that again?

5 MR. ERNST: Well say you have a service area
6 that typically is well interconnected and typically is
7 comprised of -- or a region of interest that is to be com-
8 prised of many service area, and there is typically an
9 interchange of power. And a proposal comes in and there's
10 a number of participants in the proposal, with one lead
11 participant. And this lead participant want to site in his
12 service area. The question is, in the planning for this
13 capacity addition, the plans indicate that the next addition
14 would be somewhere else. How much weight--

15 MS. GENTLEMAN: Somewhere else, other than.....

16 MR. ERNST: Some other location within the
17 several service areas involved.

18 MS. GENTLEMAN: Which happens.

19 MR. ERNST: Yes.

20 How much credit should be given to that kind of
21 planning?

22 MS. GENTLEMAN: If you have a group of appli-
23 cants and they're planning on a plant in a service area other
24 than their own? Is that the question? How much weight should
25 that have?

wb7

1 MR. ERNST: You have a bunch of cooperative
2 utilities--

3 MS. GENTLEMAN: That are organized in a grid?

4 MR. ERNST: Well, perhaps.

5 MS. GENTLEMAN: That are all interconnected?

6 MR. ERNST: And this year they're talking about
7 addition of a facility in a particular service area. The
8 question is, Why not put it in another service if two years
9 from now the plans are that the next addition would be in
10 this other service area, and that is just the sequence
11 they feel is best.

12 The question I'm asking is, How much weight
13 should one give to that kind of an overall plan for energy
14 additions in our consideration?

15 MS. GENTLEMAN: Well the real question would be,
16 Who are the potential benefitters who will potentially
17 benefit in the long run from that capacity addition? And
18 if the answer is the potential for benefit is regionwide,
19 then that will influence the siting process by expanding
20 the ROI.

21 MS. BLACKMON: May I ask a question for
22 clarification? I hope your answer to this question is no.

23 (Laughter)

24 Last winter we in the Carolinas wheeled power
25 to--

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1 MS. GENTLEMEN: To California?

2 MR. BLACKMON: No ; to Indiana. We do not have
3 any fixed contracts for the import or export of energy or
4 capacity.

5 MS. GENTLEMAN: Would you say that's an extra-
6 ordinary circumstance?

7 MR. BLACKMON: Would I?

8 MS. GENTLEMAN: Yes.

9 MR. BLACKMON: On the basis of my understanding,
10 particularly in the southeast, no. The only utility that I
11 know that has fixed contracts for shipment is TVA and some-
12 body in Indiana.

13 But we are tied directly with Southern Power
14 Company through Georgia Power. We're tied directly to
15 AEP, Vepco, Carolina Power and Light, SCE&G and the muny
16 in South Carolina.

17 Are you talking about the region where we are
18 intertied with those other people or just our service area?

19 I said I hoped your answer would be No. Are
20 you talking about all those other people, too?

21 MS. GENTLEMAN: It's quite possible that this
22 suggestion is not practical on a nationwide basis. And
23 if that's the case, then that's the case.

24 I think you have to distinguish between your
25 emergency capability to share capacity versus your planned

wb9

1 sale power in between companies and service areas.

2 Can I run through the rest of this? I don't
3 want to dominate the floor, because I know it's late.

4 MR. ERNST: Thank you.

5 MS. GENTLEMAN: I would also suggest that the
6 proposed rule address the following:

7 The use of another applicant's docketed site
8 as an alternative site. I think that really compromises
9 the value of an alternative site review. We see it all the
10 time in New England, that either someone else's alternative
11 or docketed preferred site shows up as an alternative site.
12 It could satisfy many of the things that have been discussed
13 today, being located in a different resource area, having
14 different environmental characteristics, and so forth. But
15 everybody knows, or it appears that the odds of that site
16 being classified "reasonably available" are very low. If it
17 is already a docketed preferred site of some other candidate,
18 some other applicant; I'm sorry; can we get that out of the
19 alternative site process somehow?

20 That's just a question.

21 Lastly, page 23, the last sentence under A.1.

22 "The NRC will review the applicant's
23 site selection process and its implementation only
24 if required by Criteria A.4."

25 What do you really mean by "review?" Do you

wb10

1 mean approve, or review? --look at. Do you mean "review"
2 as "take a look at," or "review" as in "approve?"

3 What I'm getting at here is, it sounds like
4 you're saying that if the means are satisfactory -- I'm
5 sorry; if the ends are satisfactory the means are inconsequ-
6 ential. If the candidate sites meet the threshold criteria
7 you don't care how you got them.

8 I'm sure that's not what is intended. I can't
9 imagine the NRC staff not being interested in the process
10 just as a means of understanding how the final sites are
11 selected.

12 So, if you really didn't mean that the staff
13 will only review the process under those circumstances, fine.
14 If you did mean that the staff would not look at the process
15 except as it is stated here, can that really hold up in
16 hearings?

17 MR. ERNST: Let me answer that. The intent
18 was exactly as I said, that indeed you have a slate of
19 candidates that meet the criteria, and hopefully the cri-
20 teria would establish good environmentally sensitive sites,
21 then we would not pay much attention as to how the applicant
22 got there. And all this is in the rationale.

23 We would, however, require a public process
24 where the process is public information. And the rationale
25 as expressed in the study document was that if it's a public

wb11 1 process that is documented there are going to be a lot of
2 people looking at. And certainly the--

3 MS. GENTLEMAN: But not the staff?

4 MR. ERNST: From a decisional standpoint the
5 intent was the staff would not review it and make a decision
6 on it; that's correct. And we don't have the staff resources
7 to review in depth something that doesn't enter into the
8 decisional process.

9 MS. GENTLEMAN: Thank you.

10 DR. KEENEY: As I comment, it would seem to me
11 that the NRC is supposed to make sure NEPA is implemented,
12 as opposed to NUDMA, the National Utility Decision Making
13 Act.

14 (Laughter)

15 MR. ERNST: Are there other comments?

16 MR. DERICKSON: I keep telling myself I'm
17 not going to say anything. But my teeth get a little bit sore
18 after a while, and I feel that I have to say a few things.

19 I think it's important to realize-- Let me just
20 say I hear the word "economics" and "expenditures by the
21 applicant," and that sort of thing. We get bombarded with
22 that all the time. I think what we have to perceive that
23 this process we're going through right now is, we're talking
24 about prevention rather than cure. I think in the past we've
25 operated under the cure basis.

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1 Cures are very expensive, much more expensive
2 than prevention.

3 And, Don, I think Duke Power would not mind
4 investing, let's say 50 million dollars, in going through
5 this process if they ended up with six licensable sites
6 each of which probably cost about 1.8 or 2 billion dollars
7 or something like that. Fifty million dollars, given six
8 sites at that cost, is rather inconsequential.

9 So I think we need to look at it from that
10 perspective. That's why I think the New York approach is
11 rather interesting. And I guess Maryland also, where,
12 rather than deal with just an obviously superior site compared
13 to five other sites we end up with a process, a whole bank
14 of sites that we can pick and choose from.

15 It avoids a lot of litigation. It is a matter
16 of economics when you stop-- If you want to talk about
17 good business sense looking down the road, investing the
18 money now, to avoid a lot of future expenditures, is good
19 business sense.

20 And what has happened because we have not done
21 this, it lends itself to litigation. And, as you well know,
22 litigation is very expensive. And if we can avoid it, or
23 minimize it, I think that's what we're here to do. And
24 we're looking out for the public interest, we're looking out
25 for the utilities' interest. Nobody is trying to undermine

wb13

1 anybody else. And we of the National Laboratories are not
2 trying to do that; we're trying to be helpful as possible.

3 And I do want to make one comment. I will leave
4 that note alone. I'm glad to find I am friends with
5 New England Power, specifically Stan Miller. And I find it
6 interesting that he considers, from the context of his
7 comments, that we are friends with what has been referred to
8 as the intervenors.. And I think that says something for
9 the Nuclear Regulatory Commission. We must be trying, or
10 they must be trying to do their job, at least in part looking
11 out for the public interest.

End 5A

6:00 PREMIUM

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1 MR. ERNST: Let's take about a five minute break or
2 so and then we'll come back.

3 (Recess.)

4 MR. ERNST: We're a little more casual in these
5 late hours. So ease back and get some coffee whenever you want.

6 I think we will move on past Topic Five at this
7 time. However, there was one question that was brought up
8 during the break.

9 The Staff study document did propose some criteria,
10 not necessarily that would be the ones that would wind up in
11 any rule, but did propose some criteria with which to judge
12 the acceptability of a site selection process utilized by an
13 Applicant.

14 The question I would like to address and get a few
15 opinions on is whether or not criteria that the Applicant should
16 follow in the site selection process should be part of a rule.

17 I wouldn't like to address the merits of the specific
18 criteria because I think you could comment on those and every-
19 thing else, but I would like to address the question of whether
20 specific criteria applicable to the structure and implementation
21 of the site selection process used by the Applicant should be
22 part of a rule.

23 MR. BLACKMON: On behalf of one Applicant, no, they
24 should not be. The reason being that there are going to be
25 many different areas: regionally, resourcefulness-wise,

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1 critical items-wise, timewise that will change in the develop-
2 ment of a generic rule.

3
4 I think in this particular case, the methodology
5 used by an Applicant to a very substantial degree should not
6 be fixed.

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7 MR. MESSING: I think we were just hoping there should
8 be a maximum amount of flexibility in the criteria proposed
9 not looking for rigid criteria there.

10 MR. MC DONOUGH: If you're going into a maximum
11 amount of flexibility, there's no use to have it, and I think
12 I would vote very strongly on the side of not having this
13 going into rulemaking, trying to define everything that goes
14 into the site selection analysis process.

15 MR. MESSING: Let's get an example here. We're
16 talking about the process, right?

17 Wouldn't an example be that the Applicant in the
18 process must hold public hearings on the proposed sites with
19 60 day notice and reasonable opportunity for the public to
20 participate?

21 You know, I can envision something along those lines.
22 We want to be sure that the process has some provision for
23 public participation, something of that sort. But I don't want
24 to prescribe those too tightly, there might be a great deal
25 of variation.

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1 MR. MC DONOUGH: think, if I read the NUREGs that
2 are out correctly, say NUREG 0292, which I understand will be
3 applied to our Carrol County licensing process, this is really
4 a NUREG to put in public involvement all the way through.

5 And I think when this thing gets docketed, the first
6 thing that's going to happen is a public hearing out on the
7 site where all of the factors -- the environmental report will
8 have been documented, it's available, the siting procedure is
9 in there, the candidate sites are all there, the environmental
10 report goes out to all the principal officers of all the
11 alternate sites so that they're aware of what was said about
12 their site and where they stand and the probability that they
13 will have future sites -- the whole thing is there.

14 And that contains -- criteria we have in that thing
15 our screening criteria, how we got from the whole State of
16 Illinois, how we went down to regions --

17 MR. MESSING: To the extent that contains acceptable
18 criteria, then we can just reference. To the extent that you
19 might want to make some sort of amendments for it for this
20 particular procedure, you would be adding new criteria.

21 And all I'm saying is that we don't want those to
22 be narrow, we want them to be broad. But I do think that we
23 can both live with criteria as we are in 0292.

24 MR. MC DONOUGH: Yes, and I believe that there is
25 ample opportunity through this process -- because even before

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1 the Staff starts to really analyze and develop a draft environ-
2 mental statement, they have a public hearing and there is input
3 available all the way through it and comment on the environmental
4 report, the draft EIS and hearings.

5 There's plenty of opportunity. I don't see where
6 the Intervenor or potential Intervenor or public interest or
7 whatever would show up at a hearing and say Hey, you know, this
8 is the first time I've had an opportunity, here's a bunch of
9 sites because I don't think you've looked at them. I don't
10 think that's in the cards.

11 MR. MESSING: I don't think we're in substantive
12 variance on this.

13 MR. ERNST: The answer to the question is no, is that
14 it? I want to make sure what we're agreeing upon.

15 Let's move on to Topic Six.

16 I think really the only new thing that appears in
17 Topic Six is the criterion on what costs would be permitted
18 in any -- Let me refresh my memory here -- yes, the costs that
19 would be permitted in the cost-benefit analysis for sites that
20 have not had an early review of alternatives compared to sites
21 that have.

22 This particular aspect was discussed some yesterday,
23 I think, and certainly some this morning. So I think the
24 principal here is well understood. And as indicated earlier,
25 the costs that would be permitted, assuming that the site had

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1 undergone a full early review of alternatives, would be all
2 costs including the costs of moving and the costs of any delay
3 in the provision of power.

4 The costs that would be permitted if the Applicant
5 did not choose the option of an early review of the alternative
6 site question would only be the costs of demonstrating -- in
7 other words, the costs to comply with NRC regulations, the
8 costs of site investigation, in other words, and submittal of
9 an environmental report and safety report and any inherent
10 differences in total project costs due to the fact that differ-
11 ences in geology, perhaps, or in cooling system types, things
12 like that that would affect the total cost of the project.

13 In other words, you go back to square one, in
14 essence, as far as project costs are concerned, and you might
15 consider differences in project costs but not differences --
16 assuming that you've got a lot of investment in ordering
17 components and engineering design and things like that.

18 I think that's what we're talking about.

19 MS. CAPLAN: Would that include -- for instance, if
20 at your proposed site you were using a standardized design,
21 and at the alternates you might not be able to use that. Now,
22 would the cost of switching to another design or having that
23 standardized design modified in some way, is that included in
24 the costs that you're talking about here?

25 MR. ERNST: I guess that's a fine structure I really

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1 hadn't thought about.

2 MS. CAPLAN: It could be substantial.

3 MR. MATCHETT: It could be an important question
4 because those costs could be substantial, and I'm concerned
5 about the whole subject of cost in the environmental rulemaking,
6 because sometimes I don't think we have distinguished between
7 capital costs, operating costs and differential costs and
8 litigation costs and things like this. And I think it is
9 something that should be discussed more. I don't have any real
10 suggestions on it.

11 MR. BLACKMON: I have another one along the same
12 lines.

13 We're in the siting process right now. We had to
14 make a decision today as to what waste heat dissipation method
15 would be used. That decision is already made that it would be
16 cooling towers.

17 If, however, EPA came out with something that we
18 could utilize, effectively utilize and make, then there is a
19 completely new option -- quote, unquote -- open to it, and the
20 costs associated with building a lake versus building cooling
21 towers are the same. But the costs of operating the plant with
22 lake cooling is substantially less than operating the plant with
23 cooling towers.

24 If we are in the early site alternative review
25 process with a lake cooling alternative -- I mean, with a

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1 cooling tower alternative, and the EPA says cooling lakes are
2 in and we say scratch it, we want to go with the lake cooling
3 alternative, where do the costs fall out on that one? That's
4 one that I could see occurring hopefully before we end up with
5 the situation on standardized plant.

6 MR. KEENFY: I, for one, would like to see the costs
7 in that case be the costs of the lake cooling system.

8 And in your example, I would like to have the costs
9 of the non-standardized plant included for that alternative,
10 because those are costs which are borne by, as somebody pointed
11 out, taxpayers who are ratepayers, who is me.

12 MS. CAPLAN: I think this points out a problem that
13 we didn't really address properly in Topic Five, and that is
14 again whether you are coming in to the site review process with
15 a proposed site, you know, if we are really doing it early,
16 I guess my question could be cancelled because the Applicant
17 wouldn't have made any commitment yet to the design. This would
18 be, I guess, a really good argument for making sure that at
19 the point at which we're doing this alternate site review
20 that there haven't been these kind of commitments made, so that
21 then we don't have to talk about that cost factor.

22 MR. MATCHETT: I don't think that's entirely true,
23 based on the normal processes for site selection the Applicant
24 goes through. It's customary for the Applicant to use cost
25 as one of his factors in determining his preferred site. And

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1 so he has made some estimates of costs before he comes in with
2 his slate of candidates.

3 What he may do is use a standard design, even though
4 it is not one that has all the refinements that would be re-
5 quired for the selected site or the preferred site. And he will
6 evaluate those elements that have to be differential -- that are
7 different on the various sites and come up with differential
8 costs. And he may use that as one of the factors in
9 determining where he wants to select his candidates.

10 MS. CAPLAN: As long as that's being done in a
11 hypothetical way -- for instance, you have some on-the-shelf
12 standardized designs, then there's no problem with that.

13 One thing I guess that I just don't understand
14 thoroughly is at what point the utility starts making commit-
15 ments to manufacturers for parts. You know, at what point do
16 you say yes, you know, I will be one of the people in on the
17 standardized design. I would hope that kind of commitment
18 wouldn't be made at this stage of the process.

19 Does what you say assume that some kind of commit-
20 ment has been made, or just that you are making costs estimates?

21 MR. MATCHETT: Well, standard parts of the plan that
22 aren't going to be affected by these variations, commitments
23 could be made prior to final approval of the site.

24 MS. CAPLAN: Well I was thinking they are standard-
25 ized units that have been approved by the NRC in topical reviews.

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1 But there is also, you know, the whole standardized units.

2 MR. DINUNNO: Let me try to answer your question
3 this way: typically what is done in a case like this where
4 you have narrowed, let's assume you've narrowed the situation
5 down to where you had six candidate sites.

6 Now, one of the engineering questions you have to
7 ask yourself is what would it cost to put a plant in what they
8 call site development costs. That's an important factor. He
9 may have sites with different topographic effects, in which
10 case the grading problem may be different.

11 Somebody mentioned here a possibility of locating
12 a site off the river because of the flood plain situation in
13 which case you may have to pump water for two miles. That's a
14 unique site characteristic or attribute. That would not
15 invalidate a site, but it would mean that the development of
16 that site would entail a pumping cost and a piping cost that
17 would not be involved if it were down on the river.

18 So part of the assessment of the suitability, the
19 overall suitability that you're trying to balance in a case
20 like that is to look at the site development costs.

21 For example, another example: in looking at
22 20 year flood, we made a determination of one river site where
23 the flood would come up within 30 feet, the water would rise
24 and one made a determination that one would have to build a
25 wall, a protective wall along the river.

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1 That is a site development cost. Those kind of
2 things, that level of very preliminary estimation is commonly
3 done as a way of providing some fix. If you had six sites,
4 all of which were environmentally sound and obviously one
5 costs much more to develop than the other, then the weight would
6 be given to that which would be least expensive to do. It's
7 in that context.

8 MS. CAPLAN: I have no problem with this at all.

9 MR. CALVERT: I think I understand your question.

10 There are two basic concepts, I think, that we're
11 looking at. You basically have to commit to your order of
12 your nuclear steam supply system about 2.5 years before con-
13 struction starts on a normal -- about 2.5 years.

14 The other concept that you're thinking of, which
15 is the standardized plant which, really there is only one
16 type of this which is SNUPPS at this time. And then the
17 commitment to SNUPPS has to be made 3.5 years before the first
18 of the standard nuclear plants went on-line. So, the SNUPPS
19 unit is the only one of its kind.

20 MS. CAPLAN: That does speak to part of my concern.
21 It's helpful to have that information.

22 If we're talking now about doing early alternative
23 site review so that this process will be completed two years
24 before the Applicant has to come in with a construction permit
25 application, then we're almost at the point where you don't have

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1 to make a commitment to any kind of plant design at the stage
2 that we're talking about alternatives, right?

3 I mean, because we're saying 2.5 years and we're
4 up to 2 years, and so it wouldn't take much to make sure that
5 the alternative site hearing was concluded in time for the
6 Applicant then to make a commitment to purchase something.

7 MR. BLACKMON: Let me try just a little bit different
8 answer and see if this goes along that route.

9 In the past and, indeed, in the future, because of
10 lead times on the construction of nuclear steam supply systems
11 or turbine generators, for that matter, an Applicant will
12 normally commit that NSSS or 2G unit at the same time they
13 commit the site. That is necessary in order to have the
14 information available to file the application in a timely
15 manner.

16 If the early site alternative review is conducted
17 such that the completion of that is at least two years prior
18 to the submittal of the construction permit application, then
19 in most cases you would not have a problem with the commitment
20 of anything more than, to a vendor, give me a budget estimate
21 on a plant.

22 MR. ERNST: I think that was the judgment that led
23 to this two year business.

24 MS. CAPLAN: I think that should be clear in the
25 language that is written up.

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1 MR. EASTVEDT: Might I also add that I think I
2 have to get another pitch in for the transmission incremental
3 costs.

4 (Laughter.)

5 MR. MESSING: If that's true, as you laid it out,
6 then I don't see the reason for the inclusion of costs of delay
7 in the consideration of alternate sites or in consideration of
8 -- in determination of obvious superiority, which is on
9 Page 38 under 8E.

10 "The fact that an appropriate considera-
11 tion of forward costs (including costs of delay)
12 at the proposed site..., " et cetera, et cetera.

13 I don't see where there are costs of delay associated
14 if you haven't made your commitments to major components
15 yet, and you shouldn't be making those prior to determination
16 that there is not an obviously superior site.

17 MR. ERNST: I would have no problem deleting that.

18 MR. BLACKMON: I don't see any problem with that
19 either.

20 If, in the early alternative site review, there is
21 no problem. As I understand what we've got written here, the
22 problem comes if the utility unluckily or, as the case may be,
23 makes the decision that it's not going to file that type of
24 information -- in other words, they're going to file for a
25 construction permit review -- when they make that filing, they

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1 have committed NSSS turbine generator, the cooling system for
2 the most part.

3 And I think that's where the money cost comes in,
4 that this is written to say Here is the carrot, do the job
5 early. If you do it early, then you can recover all the costs
6 if you have to go to another site. If you don't do it early,
7 then the only costs you can recover are, indeed, the site
8 specific development costs.

9 MR. MESSING: That also speaks to the reason why we
10 were advocating mandatory use of the early site review, because
11 it protects the consumer, the ratepayer, against that situation.

12 MR. BLACKMON: It's a double-edged sword, then.

13 MR. ERNST: Let me go back and say I'm not sure
14 whether I'd have a problem eliminating that parenthetical
15 statement, and we will take a closer look at it.

16 The reason why I'm not sure is because these
17 criteria are criteria that would be applied any time that you
18 make an alternative site decision. And it could also apply
19 to re-opening the decision at some later time after you have
20 made one. I just have to take a look at the language.

21 If you're making a redecision, it's clear the
22 parenthetical statement does you no harm, because there is no
23 cost of delay. If it also applies at a different time then it
24 may be a valid thing and we would have to look at that.

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1 MR. BLACKMON: If the decision to review alternative
2 sites is made any time after the submittal of the Safety
3 Analysis Report you've got problems.

4 MR. ERNST: That's right. And these criteria may
5 apply to both stages and I'm not exactly sure without reading
6 them, and I don't want to take the time right now.

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7 MR. MC DONOUGH: I think when we're saying there is
8 no cost before that, I think we're talking about relative costs.
9 There's a heck of a lot of costs if you're talking five or ten
10 million dollars. That's the kind of costs, and maybe even
11 50 million you've got involved.

12 You may not have a quarter of a billion dollars
13 but you have a significant amount of money in there, and those
14 things should be factored in. So I think it should stay in
15 but I think we should have the understanding that they are not
16 really that significant. But they're there and they should be
17 considered.

18 MR. ERNST: I think we understand the point.

19 MR. VESSELS: Can you explain to me where the rule
20 indicates that if you don't go through this preliminary
21 process then these costs are out?

22 MR. ERNST: I think that's in the note at the bottom
23 of page 38.

24 MR. VESSELS: Okay.

25 DR. KEENEY: I had one specific comment that I made

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1 before but it is twice on page 98 referring to cost-benefit
2 analysis on the fourth line, and then in "e" also, and I
3 would like to have that changed to "analysis including costs
4 and benefits."

5 I think cost-benefit analysis has some important
6 inherent weaknesses. There are other procedures to do this,
7 and I don't think it ought to specify a particular methodology.

8 MR. ERNST: Yes. I think this has been a continu-
9 ing problem and in our view-- I understand your comment but
10 cost-benefit analysis, the way we use it in this document,
11 is NEPA cost-benefit analysis which really is what you might
12 call a value impact kind of a thing.

13 It is not the more restrictive cost-benefit
14 analysis that you might normally think about, so I think it is
15 a term that has evolved in NRC's usage.

16 DR. KEENEY: Why not change it as addressing costs
17 and benefits since it is, as you said, misleading?

18 MR. ERNST: I understand your comment. Thank you.

19 MR. MC DONOUGH: I think after reading the comment
20 or the note at the bottom of 38, I think I would like to offer
21 that anybody who has gone in for early site review, which I
22 think you might loosely interpret as an early review of alter-
23 nate sites, should have the same protection as if he went in
24 for the early review of sites which we said would not be
25 mandatory.

eb3

1 MR. ERNST: I perceive a difference. You could
2 come in for early site review on one subject such as seismicity
3 and then I don't think that should allow you to count full
4 costs of delay if you happen to be at the wrong site and you
5 don't find this out until the CP stage.

6 MR. MC DONOUGH: Well, I think what I would have
7 to say is that if the early site review -- if the site
8 selection procedure was fully addressed because when we sub-
9 mitted our Carroll County review for early site review, that's
10 one of the findings we wanted.

11 In fact the main impetus in going in with it was
12 on the site selection procedure.

13 MR. ERNST: The second line of that note would take
14 care of that.

15 MR. MC DONOUGH: The only thing is that in the
16 connotation of this document, there is a differential between
17 early review of alternate sites and an early site review.
18 I would take that term to mean this bifurcation or whatever
19 where they split off just that portion up ahead of the early
20 site review.

21 Maybe it's terminology but --

22 MR. ERNST: I think it's terminology because I
23 think where we wound up, at least as this group is concerned,
24 it would not make a lot of sense to bifurcate the process and
25 if you want to consider the full review of alternative sites

eh4

1 in an early site review application, you have the prerogative
2 to do so.

3 If you do, then if the issue is reopened at some
4 later time, you do have the "all costs including delay" to be
5 considered. But if you don't include that issue in the early
6 site review application, then you can't consider costs of
7 delay. I think that is how it is coming out.

8 MR. MC DONOUGH: Fine.

9 MR. MESSING: I have a real problem with delay
10 costs but I think I'll submit it.

11 MR. ERNST: I take it there's no great problem
12 with this criterion, that this seems to be a useful criterion?

13 MR. CALVERT: It's only the criterion your using
14 in the decision-making process because you're not permitting
15 this to be put automatically in the rate base for utilities
16 that aren't allowed to already include this in their rate base,
17 so it is only really just a part of the decision-making process.

18 MR. ERNST: It is part of the decision-making
19 process, yes. We can't control how these costs are taken care
20 of eventually, but it would be in our decision-making process.
21 It helps to get us out of what I perceive as a quandary the
22 Commission has. If we have a process that sort of demands a
23 commitment at the time of the CP review, how do you make good
24 public interest decisions regarding the protection of the
25 environment because you have such a heavy weight on one side of

eb5

1 the scale.

2 This gives an out, that if the applicant chooses
3 to do so, then we make an early decision with public involve-
4 ment, and that is a commitment to the applicant in good faith
5 that if he doesn't take advantage of that process, then we
6 say Well, we're sort of back at square one in these things,
7 you should have come in early and we would have hashed all this
8 out.

9 MR. VESSELS: Let me say something. I think we
10 would be naive though to think that a public service commission
11 wouldn't find this as a very helpful way to decide to throw
12 something out of of a rate base. They won't allow it for this
13 purpose because it just gives them the kind of a handle they've
14 been looking for to throw it out.

15 MR. ERNST: But we all agree it's a good way to go.

16 MR. MC DONOUGH: I would like to bring up one thing
17 at this particular point. I'm not sure if this is a propos
18 to Topic 6 but we've only got one left and I'm sure it doesn't
19 enter into that one. And that was the original thing I threw
20 out, that there does not seem to be a workable mechanism
21 through this whole rulemaking where you can effectively handle
22 the siting of some new units at an operating station versus
23 development of a new site.

24 How would we bring this in? How do you do it?

25 You know, you talk about having difficulty with trying to match

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eb6

1 reconnaissance level information on some sites compared to the
2 preferred site where you generally have a higher level.

3 Now when you get at an operating site or one that
4 is far along in construction, you absolutely know everything
5 about it. Now how do you put these things in, and how do you
6 stay away from the situation where you get into the syndrome
7 that if you add units at an existing plant site that essen-
8 tially all of the impacts have taken place?

9 You've got land dedicated to the plant. You've
10 got docks for the receiving of the vessels, rail transporta-
11 tion. You've got all these things. And you go into the
12 situation and say Gee, well, everything gets loaded onto one
13 site and pretty soon you are up into the energy park and they
14 keep saying Well, put more, put more, which is really the wrong
15 way to go.

16 And I see nothing in this whole rulemaking now
17 that will be able to define how we can rationally pick and select
18 sites and develop a diverse group of sites. I just throw that
19 open for any comments.

20 MR. BLACKMON: Let me say that is a valid question
21 to bring up, particularly in light of two recent studies, one
22 last year and one a month ago, that have come out, Allen
23 Weinburg's people over at Oak Ridge, in which they are saying
24 you don't develop any new sites after 1988.

25 MS. CAPLAN: I think it's a very important point.

eb7

1 It is one that I'm very concerned about. I'm not sure if it
2 is something that we can really handle right here.

3 I think that the staff and the Commission have to
4 deal with this, that there is the question of environmental
5 impacts. There are other questions, too, the safety questions.
6 There is, you know, risk kinds of questions involved in that.

7 And if it is not dealt with here, I would really
8 urge very strongly that there be some other way of dealing with
9 this question.

10 MR. ERNST: I think that's the kind of answer I
11 was going to give to it.

12 We wrestled with the same exact question before
13 we came out with the Study Document and felt we couldn't answer
14 it under the auspices of this workshop, that it really is a
15 case-specific problem.

16 I will not agree that the addition of another unit
17 to the site has zero impact on the environment. I think you've
18 got to look at each case on a case-by-case basis right now.
19 Maybe there will be a policy developed in the future years
20 in this area that might make some sense and be implementable
21 but I don't think this particular panel should be asked that
22 question.

23 However, it is a duly noted question and an impor-
24 tant one.

25 MR. VESSELS: I think when you do that you have

eb8 1 reconnaissance base data that even I would agree was more than
2 adequate. I think it would tend to warp the analysis because
3 you have so much data. I worried about it but I didn't bring
4 it up but you brought it up.

5 MR. MESSING: I'm puzzled by the discussion. I
6 don't know if anybody is planning on developing only a single
7 unit at a single new site. All projected developments that
8 I'm aware of are either for multiple unit developments or for
9 additional units at existing sites.

10 And to the extent that that's a serious -- that
11 that presents problems to the rule, then I don't quite see it
12 but I do think that we have an obligation to consider it. But
13 my sense of this is that the kind of data requirements neces-
14 sary and the kind of decisions that would be made in sequence
15 would still be the same. The difference would be that the
16 marginal impacts -- that there would be a shift in the marginal
17 impacts associated, that is, the initial environmental impacts
18 on a site would be marginally less with incremental units.

19 They might be significant if you don't have addi-
20 tional water necessary or for whatever reasons, but marginally
21 they would be smaller.

22 Conversely, the impacts on reliability, on trans-
23 mission line corridors, on threats to safety and the integrity
24 of the units, those marginal risks are increased. But it seems
25 to me that the mechanisms that we've been discussing should

eb9

1 operate equally well, if not better, for the additional siting
2 -- for the siting of additional units at existing sites.

3 MR. ERNST: I think I would agree. I'm not at all
4 sure that in all cases the marginal impacts would be smaller
5 per megawatt. I think there could be situations where -- I'm
6 not a biologist, but situations where you might actually stress
7 the system beyond a point where you're going to start seeing
8 greater adverse impact per megawatt.

9 MR. DINUNNO: I think the problem one struggles
10 with in a case like this, and one would hope the Commission
11 would eventually address, is the fact that there is a capacity
12 at each one of these plants, perhaps undetermined, but there
13 is a capacity at each one of these sites to place plants and
14 still meet the environmental requirements that have been laid
15 down.

16 For example, you're concerned about the water impact
17 but that's controlled by the NPDES requirements that are laid
18 down, and obviously one can't extend the use of a plant without
19 going through the permitting process that is required from a
20 water standpoint.

21 So that that resource is protected through a set
22 of environmental laws that really are not involved. They are
23 over and above this question of alternate siting.

24 It is hard for one to imagine a site that obviously
25 has capacity, or maybe not so obvious, but you could show that

eb10

1 relatively easy. Even from a radiological standpoint, for
2 example, the addition of a plant can be shown to fall within
3 guidelines that have been set by the Commission for radiation
4 protection for the public.

5 Looking at the impacts that one looks at in going
6 to a new site versus the addition of that capacity at a site
7 that has the ability to expand, whether the exercise of going
8 and looking elsewhere when you have a capability there that
9 is obviously superior, and one can show this fairly readily,
10 I'm wondering about the merits of putting a utility through
11 the exercise of going out and looking for another five sets of
12 sites to compare with one that they already have.

13 That's the problem. I have no answers to that.

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14 But to exclude the enlargement of a site until such time as
15 you go out and do another study to come up with five more
16 candidates to look at seems to be an undue burden.

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1 MR. MESSING: I've just got the sense that that
2 problem continues to be exaggerated when we look at the total
3 costs of developing a single unit today and when we assume
4 that the baseline data, the reconnaissance level data, if that
5 is sufficient, is going to continue to be more readily avail-
6 able, more extensive, and superior in quality, I should suppose.

7 But more importantly I think in terms of framing
8 the rules, the rules should be written as though future siting
9 additions through the turn of the century are going to be
10 multiple addition units for the most part.

11 I think the exception will be somebody opening
12 up a new site for a single unit. And I think that has to be
13 considered in terms of the language of the rule, that most
14 of the siting additions we're looking at are additions to
15 existing sites, sites that are already under development.

16 MR. ERNST: That's not an operative criteria in
17 the rule, though.

18 MR. MESSING: No, but it's consideration in terms
19 of writing it. In terms of reservations, you must express
20 them on the nature of the problem. You know, it's something
21 that should be considered in terms of writing the language
22 of the rule.

23 MR. BLACKMON: Let me give you some perspective
24 on that.

25 Of the sites, we have five nuclear plants either

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mpb2

1 in operation, under construction, or in design. On the
2 basis of land availability, i.e., physical land availability,
3 there is not a single one of those five sites where we could
4 put another unit.

5 The most pessimistic date that we have for the
6 operation of the last of those 13 units is 1995. That means
7 that we've got five years when we're going to have to do
8 something, and based on that I would say that our next nuclear
9 unit, if there is a next nuclear unit at Duke Power, is going
10 to be at a different site.

11 MR. MESSING: But it wouldn't be intended as a
12 single unit site.

13 MR. BLACKMON: No, sir.

14 MR. MESSING: Well, we're looking at multiple
15 unit sites.

16 MR. BLACKMON: But as I heard your comment,
17 it was that if there was to be a single unit addition --

18 MR. MC DONOUGH: I would like to make one comment
19 because I brought up the issue. Maybe something I said
20 inferred one unit. But we have always put units in pairs
21 because of the size of our system. That's the only thing
22 that makes any sense at all.

23 So if we're developing a new site or adding
24 to an existing site, they would be in pairs.

25 So they are multiple units regardless.

mpb3

1 MR. ERNST: Let me proceed to the supplement one,
2 two or three page thing that was issued yesterday, which is
3 an additional criterion.

4 Basically what it says is if you come in and an
5 obviously superior site is found, and the slate of candidate
6 sites at that time was found to be acceptable, then the appli-
7 cant turns around and resubmits an application for the
8 obviously superior site. Shouldn't that be the end of the
9 alternate site review process, that is the proposed criterion
10 on the rationale that you had a good slate to start with and in
11 the detailed weight and balancing you found one that was
12 obviously superior, therefore it is highly unlikely that
13 there is another obviously superior site to the one that was
14 already obviously superior, if I am making myself clear at
15 this time of night.

16 It's to take care of the circumstance where
17 -- of endless reviews of about the same kind of an issue.

18 MR. AHERN: I have no problem with that concept.
19 Maybe you can even stretch it one step further.

20 When you talk about the early review of sites
21 and early site review, if that process is reviewed and found
22 to be reasonable, and if no other site at that step -- if at
23 that step it is found to be obviously superior, maybe you
24 should also exclude the review of alternate sites at the CP
25 level, and further on into the operating license level also.

mpb4

1 MR. ERNST: I think that's in Topic Seven, the
2 re-review thing.

3 This is not a re-review problem. This is do
4 we have a de novo review of a site that has already been
5 determined to be obviously superior and a previous rejection
6 of another site. That's the question here.

7 I think your re-review is in Topic Seven.

8 MR. MC DONOUGH: I think this particular criteria
9 will illustrate, I think, the position we are in on our early
10 site review now, because we have selected a new site over one
11 of our existing sites. And we feel, as you had stated, that
12 all of the impacts are not over when you first develop the
13 site, that there are additional impacts, plus reliability
14 and system stability and a lot of other factors.

15 But if perchance it would be ruled that, heck,
16 you shouldn't have started development, you should have gone
17 over to this other site, it would be a tremendous burden on
18 the utility to go back and say, Let's start a new process.

19 I think in this kind of a case the only thing
20 that would be logical would be to say Okay, you've got an
21 existing site there, it's qualified, go.

22 MR. MESSING: That should be one of the candidate
23 sites that comes in under the application, shouldn't it?

24 MR. MC DONOUGH: It is.

25 Then the irony would be if they say Start on that

mpb5

1 one, and before we go through the licensing process we feel
2 we have to develop a new site. Now what happens?

3 MR. ERNST: Is there any problem with that
4 criteria?

5 Let's go on to -- I guess I shouldn't really
6 leave Topic Six until at least I do address the "obviously
7 superior" concept.

8 What the Staff has proposed in Topic Six is the
9 concept of "obviously superior" and the ingredients thereof
10 as developed through the Seabrook case, and I guess the
11 Sterling appeal board decision, and Midland, I guess, which
12 implies that economics should only be considered if indeed it
13 looks like there is an obvious -- there is a superior environ-
14 mental alternative that is not being utilized.

15 So it is in essence a mesh of those three cases
16 that developed these three criteria. And it appears reason-
17 able. The only possible difference is that the Staff is taking
18 the position that the criterion really is that you should not
19 reject a site unless the agency is confident in its determina-
20 tion that that's the right action. And there are, then, some
21 factors that add to this determination of confidence.

22 So the basic criterion is that you're confident
23 and then there is a list of factors that need be considered
24 in arriving at this confidence.

25 Unless there is a big problem with these, I would

mpb6

1 like just to leave those. Otherwise I think we might be
2 rehashing the bases for Seabrook and everything else. I'm
3 not sure exactly if the panel thinks that that should be
4 done. Then we'll take a crack at it.

5 But basically what we have here is what we
6 think is the current practice now as already approved as an
7 acceptable process by the circuit court of appeals in Seabrook
8 and a few other cases.

9 MS. SHELDON: I'm not going to rehash the
10 "obviously superior" standard, although I don't like it, and
11 I was mightily disturbed when it was approved by the first
12 circuit over what I thought was a terrific brief on my part.

13 But the thing that worries me about this is
14 how you make the judgment that a site is or is not "obviously
15 superior", how do you weight -- or do you weight the various
16 factors? Isn't there a danger of everything coming out in the
17 wash in favor of the applicant's site?

18 This gets back to some of the comments that
19 Jerry Kline made in explaining how the Staff views the
20 "obviously superior" standard in terms of carrying out the
21 Staff review, that you get down to a point where you have
22 identified a variety of factors, you have Site A that maybe
23 has less impact on aquatic biota but longer transmission
24 lines. Is that a better or a worse site than Site B, where
25 you would have greater impact on aquatic biota but substantially

mpb7

1 less transmission impact?

2 One site may be that cooling towers, if you were
3 using them, would intrude less on the environment, less of an
4 aesthetic impact, but there are greater numbers of people
5 around the site.

6 How do you decide when you have all of this
7 information in front of you that one site is obviously
8 superior?

9 MR. ERNST: The only answer I have to that is
10 it's not the intent of this rulemaking to try and weigh these
11 various factors and come up with a cookbook. I really don't
12 think that's possible.

13 I think it is a case by case kind of a situation,
14 and maybe experience will eventually demonstrate how some of
15 these factors should be weighed. Maybe we can do a better job
16 of explaining how they should be weighed in the future; but
17 right now I don't think we are at all ready for that and I
18 think it is an appropriate matter for litigation.

19 MS. SHELDON: The problem is that you have posed
20 a two-phased analytical test and you go through phase one and
21 phase two of this test, and then presumably you make some
22 conclusions, and then you indicate that applicant's proposed
23 site will be rejected. In other words, a decision will be
24 made about that site, go or no go, only if there is an obvious-
25 ly superior alternative.

mpb8

1 How do you know if you have one? You've gone
2 through this test. If all you've done is identify a whole
3 lot of information, but you can't decide that Site B is
4 better even if it does have less aquatic impacts but more
5 transmission impact than Site A, what is, then, the purpose
6 of -- or how do you implement the "obviously superior"
7 standard? What's "obviously superior" about Site B, then,
8 or not "obviously superior" about Site B?

9 MR. ERNST: The two-step process I think is a
10 procedural process, and perhaps should not be advertised as
11 a decision process. I don't know.

12 The fact of the matter is the Staff will evaluate
13 all six of the factors for the public record. If indeed -- it
14 seems logical to me, anyway, that if indeed you find that
15 there is no environmentally preferable alternative, then the
16 decision of the board may well rest with that.

17 But more than likely to complete the record you
18 want to have the other three factors also considered and get
19 a determination on that just to complete the record. You don't
20 know what would happen on appeal or something like that. So
21 more than likely the whole process would be accomplished in
22 any event.

23 As to perception of how much the scales tilt
24 one way versus the other way between alternative sites, I
25 think that's a matter that can only be addressed in a public

mpb9

1 forum. I just don't think I or the NRC or any of us around
2 the table are smart enough to do that in a rulemaking.

3 MS. CAPLAN: A couple of comments:

4 First, I would like to reserve final comment on
5 this whole question until the Commission has decided the
6 Sterling case.

7 MR. ERNST: I understand they're asking for
8 briefs.

9 MS. CAPLAN: Yes.

10 Second of all, when I look at this process we're
11 going through, I think of, you know, the purpose of why NEPA
12 was written.

13 Now in this case it was written to help agencies
14 develop a process that will lead to a good environmental
15 decision, and I guess, you know, I hope that in the same way
16 this process would help the utilities come to a good environ-
17 mental decision.

18 I would hope that the decision as to what their
19 preferred site is would come as a result of looking at these
20 possible alternative sites. In other words, they wouldn't
21 come in with a proposed site and then look at five others.
22 Okay. But that this process could be used for the utilities
23 themselves to make a decision as to what they would see as
24 their preferred site.

25 A third comment I have is a problem with the top

mpb10 1 of page 38, C.

2 You have an approach which as a result of first
3 looking at the environmental factors and then looking at the
4 other factors, you make a decision on obvious superiority.
5 Given that, I don't understand why in C you require clear
6 and substantial superiority on the environmental impacts.

7 It seems to me that the superiority ruling as
8 we have it now is for both of them together, and therefore
9 you wouldn't have to have clear and substantial superiority
10 on environmental first.

11 MR. ERNST: I think that is some wording we will
12 probably have to take care of.

13 MR. MESSING: Just on that point, we also
14 discussed earlier today, that is while we were at lunch, the
15 distinction between the requirement of a clear superiority
16 and/or substantial superiority, and I think that's an issue
17 that should also be carefully considered by the Staff.

18 MR. ERNST: I think this particular issue is
19 going to be considered by the Commission. I don't know what
20 will come out of that, but I certainly agree with you.

21 DR. KEENEY: This is partly a comment on
22 Karin's would value judgments be used or how would one
23 determine "obviously superior". And they just have to be
24 used, as I'm sure you are totally aware. The only options
25 are whether one cares to do it formally or informally.

mpb11

1 I don't think there is much of a possibility
2 of formalizing a value structure that would be appropriate
3 in all cases. And it should be on a case by case basis.

4 But I would certainly be in favor of having
5 that value structure clearly articulated so one could debate
6 whether it was appropriate.

7 With regard to "obviously superior", there are
8 a couple of technical concepts that may have some value in
9 determining that. One is dominance. If a site were better
10 environmentally, economically, socioeconomically, from a
11 health and safety point of view, public attitude point of
12 view and an institutional point of view, you know, it would
13 be a pretty good site probably, and that would probably suffice.

14 A little weaker condition is sort of almost
15 dominant, and that would be where you could put a simple case
16 as a weighted scheme of those six categories. And if, for
17 almost any reasonable set of weights, one that had a heavy
18 weight on the environment and a smaller one on economics
19 and then one also reversed, indicating the same type of
20 preference -- in other words, it was a relatively robust type
21 situation, that might be appropriate. It would help determine
22 what was appropriate for the particular situation.

23

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1 MR. ERNST: With that I would like to continue
2 with Topic Seven.

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3 In Topic Seven we have chatted I think about
4 this particular topic before. And basically it's a question
5 of doing two things: No. 1 is making our existing rules
6 somewhat more consistent with regard to the reopening of
7 issues, and also to suggest some more specific criteria
8 as to whether or not the alternative site quite should be
9 reopened.

10 I think there was one comment made, I believe it
11 was the first day, yesterday, that it appeared highly un-
12 likely, or maybe it was even a stronger statement than
13 that, that the alternative site question could ever be
14 reopened at the operating license stage, except, clearly, on
15 a case of site suitability from the safety standpoint.

16 So I would like to hear observations from the
17 panel.

18 MR. MESSING: The statement yesterday was a little
19 bit stronger than that, that the final determination of
20 alternate sites should be made at the construction permit
21 stage and on the basis of final design application; that is,
22 you should have a complete final design in conjunction
23 with the construction permit stage, and that that determina-
24 tion on sites should be final.

25 Beyond that, in response to question 7.1, "Is

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1 the criteria for reopening a previous decision reasonable and
2 understandable?" I think the proposed criteria A.1. on page 41
3 is understandable. And I think it is reasonable up to
4 line 4, and then we should just strike the last clause,
5 "using a full, forward looking, cost-benefit analysis
6 that includes reasonable costs of delay and of moving the
7 site."

8 I think it is unnecessary, but I'm not prepared
9 to argue very strenuously on the point.

10 A.2 I don't understand.

11 MR. ERNST: I'm extremely sorry, but I was making
12 a fast note to myself on your previous comment. Where were
13 you?

14 MR. MESSING: A.1. I think the first four lines
15 are sufficient. Re-evaluation should only be permitted
16 on the presentation of significant new information which
17 can affect the early decision, period.

18 On proposed Criteria 2, I don't understand it.
19 It may be that I'm reading it too late at the end of a long
20 day. But I just don't understand it. I just don't under-
21 stand what you're getting at in 2.

22 MR. ERNST: What we're getting at in 2 is,
23 assuming you have a site bank process, and each one has been
24 banked, say you have two sites that have gone through early
25 site review: it's hypothetical at best right now: but for

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1 some reason these two sites were not compared to each other,
2 for whatever reason. And what it really is saying is,
3 if a utility has a banked site and there is a demonstrated
4 need for the power at some time within that particular
5 region, does it make -- I think that's what it says: it's
6 getting late. --do you need to reopen that to see if you
7 can now use that particular banked site.

8 I think that's what it's saying.

9 MR. HARLEMAN: What is the meaning of "partial
10 decision?"

11 MR. McDONOUGH: I think that's an early site
12 review, I would guess.

13 MR. ERNST: A partial decision is all you can
14 get out of an early site review.

15 Let me take another look at it. I'm tired also.

16 MR. McDONOUGH: In the meantime, if I could
17 comment about A.l., I see no purpose really in removing that.
18 It may be self-evident, but I think it's good to have it out
19 there. You're not changing the rules. You have that
20 particular item in on the early site review going into a
21 CP, and to have it worded differently now would say that
22 you're changing the rules. And I don't think-- I think the
23 rules are even firmer at this stage.

24 MR. MESSING: I think you're introducing an
25 unnecessary delay in the licensing process with that.

wb4

1 If somebody comes in with significant new information
2 the burden on the Commission should be to judge if that is
3 significant new information, and, if so, does it require
4 reconsidering the siting decision. To ask them to go beyond
5 that I think you would essentially be asking for a reopening,
6 a full, forward looking cost-benefit analysis. I don't know
7 if the applicants would really like to get into that.

8 But I won't argue any further.

9 MR. ERNST: What we're attempting to get at
10 here is the fact that before you reopen the issue one of
11 the elements of judgment as to whether the issue is reopened
12 is the problem identified with the proposed site, or the
13 previously accepted site, as compared to the cost of doing
14 something else. And if it is pretty clear that the benefits
15 gained, even if you moved the site to an exceptional site
16 that had not problems, would not offset the cost of moving,
17 then there is no sense in looking at the issue. That's the
18 intent.

19 MR. MESSING: Let me clarify my position, then.

20 The Commission-- The criteria to reopen should
21 simply be whether the information is significant or whether
22 it's new. The decision as to whether to require relocation,
23 I have no problem with consideration of cost at that point
24 but I don't think the costs should be considered in deter-
25 mining whether or not they should judge on the merits of the

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1 significant new information.

2 MR. ERNST: I understand your point. There is
3 a difference of opinion there, I think.

4 What we're talking about is a meritorious reopen-
5 ing rather than reopening just on relevance.

6 MR. VESSELS: I would like to reinforce Mark's
7 position because I agree with him. I think it is understand-
8 able and it's reasonable as Mark has modified it. And I
9 would like to make the point in A.2 that it's not understand-
10 able to me in any sense of the word, and therefore I can't
11 determine whether it's reasonable.

12 MR. ERNST: I did take a look at A.2 and it is
13 what I thought. It's basically, you have two sites both of
14 which have been through an early site review process where
15 you've considered alternate sites. And it's really
16 saying if they are generally in the same region the applicant
17 should have the choice of which one of these he would like
18 to utilize first, without going through another process of
19 trying to decide whether this one or that one in the same
20 region should be used first.

21 MS. CAPLAN: I guess I don't understand why there
22 would be two such early alternative site review processes for
23 the same area. If you have one of them and you're considering
24 reasonable alternative sites in whatever this region of
25 interest is we're going to end up with, you know, why, before

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1 you have taken that one forward to construction permit stage,
2 do you then have a whole nother process in which you, I
3 guess, look at another set of sites, or maybe some of them
4 are the same, and come up with a second one?

5 MR. ERNST: I can give you an example, and it
6 may tie in with a comment we had earlier today.

7 That is, suppose you have an interconnected
8 region that is pretty tightly interconnected, and maybe
9 even cooperative in nature, and there is a siting plan for
10 putting sites on line, and they want to get two sites in
11 different parts of the total surface area into some kind of
12 an approval status. If that happens, all we're saying is
13 both of these sites are good sites that have been through
14 the process. And really should the NRC then be concerned
15 about which one of these happens to go first? Shouldn't
16 that depend on the utility and its desires and needs, so
17 far as which one? --which is a time problem: they may
18 change in three or four years, and the one they decided
19 to put on first, maybe the other will go on first. And
20 shouldn't that be their decision, or should we get involved
21 in it?

22 MS. CAPLAN: I would hope the NRC wouldnt go
23 into a whole nother process like this lightly. There would
24 have to be some real indication of need on the part of the
25 utility for these sites very close together in time. It's

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1 going to be time-consuming for everybody to go through this.

2 MR. ERNST: I don't think the utilities would
3 want to go through it either if their perception is that it's
4 not needed.

5 MR. MESSING: To the extent that I understand
6 this, I don't see the need for the criteria if this is the
7 way things would likely function. Utility A has a site
8 which has a partial review on it. Utility B does. Somebody
9 comes in for an application and an alternate site review
10 program. Now they'd have the obligation of coming in with
11 'x' number of candidate sites. Now they obviously could
12 reference this other site which has gone through a partial
13 review process. That would obviously minimize the amount
14 of data that would have to be collected. They could present
15 it to the Commission and say, This is our proposed site,
16 this is one which already has been partially reviewed, it
17 is among our alternatives. And the Commission should then,
18 you know, apply criteria as established elsewhere in
19 determining environmental preferability and, perhaps,
20 obvious superiority. But I don't see the need for an explicit
21 description -- I don't see where that amounts to criteria
22 for reopening. Because it seems to me it comes up with a
23 new application for a nuclear power plant.

24 MR. ERNST: Are there any other comments on this
25 one?

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1 DR. KEENEDY: With regard to reevaluation, I
2 think the decision to open, to reopen the case should be
3 on meritous grounds as well as the cost of delays in opening
4 it. If somebody finds a new piece of information which,
5 sloppily speaking, let's suppose is a 10-million-dollar
6 problem, and if delays are going to be a 100-million over
7 time, that's not worth it to me. But if it's only going to
8 be five million it is worth reopening. And once it is
9 reopened I htink the costs that have been expended on that
10 site up to that stage are very legitimate concerns to then
11 include in whether or not you would like to move the site.

12 So I would use the first half of the costs
13 for the first decision, reopening, and the second part of
14 the costs for whether or not one needs to move it.

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1 MR. ERNST: I'm not sure I understand the first part
2 of the cost and the second part of the cost.

3 DR. KEENEY: Well at the end it says:

4 "...includes reasonable cost of delay
5 and of moving the site....," and delay costs were the
6 first and the moving costs were the second.

7 So I would use delay costs as part of what I would
8 use to decide whether to reopen the hearing or whatever, and
9 I would use moving costs as part of the consideration of whether
10 or not to move the plant.

11 MR. ERNST: Let me explain maybe a little bit
12 clearer what costs of delay are. Costs of moving the site
13 clearly are the physical costs, engineering costs, things of
14 that nature.

15 The costs of delay are not just to cost of delay to
16 relook at the problem. The costs of delay would be the cost
17 of delay of moving from one site to the other, which adds
18 maybe three years to the time the plant gets on-line and could
19 be a differential cost of power and things like that, so those
20 are the two elements. Both of them relate to delay as such.

21 DR. KEENEY: Well then, I think we need three
22 elements. I would like to include the cost of delay -- of
23 re-opening the hearing as part of the consideration for whether
24 you would re-open, and the costs of moving the plant, including
25 the delay costs in moving the plant, as part of the decision on

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1 whether or not to move the plant.

2 MR. MESSING: There's a distinction that should be
3 kept in mind here. We're now talking about significant new
4 information related not to the physical construction of the
5 plant but the choice of the site.

6 And just intuitively, my sense of it is that that's
7 the sort of consideration that, if there is significant new
8 information on the issue, the Commission is simply going to
9 have to be prepared to hear it, and then they're going to have
10 to -- they'll have to make that determination on the merits
11 and then be prepared to deal with the cost question in terms
12 of whether or not to ask for site relocation.

13 I think your standards would be more appropriate in
14 the case of information regarding components of the plant
15 where those different costs, costs of implementation and costs
16 of delay, bear a different relation.

17 DR. KEENEY: I think what I'm really doing, I guess,
18 is I'm defining what is meant by significant new information
19 by how much it's going to cost us to bring in that information.
20 If it's going to cost us \$20 million in the delay to bring
21 that information in and the information is significant, it
22 is worth \$20 million.

23 MS. SHELDON: Supposing you find distilled water on
24 your site.

25 DR. KEENEY: Sure, but I don't think that's a problem

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1 that we are not in this way.

2 There certainly are uncertainties in any process that's
3 going to be arrived at in any situation.

4 MR. MESSING: You need a prehearing to determine
5 the cost of implementation and delay, a prehearing would in-
6 volve discovery and so on.

7 But that's true, isn't it? Who's cost estimate are
8 you going to take when you say we've got new data in terms of
9 USGS projected river flow for different periods of time? Then
10 you would have Intervenors who present the argument going before
11 the NRC and trying to establish estimable costs for it and
12 then, of course, the Applicant is going to say those costs
13 aren't realistic. You're going to have to do that during an
14 adjudicatory proceeding.

15 DR. KEENEY: One way or another, somebody has to
16 define what significant is here, and I just think part of
17 significant is how much it's going to cost us to investigate
18 that.

19 MR. MESSING: I'm just saying the Commission is going
20 to have to wing it, a value judgment on the part of the five
21 members.

22 DR. KEENEY: I agree, I just think part of their
23 value judgment....

24 MR. ERNST: I get the sense of this thing, though.
25 that one value judgment that the Commission might want to

ac-4 1 weigh is the \$5 million or whatever it might take to investigate
2 the new information. But what the Commission should not weigh
3 in a decision to re-open is the value judgment which might
4 clearly and with very little effort indicate that there's going
5 to be an \$800 million cost if, indeed, the decision is changed.

6 Somehow I find that incongruous. Why should one
7 worry about a \$5 million cost and not worry about whether the
8 result of the investigation has any likelihood at all to change
9 the site.

10 DR. KEENEY: I think you should worry about that,
11 too. But that's part of the definition of where that comes.

12 MR. ERNST: Well but you're saying you would still
13 have a hearing on that issue, even though it is clear that the
14 result of the hearing was that, yes, there is this added impact,
15 we agree, but the \$800 million no way under the sun could
16 possibly be worth the remedy, I'm saying it has to be a pretty
17 substantial impact.

18 An endangered species was mentioned. That may well
19 be one that you would have to re-open a hearing on if you
20 suddenly found the aquatic impacts on particular species used
21 in sport fisheries or something like that may be double what
22 you thought it was before, six years before when you looked at
23 it, but the plant is essentially built.

24 Does one open a hearing on alternative sites at that
25 stage, or does one really rationalize that it is -- it's a

agb5 1 litigation problem, I can see, but there may be something you
2 can do in operation or a slight redesign or something like that
3 to change the problem.

4 But the question of alternative sites, I wonder if
5 that is -- do you really go out and bring in a new slate of
6 candidate sites at that time and go through the process for that
7 particular problem or is it a litigation problem.

8 MR. MC DONOUGH: Of course, this Item A1 that we're
9 discussing, this criteria is really what we had just resolved,
10 I thought, back on Page 38. So I think we have got to talk
11 about both of them.

12 I think at that time we said it was logical if you
13 go through the carrot, or take the carrot of going through an
14 early site review you should have protection, and that pro-
15 tection is the forward-looking costs.

16 And that's all this thing is reiterating, the same
17 position. And I think it was logical to put in context and it
18 is still logical when we're here looking at option seven.

19 MR. ERNST: I think we have the comments, and I think
20 we're all pretty tired.

21 We have an observer who is still awake and wants to
22 talk.

23 MR. WILLOUGHBY: You have an observer that is still
24 awake, and I'm afraid I feel I must enter one more comment,
25 please.

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1 MR. ERNST: Fine.

2 MR. WILLOUGHBY: The comment goes back to the question
3 of, in Topic Six, of the cost-benefit analysis, that is has to
4 be done before an alternate site is found obviously superior.

5 When you say that an alternate superior site cannot
6 be found obviously superior without having done a cost-benefit
7 analysis --

8 MR. ERNST: If it said that, then....

9 MR. WILLOUGHBY: I'm reading from Page 38:

10 "The second phase of the test will be a
11 cost-benefit analysis to determine whether the
12 environmentally preferred alternative is also
13 obviously superior to the proposed site."

14 MR. ERNST: Right.

15 MR. WILLOUGHBY: So this says that for the
16 environmentally preferred alternative to be identified as
17 obviously superior, you must do a cost-benefit analysis.

18 MR. ERNST: Yes.

19 MR. WILLOUGHBY: All right. That I have no argument
20 with, provided that the quality of the cost-benefit analysis
21 is better than was done for all except one of the Green County
22 sites which were not -- they were identified as superior to
23 the proposed site.

24 I don't know whether that's different from obviously
25 superior or whether you are mincing words, but they were

1 identified as superior. With the exception of one of those
2 sites, there was no cost data presented at all.

3 Now, if what is in Green County is the quality of
4 the cost-benefit analysis, then I can't agree with this. It
5 must be a good cost-benefit analysis that provides cost data.

6 MR. ERNST: I agree in principle, but you should
7 have information on the sites. However, I think it is fair
8 to say that if you find one site that is obviously superior
9 based on a good cost-benefit analysis, that you have sufficient
10 reason for rejecting the proposed site.

11 MR. WILLOUGHBY: I'm not arguing in terms of whether
12 the site should or should not -- the proposed site should or
13 should not be rejected. I'm arguing that before another site
14 can be labeled as superior and/or obviously superior, you must
15 have a cost-benefit supporting that label.

16 MR. ERNST: I understand the point. Thank you.

17 MR. WILSON: G.L. Wilson, Public Service Company of
18 New Mexico.

19 I have one question. It was alluded to before, and
20 that's that all utilities don't have the right of eminent
21 domain. We happen to be in a situation where we don't have
22 it on sites and it's very limited on transmissions, which is the
23 only place we do have it is on transmission lines and then it's
24 very limited.
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1 What happens if somebody comes in and says
2 Here's an obviously superior site to the one you have, but
3 we can't buy it, we can't use it. I mean, how does that
4 affect the analysis? How does that affect the regulations?

5 MR. ERNST: Let me take a crack at that.

6 Suppose you can't. Let's look at the environ-
7 mental and cost kind of parameters that led to that decision.
8 You may not be able to purchase that site, but more than likely
9 in that particular region there will be a site with similar
10 characteristics that you can, possibly, you know, I'm just
11 talking off the top of my head.

12 MR. WILSON: I know, you're not familiar with
13 New Mexico.

14 MR. MESSING: Can you propose a site according
15 to the threshold criterion? Can you propose a site that
16 you don't have -- that you don't own or that you don't have
17 an option on that's not available?

18 I thought we had a reasonably available criterion.

19 MR. ERNST: I think the reasonably available one
20 is not necessarily ownership or option, but, you know, some-
21 thing that is just not precluded for --

22 MR. MESSING: Physical existence, is that right?

23 MR. WILSON: I wish to point out that in
24 New Mexico it's not uncommon to have an 80,000 or 100,000
25 acre ranch, and I've run into them where the family literally

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1 fought in the 1800s to put it together, and they're not
2 about to give up a square inch of it. They'd rather be
3 buried on it than give up a square inch of it. And this has
4 stopped other coal projects -- or this type of thing, where
5 we just couldn't find a site.

6 MR. ERNST: I don't think that if there is a
7 demonstrable case that land is really unavailable -- it has
8 to be demonstrable, I think -- then I think that would be
9 sufficient. I don't know what it would take for a demonstrable
10 case. It is too late tonight, I think, to get into that.

11 MR. ROWE: I'm Michael Rowe, Brookhaven National
12 Lab.

13 I'm a bit surprised and disturbed that people
14 find it so easy to deal with the concept of "best" and are
15 upset by the concept of "obviously superior" because I feel
16 the other way around.

17 Based on what Ralph has said, the concept of
18 "obviously superior" is pretty straightforward, and you can
19 define that pretty easily. The concept of "best" is so much
20 based on a value judgment or a large number of value judgments,
21 I don't think it exists. I don't believe there is such a
22 thing as the "best" site, except under such restrictive
23 conditions of, you know, such a restrictive set of values
24 that we really ought not be talking about that here.

25 MR. ERNST: I'm glad we didn't.

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(Laughter.)

MR. ROWE: Because of that, I'll address another point here:

I think it's critical to get as much public input very early as you can to find out just what the value system is. I submit that there is nobody here who is qualified any more than I am to represent the general public. We know too much, and we don't have the same kind of concerns that the general public has.

Many of their concerns are often based on ignorance of what it is we're talking about.

MR. ERNST: But they're intelligent about the values they think are important.

MR. ROWE: They may think different things are important. All right. Who are we to tell them what they should care about? Therefore sometime very, very early in the process, as early as possible, you have to find out something about what they care about instead of what we care about.

Now because of the nature of the process, I hate to use cliches, but there was a time when people talked about silent majorities. Those guys out there in the silent majority will not become involved in the process until the very last minute when they find out you're going to put that site there, and that's only two miles from my house, and, boy,

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1 I don't want it there. Okay.

2 That's the point at which they become involved
3 now.

4 The only way that you're going to get them
5 involved earlier, I think, based on my conversations with
6 people who have tried, based on what Don Blackmon was saying
7 earlier, is to cut that option out; bring the point at which
8 there is any opportunity whatever for public input forward
9 so that they must respond or forever hold their peace, so to
10 speak.

11 So I think you should place a limit on the other
12 end. We talked a great deal about how early you should start
13 permitting public input. I think it's equally important to put
14 an end to it, so that people understand that if they don't
15 speak up they're not going to get a chance. And by doing so
16 you may get a much greater input from those people who don't
17 normally respond to these things, that you will know more
18 about the value system. Then you can begin talking about what
19 is best. You can begin talking about what's "obviously
20 superior" based on the variability of the value system.

21 MS. CAPLAN: Are you going to have hearings at
22 each proposed site, then, in order to do this?

23 MR. ROWE: At each proposed site?

24 MS. CAPLAN: At all of the candidate sites;
25 will there be hearings at each candidate site?

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1 MR. ROWE: I really haven't given any thought to
2 how you might do it. I'm thinking only of the timing, the
3 point in the process, not the specific mechanism.

4 MR. MESSING: Do you have any trouble with what
5 I thought was the consensus here, that it must be at one of
6 two points, either when the six candidate sites are considered
7 or at the construction permit application stage, because we
8 decided that after the CP application has been considered, you
9 can no longer be heard, except for significant new information.

10 Do you think that's an adequate boundary for the
11 opportunity for public participation?

12 MR. ROWE: I think it ought to be long before
13 the public participation stage.

14 MR. ERNST: We're agreeing with that.

15 MR. ROWE: But I haven't heard anybody talk about
16 using the information generated on value systems at that
17 early point.

18 MR. MATCHETT: I know of a case where a utility
19 that is siting a fossil plant is making an attitude survey
20 as part of their input in selecting their preferred site.

21 MR. ROWE: Is it working?

22 MR. MATCHETT: They're just in the process of
23 making the survey now, so we don't have the data, so I
24 can't answer that.

25 MR. PETERSON: There also is a process by sort of

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1 a -- sort of a conscious raising about all these things that
2 people do to gain a different sort of awarness toward an
3 .energy facility when it's a little closer in term to them,
4 and if they are frustrated, if they are cut out later on,
5 there is the possibility that they will resort to other means.

6 I think the possibility is going to grow and
7 grow and grow. You can't cut them off too -- you can't cut
8 them off too early -- you know you can't make it too early
9 because then you really do encounter the possibility of
10 violence, or if not violence, of a lot of extra cost.

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1 We had a governor who was defeated because of
2 problems in our state related to the very question. It is
3 nice theoretically, but it really doesn't work that way. You
4 know, people's minds, they do change. It's a slow sort of
5 raising awareness and I don't think you want it to mature.

6 MR. ROWE: There is the question of responsibility.
7 There's a certain amount of responsibility involved on your
8 part as well as on the --

9 MR. PETERSON: I don't knock down power lines and
10 things like that. But people do. You know, the great silent
11 majority out there does have a different sort of an attitude
12 toward things than you and I might toward procedures.

13 MR. MESSING: There's also another procedural
14 mechanism that goes beyond the role that stops short of vio-
15 lence and that is that you can let people vote. We preempted
16 the right of states to make these decisions in 1954. It's
17 been generally assumed that local governments cannot be allowed
18 to make the decisions because that doesn't allow proper con-
19 sideration of regional or national needs.

20 But a lot of these mechanisms are ways of getting
21 around the simple question of putting it to the people in the
22 local jurisdiction, either the state or the local level, and
23 saying "Are you willing to accept a nuclear power plant within
24 your jurisdiction?"

25 You don't have to worry about attitudinal surveys,

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1 possible prejudices, questionable interpretation, lawsuits,
2 interventions, mechanisms, attempts to bend the system. Let
3 people vote.

4 MR. AHERN: One additional comment on that. You
5 have to have informed information from the public, but especially
6 on survey type information. Somebody may say that they don't
7 any power plants within two miles of the coast. The public
8 in order to make that decision has to know that there's going
9 to be an economic penalty of so many millions of dollars and
10 what this is going to mean in their electrical bill.

11 That type of information-- It has to be informed
12 information from the public. Public information is fine. It
13 is really great. Nobody is going to put a coal plant in my
14 back yard, or whatever. But it really has to be informed as
15 far as the economics of what some of these things are or what
16 their decisions may mean in all respects.

17 MS. CAPLAN: I think that what happens too often
18 in the process we have now is that the education that takes
19 place of course is after there has been a proposed site and
20 it is often, you know, a very unhappy experience.

21 What the applicants do is, you know, proceed with
22 wining and dining the important officials, you know, trying to
23 get the local population to agree with what the utility has
24 already decided.

25 The other side is trying to educate the local

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1 population on some of the problem that they may see with it.

2 If this education process -- and I would assume
3 that the utilities have been involved in it and other groups
4 would be involved in it -- occurred earlier, you know, hope-
5 fully it could be something which would lead to more total
6 public education. But you know, if you don't have a felt need
7 on the part of the public you're trying to educate to learn
8 what you're trying to teach them, it's a hard job. I just know
9 from myself. You know, my need to learn something certainly
10 influences my ability to learn it, and I think that's true
11 for other people, too.

12 So that this early education job-- You know, no
13 matter how much the leadership on both sides may want to have
14 a fully informed public, we just have to face the fact that it
15 is not an easy task.

16 MR. CALVERT: And there's also the question of who
17 is going to do the teaching.

18 MR. MC DONOUGH: I would just like to throw an oar
19 in here some place. I don't like the implication of wining and
20 dining on one side versus education and goodness on the other
21 side.

22 (Laughter.)

23 MR. ERNST: This sounds like a good place to--

24 MR. MC DONOUGH: I just want to make one point.

25 I feel that on balance we probably had quite a bit

eb4 1 less controversy in our area because of a very, very widespread
2 educational system of the utilities, really Commonwealth
3 Edison, --

4 MR. ERNST: And you're getting the utilities, you
5 say?

6 MR. MC DONOUGH: By the utilities.

7 -- of throwing open our plants to educational
8 institutions, to try to get science teachers and so on to be
9 guides, getting schools to go through, having speakers'
10 bureaus, showing people what the thing is all about, how they
11 operate, what the various elements are.

12 MR. CALVERT: But perhaps that's not the education
13 you were thinking of.

14 MR. MC GORUM: Mr. Chairman, I'm getting all choked
15 up.

16 MR. ERNST: Let me suggest that this can continue
17 off the record.

18 Let me make two observations before we -- three
19 observations:

20 One, I want to give my heartfelt thanks to the
21 panel. When we were sitting about noon I was wondering where
22 we would go. I think where we have been has been excellent.
23 I think there is some useful material that will help us very
24 greatly in reconstructing this proposed rule. I think it has
25 been a very profitable experience.

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1 The second point: Ther is one item that is still
2 a little bit loose in my mind, and that is the region of
3 interest. I would like for you to put this under your pillow
4 tonight and sleep on it, and maybe we can have a fresh thought
5 in the morning.

6 The third is I really don't know exactly what we
7 are going to be doing tomorrow morning because we have to stay
8 up for a couple of hours with Mitre, and then I guess they stay
9 up all night coming up with a document to look at. But we'll
10 have something in the morning to refresh our thoughts and make
11 sure we know where we have been.

12 Thank you, and good night.

13 (Whereupon, at 7:30 p m., the meeting of the
14 workshop was recessed to reconvene at 8:30 a.m.
15 the following day.)
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