

**ORIGINAL**

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the matter of:

COMMISSION MEETING

Briefing on Status  
of DOE'S High Level  
Waste Program

(Public Meeting)

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1 UNITED STATES OF AMERICA  
2 NUCLEAR REGULATORY COMMISSION

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4 BRIEFING ON STATUS OF DOE'S HIGH LEVEL WASTE PROGRAM

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6 PUBLIC MEETING

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8 Nuclear Regulatory Commission

9 Room 1130

10 1717 H Street, Northwest

11 Washington, D. C.

12  
13 Thursday, February 27, 1986

14  
15 The Commission met in open session, pursuant to  
16 notice, at 10:05 o'clock, a.m., the Honorable NUNZIO  
17 J. PALLADINO, Chairman of the Commission, presiding.

18 COMMISSIONERS PRESENT:

19 NUNZIO J. PALLADINO, Chairman of the Commission

20 THOMAS M. ROBERTS, Member of the Commission

21 JAMES K. ASSELSTINE, Member of the Commission

22 FREDERICK M. BERNTHAL, Member of the Commission

23 LANDO W. ZECH, JR., Member of the Commission

24

25

## 1           STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

2           S. CHILK, Secretary to the Commission

3           B. RUSCHE, DOE

4           H. PLAINE, OGC

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## P R O C E E D I N G S

[10:05 a.m.]

CHAIRMAN PALLADINO: Good morning, ladies and gentlemen.

Commissioner Asselstine has been detained, but he suggested we start without him. He will be joining us shortly.

This morning, the Commission will be briefed by Mr. Ben Rusche, Director, Office of Civilian Radioactive Waste Management, on the status of DOE's high level waste program.

Although Mr. Rusche recently briefed us on DOE's monitored retrievable storage proposal, the last periodic update on DOE's high level waste program was provided in July 1985.

On behalf of my fellow Commissioners, Ben, I want to thank you for coming here today. This meeting should help the Commission stay current with DOE's waste management activities and serve as a forum for discussing important issues that both agencies have to address.

I presume you will give us an update on the MRS situation as well?

MR. RUSCHE: I can hardly wait.

CHAIRMAN PALLADINO: Unless there are other comments from my fellow Commissioners, let me turn the meeting over to you.

1           MR. RUSCHE: Thank you, Mr. Chairman. I welcome  
2 again the opportunity for this relatively informal session for  
3 us to talk about what I believe one of the very important  
4 programs that we in the Federal Government, States, and in  
5 fact, all Americans are working toward, mainly the safe and  
6 permanent disposal of high level radioactive waste and spent  
7 fuel.

8           And since under the Act we have fairly specific  
9 responsibilities prescribed for both our agencies, as well as  
10 other agencies in the Federal Government, I think this is a  
11 good opportunity and I appreciate it.

12           What I propose to do if it meets with your approval,  
13 is to take a few moments at the beginning to offer brief  
14 status reports on a number of the program elements and then I  
15 would like to spend a few minutes on what might be more  
16 general management questions, and perhaps even management  
17 approaches to some of the things that we are doing that  
18 hopefully will help us both as we are proceeding.

19           If that is agreeable, I would do anything you  
20 prefer, but that is what I would do if you have no other  
21 suggestion.

22           CHAIRMAN PALLADINO: I suggest you proceed that way  
23 unless others have thoughts.

24           COMMISSIONER BERNTHAL: Sounds fine.

25           MR. RUSCHE: Let me start then by bringing you up to

1 date on activities with respect to the first repository. Many  
2 of you will remember that we had -- well, over a year ago, a  
3 year ago last December, we published draft environmental  
4 assessments as a basis for nomination and recommendation on a  
5 tentative basis sites for the first repository. We received  
6 many, many comments from the public, from the Commission, and  
7 from others on those documents, and we were working toward  
8 making a choice and a recommendation to the President by about  
9 the end of the year just completed.

10 In the Fall, we concluded that it was worthwhile to  
11 add an additional step which involved a request to the waste  
12 management panel of the National Academy of Sciences to  
13 provide an independent view as to whether the methodology we  
14 were using was an appropriate methodology, and subsequently in  
15 conversations with them asked them to look at how we were  
16 applying such methodology as an additional attempt to add  
17 confidence and credibility to what we were doing.

18 That process is proceeding, and I believe we are on  
19 schedule with the Academy. We have had, I believe, two  
20 meetings on the subject and we will be providing what amounts  
21 to almost final material in the next ten days or two weeks  
22 which will lead to a meeting with the Academy's panel on the  
23 29th of March.

24 They have promised us a response on the material  
25 that they will have had a chance to review, and the

1 interaction they have with the Staff and folks who are working  
2 on the effort by some time in April. It is still our  
3 objective, and I believe we have a high probability of making  
4 the nominations before the end of April, and making the  
5 recommendations to the President for three sites for  
6 characterization by the end of April.

7           You will recall under the Act the President has  
8 sixty days in which he may act, or if he does not act at all,  
9 within sixty days the recommendations of the Secretary become  
10 final. I hope that the President will act on a considered  
11 basis very quickly with the kinds of activities that are going  
12 on. It is hard to tell how long it will take the President  
13 and his Staff to come to a conclusion, but I believe as a  
14 result of some of the conversations we had that we can look  
15 forward to a prompt consideration.

16           So, I hope that by summertime we will have the three  
17 sites designated for characterization. Concurrently, we are  
18 working to begin the very important activity of developing  
19 site characterization plans with a very intense interaction  
20 with your staff.

21           I believe some of the meeting we have had some of  
22 the States have sat in on, and we are working to develop these  
23 plans, and I must say that it is something of an adventure in  
24 trying to write down everything you think you might need to  
25 know, and develop a plan for carrying it out and at the same



1 time recognizing that some of the things that you need to know  
2 in order to make the plan effective are things that you have  
3 to find out, so you are in that traditional developmental  
4 planning basis. I believe our staffs have worked out an  
5 approach that will meet your guidelines. I believe there is a  
6 Reg Guide that relates to the SCP, and I believe we are on a  
7 track that will allow us to get the SCPs in place, at least  
8 for the first two Federal sites some time early in 1967.

9 CHAIRMAN PALLADINO: Ben, to come back to EAS, you  
10 want to get it final, I gather, by the end of April.

11 MR. RUSCHE: Yes.

12 CHAIRMAN PALLADINO: Is there any role for which we  
13 might be a delaying element?

14 MR. RUSCHE: So far as I know, no, sir. We have had  
15 your comments, and I think the interaction of the Commission  
16 has been fully included, and there is no further action needed  
17 for us to issue the documents in final form except to complete  
18 this work with the National Academy.

19 COMMISSIONER ASSELSTINE: Ben, you said you could  
20 have the site characterization plans in place by early 1967,  
21 at least for the first two Federal sites.

22 MR. RUSCHE: That is our hope.

23 COMMISSIONER ASSELSTINE: You are not pre-judging  
24 that Hanford and Nevada are going to be in the three.

25 MR. RUSCHE: No, but I do --

1 COMMISSIONER ASSELSTINE: If they are, that is when  
2 you can get them --

3 MR. RUSCHE: I do note that they were the tentative  
4 choices, which is the basis on all conversation now proceeds.  
5 No, I don't have any basis for pre-judging. I don't have the  
6 answers and don't know the answer.

7 With respect to the crystalline repository project,  
8 which is the effort to look at other rock bodies as a possible  
9 inclusion in the second repository selection process, you will  
10 recall under the law we are authorized to proceed to propose a  
11 site for a second repository. We are not authorized to  
12 proceed with characterization and construction.

13 That effort has been underway nearly three years  
14 now, and the last most significant step that was taken was the  
15 publication of the draft area recommendation report in  
16 January, which was for the purpose of indicating our tentative  
17 selection of twelve sites out of a total of two hundred and  
18 thirty-five that we identified in the regional  
19 characterization report as sites that we hope to be in a  
20 position to identify as potentially acceptable sites at the  
21 end of this comment period.

22 The twelve sites were in seven States in the upper  
23 Midwest, the Northeast and along the East Coast -- South and  
24 East Coast.

25 And I must say that this effort which has been one

1 that essentially begun at the time the Act was passed, or just  
2 about the time the Act was passed, and provided a much more  
3 extensive opportunity for States and others to participate in  
4 in terms of developing the data, developing the methodology  
5 for screening, and to some extent developing weighting factors  
6 and so forth.

7           Nevertheless, it has produced a very obvious set of  
8 subsequent interactions after the results of that process  
9 became identified in our draft report.

10           The reactions in each of the States have been  
11 predictably negative, unpredictably intense and we are in the  
12 process right now of conducting briefings in each of these  
13 States and will conduct hearings to receive formally comments  
14 from the States, bodies, persons, who have an interest, and  
15 our current schedule is that the comment period will close in  
16 April. As in the case with the first repository documents, we  
17 have indicated to the States that we would continue to receive  
18 comments beyond the close of the comment period, and fully  
19 consider them in the preparation of the final document until  
20 it became a matter of schedule consideration.

21           I think we have plenty of opportunity for that.

22           COMMISSIONER BERNTHAL: Ben, if I can interrupt for  
23 just a minute. Remind me again the particular rock types that  
24 were mandated to be explored by Congress -- mandated by  
25 Congress to be explored. Be careful there. Senator Moynihan

1 is fond of pointing out there is not a single natural  
2 scientist in the United States Senate today.

3 Which were mandated as rock-types to be in that  
4 second set of candidates.

5 MR. RUSCHE: Without getting out the Act, which I do  
6 have with me, I think that it is fair to say that no rock-type  
7 was literally mandated.

8 COMMISSIONER BERNTHAL: But a different one from --

9 MR. RUSCHE: What was included was that for the  
10 first repository, we were directed to proceed on the basis of  
11 then available data, which pretty much pointed us in the  
12 direction of using the two Federal sites, which were in  
13 volcanic rock, that is the Washington and Nevada site, at  
14 least to explore, and salt, which we had done a good bit of  
15 work on earlier.

16 The Act then says that for a second repository, and  
17 in fact even for the first repository, we ought to give  
18 attention to looking at different rocks for geologic  
19 diversity, and we ought to look at geographic diversity as a  
20 means for considering both the second repository as well as  
21 the first one, but geographic becomes more important when you  
22 look at the second one.

23 I think that grew out of the feeling of the members  
24 of Congress that if there was to be a second repository, and  
25 recall that it is not now authorized, the connections are

1 between first and second a limitation of seventy thousand  
2 tons in the first repository until a second one is either  
3 authorized or Congress takes some action on it, and so given  
4 the three types in the first repository ensemble of nine  
5 sites, that is salt sites -- I guess there were seven -- and  
6 there were two volcanic types. We turned our attention to  
7 crystalline rock, in that we had done some work in crystalline  
8 rock.

9 I don't know if any of you remember, but at Savannah  
10 River, back in the 1970's, we looked at possible crystalline  
11 rock for a disposal process at that time, and it was abandoned  
12 late in the '80s.

13 Other nations around the world have turned to  
14 crystalline rock as the preferred type, not exclusively, but  
15 largely. For example, the Swedish now have an intermediate  
16 storage facility that is in crystalline rock literally under  
17 the edge of the sea bed.

18 COMMISSIONER BENTHALL: Let me get to the second  
19 part of the question, and I have now heard serious proposals  
20 that volcanic must be seriously considered, that the salty  
21 rock be seriously considered, that crystalline granitic-type  
22 -- and granitic I guess is the right term -- be seriously  
23 considered, that salt be seriously considered.

24 The Belgians are seriously considering a special  
25 type of clay formation. And clays have a very nice ion

1 exchange property as one of their natural properties. What  
2 really drives the site selection? Name me a rock formation  
3 other than porous sandstone or something that is not  
4 potentially acceptable?

5 MR. RUSCHE: I think the thing you would look for  
6 first is a rock that is accessible, or region that is  
7 accessible. You wouldn't want something that was at fifteen  
8 or twenty thousand feet. You would look for a rock that is  
9 structurally stable so you could mine it.

10 That is one of the reservations I would have about  
11 clay for the amount of mining that we have to do. You would  
12 look for a rock that has a sort of geohydrologic properties,  
13 geosomical properties that are predictable and reasonably  
14 measurable, a very porous media that are very wet might not --  
15 if they are homogeneous it might be all right from the  
16 standpoint of predictability, but I think those are the  
17 properties that I would turn to first and if you look at the  
18 two volcanic rocks, for example, that we are looking at, one  
19 is saturated and the other one is unsaturated. So we have two  
20 different hydrologic environments or conflicts.

21 COMMISSIONER BERNTHAL: It seems to me the important  
22 point that we shouldn't miss here if I am hearing what you are  
23 saying right, and having occurred earlier to me, at least, is  
24 that it is not really the type of rock. There has been a  
25 certain focus on the type of rock. It is where it is, the

1 fracture characteristics in the site, and the physical  
2 characteristics other than the actual -- I guess what you  
3 would have to call the chemical composition of the rock that  
4 is the major issue, isn't it?

5 MR. RUSCHE: Yeah. The simple test -- I guess in  
6 one of the hearings last -- week before last or so, I was  
7 asked about what attributes or factors you had to weigh, and I  
8 said the first factor you have to weigh in the most general  
9 sense is you are looking for a block of rock that has  
10 sufficient volume --

11 COMMISSIONER BERNTHAL: Right, right.

12 MR. RUSCHE: -- strength and capability to isolate  
13 the waste, and isolation is produced by keeping it in the  
14 place you put it, and keeping the form to some extent in a  
15 predictable manner, and if the package eventually begins to  
16 seep, that the transport from that is predictable.

17 So, isolation is the objective.

18 COMMISSIONER BERNTHAL: I was just curious. Thanks.

19 MR. RUSCHE: Well, I appreciate the opportunity to  
20 kick it around, in that there are a number of factors about  
21 the second repository that have not received anything like  
22 the amount of discussion as the first one. Not so much the  
23 technical factors as the institutional factors if I can  
24 collect them all in that kind of package.

25 It is very important that we all recognize that we

1 don't have authorization to put a second repository in place.  
2 Congress reserved that choice for itself. We are only  
3 authorized to do site searching, so to speak, and get to the  
4 position where we could recommend such a site.

5 COMMISSIONER ASSELSTINE: Ben, what is your position  
6 on whether a second repository is needed? We are going to  
7 leave the seventy thousand metric ton limitation remained in  
8 force.

9 MR. RUSCHE: I think Congress acted wisely. Less  
10 for technical reasons than for institutional reasons to  
11 suggest that we move to the -- in the direction we are  
12 moving. That is why I have to try to figure out what you mean  
13 by, "is it needed?"

14 COMMISSIONER ASSELSTINE: Well, in terms of  
15 generation of waste. Are you going to have more than seventy  
16 thousand metric tons generated by the plants that we now have  
17 under construction or in operation?

18 MR. RUSCHE: Yes, and I understand you just gave a  
19 low level license to Catawba just recently, did you, to make  
20 ninety-nine? Isn't that about right?

21 COMMISSIONER ASSELSTINE: If we didn't, we are  
22 probably pretty close, yes, that is right.

23 MR. RUSCHE: Excuse me. Maybe I preempted you. But  
24 our current estimates are that the amount of spent fuel and  
25 defense waste combined is in the range of a hundred and



1 twenty to a hundred and forty thousand tons, and so the answer  
2 is for a seventy thousand ton limitation, you have to do  
3 something.

4 An obvious consideration is whether or not the  
5 particular bodies of rock we are looking at have the  
6 capability for storing more than seventy, and that we haven't  
7 got such a precise prescription that we look only for rocks  
8 that will take seventy, and most of the rocks you look at  
9 probably have a potential for considerably more than that, and  
10 we really won't know until we get down into the geologic  
11 exploration.

12 COMMISSIONER ASSELSTINE: Is the design target still  
13 somewhere in the neighborhood of a hundred thousand metric  
14 tons?

15 MR. RUSCHE: The design basis is seventy thousand  
16 tons, with the expectation after we find out what the  
17 dimensions and properties of the rock are, it would be  
18 primarily a modular expansion if Congress should move in that  
19 direction.

20 CHAIRMAN PALLADINO: If another site is needed,  
21 what time frame would you say initiation of action on it?

22 MR. RUSCHE: It looks like now we would be in a  
23 position to identify the sites for characterization in the  
24 early '90s, like '92-'93, and we hope to be in a position to  
25 select one by '99 or thereabouts, so it wouldn't be in

1 operation until well after 2000. Maybe 2005, to maybe 2010.

2 I don't want to belabor the point, but one of the  
3 factors that we have had to give a good bit of attention to in  
4 trying to communicate with folks is that second repository and  
5 crystalline rock project are not identical.

6 Crystalline rock project is aimed at identifying  
7 sites that, perhaps, we would find suitable for repository  
8 consideration. The second repository effort would be one  
9 aimed at finding amongst either those sites or other sites,  
10 and other sites are still those from the first ensemble, sites  
11 that would be suitable, and I say that particularly for those  
12 who may not have come to the fact that it is not  
13 pre-determined that a second repository site would come from  
14 the crystalline set. It is very likely, and we hope that we  
15 would find crystalline sites that would be acceptable, and  
16 that we and you and the Congress would have that option to  
17 look at, but I think sometimes the two get merged together as  
18 if one is equal to the other, and that is not quite the case.

19  
20 COMMISSIONER ASSELSTINE: I gather the one thing  
21 that gives you some difficulty on that is if the first three  
22 sites all tend to come from the West, and that is where the  
23 first repository ends up coming from, and then you run into  
24 that geographic distribution question, although even there I  
25 gather there is some flexibility under the Act that says you

1 consider it; doesn't mandate.

2 MR. RUSCHE: That is exactly right. It is not a  
3 requirement, but a consideration. I think when we get to the  
4 point of looking for a second repository site, we will want  
5 to look at a site that is most suitable amongst those that are  
6 accessible, and that could be all crystalline, it could be  
7 little or no crystalline considerations, depending on what we  
8 find as we go through the program over the next several years.

9 I would just make one other comment, and it is that  
10 we have -- I think we have in the audience today some of the  
11 representatives from the first repository States whom we have  
12 been working with for the last year or two, or longer, since  
13 the Act was passed, fairly intensely. The folks who have been  
14 working with us in the second repository States have been  
15 working equally vigorously, but the members of their  
16 governments, their congressional delegations and so forth,  
17 have been much less aware of what is going on in spite of all  
18 that we published. We have published many documents. We have  
19 had countless meetings, but it has not reached the attention  
20 level of many of the folks, but as someone said to me about  
21 January 17th, you folks sure do know how to get a fellow's  
22 attention with the publication of the area recommendation  
23 reports, where we went from two hundred and thirty-five down  
24 to nominally twelve sites. We actually identified twenty, and  
25 twelve is about the number we think we need to look at.

1           The result is that the intensity of reaction from  
2 several of these States has been very high. It has been both  
3 -- in some cases very technically responsible. In other  
4 cases, it has been very much a public relations, and I don't  
5 want to mischaracterize it, but I mean it is ordinary citizens  
6 who are not coming primarily to bring new geohydrologic data  
7 at this stage, but who are either just finding out or just  
8 coming to the realization that something might happen in their  
9 State.

10           We have had several meetings in which we have had  
11 more than two thousand people. We had a couple of meetings  
12 that started at seven in the evening, and went -- one went  
13 until two-thirty, one went to three-thirty, and the one that  
14 went to two-thirty, at one-thirty there were still eight  
15 hundred people in the meeting.

16           COMMISSIONER BERNTHAL: We had a meeting that lasted  
17 almost that long yesterday.

18           [Laughter.]

19           Fortunately it was during the day time, and not at  
20 one-thirty at night.

21           CHAIRMAN PALLADINO: Fewer people.

22           MR. RUSCHE: Well, if there is anything that we can  
23 each learn from the experience, it might be worthwhile on  
24 another occasion for us to talk about it. We have determined  
25 it is not a good thing to do in the future if we can avoid it.

1           CHAIRMAN PALLADINO: To do what?

2           MR. RUSCHE: To have meetings of about eight hours  
3 in length.

4           CHAIRMAN PALLADINO: Oh, I see.

5           COMMISSIONER ASSELSTINE: Ben, I think what you have  
6 seen in terms of the intensity of reaction from the area  
7 designations for the crystalline sites surprised you in  
8 comparison with what the first site did, is that right? And  
9 if so, why do you think the reaction has been so much more  
10 intense?

11          MR. RUSCHE: I guess one reason I was surprised is  
12 the amount of interaction we had had with a number of people  
13 in the States; their representatives, the universities, the  
14 geological surveys and so forth, was far, far greater, and the  
15 amount of participation in bringing to a conclusion the  
16 documents that we had published, methodology, data bases, the  
17 regional study, and so forth, was far greater.

18          With the first repository States, we were directed  
19 to proceed on a course that was fairly tightly prescribed both  
20 in time and content, and some of that latitude and involvement  
21 was not there.

22          So, based on the premise that participation brings  
23 confidence, brings credibility, I thought that we might have  
24 made progress, and in some sense I think we did in that many  
25 of the people, not everybody, but many of the people who are

1 involved came to the conclusion that the answers that we --  
2 the tentative answers that we had in the area of reports --  
3 are the answers that you get when you do what we said we were  
4 going to do, so in that sense we did have a common  
5 understanding that we didn't have some rabbit that we were  
6 pulling out of a hat.

7 But I think from my own standpoint, I perhaps gave  
8 greater weight to that as a factor that would tend to make the  
9 activity more tolerable to people as being a responsible  
10 technical activity and it has not been so. I think it must be  
11 because most of the attention in more public arenas have been  
12 given to the first repository effort, and the government  
13 figures, legislative figures, the folks who tend to get  
14 involved from a more institutional standpoint were not as well  
15 informed in spite of the fact that a smaller group of people  
16 were very much better informed than had been the case  
17 otherwise.

18 It doesn't discourage me from trying to keep people  
19 informed. I think we still have a strong incentive and  
20 obligation to try to work together, but it may suggest that in  
21 this particular business that the need for information is  
22 insatiable. That no matter how much we do, there is always a  
23 need for more, and we are faced with the necessity to do the  
24 best that we can, and continue to try to improve.

25 COMMISSIONER ZECH: I presume that the States that

1 have shown a more recent interest in waste depository are  
2 being provided with all the information and documents that you  
3 had from the beginning of your effort, so that they feel  
4 confident at least, even though they haven't been involved  
5 until fairly recently, that they have available to them all of  
6 the information that you have developed to date.

7 MR. RUSCHE: I think that is certainly the case.  
8 Commissioner, but I believe in the context of the statement I  
9 just made that does not mean that all the people who are to  
10 react are equally well informed.

11 COMMISSIONER ZECH: No, but I mean is the  
12 information available to them --

13 MR. RUSCHE: It is indeed.

14 COMMISSIONER ZECH: -- and they know that they can  
15 get whatever you have, so that they can feel confident that at  
16 least what has been developed before their more recent  
17 involvement, they can take advantage of all that.

18 MR. RUSCHE: Yes.

19 COMMISSIONER BERNTHAL: If I may say so, that is an  
20 important question that if we don't pursue right now, I would  
21 like to hear some more about later, because in the broader  
22 context, the availability of information is something that is  
23 going to become terribly important. Rapid access to  
24 information, and I understand that your people are working  
25 with ours, I think, on some novel techniques there.

1 MR. RUSCHE: That is a more general subject, and if  
2 it is agreeable, let's visit that in a few minutes if we can.

3 COMMISSIONER ASSELSTINE: Ben, at what point for the  
4 second round sites are the states eligible for cooperation  
5 agreements and for access to funding to obtain their own  
6 experts?

7 MR. RUSCHE: We have funded all seventeen of the  
8 States to the degree they have an interest. Some have done a  
9 good bit of work already. I would say the exploratory funding  
10 does not really occur until after we get to the point of  
11 potentially acceptable sites, and more specifically when they  
12 are selected for characterization. But BAS designation would  
13 be a first trigger.

14 We have, on our own discretion, I think clearly for  
15 their benefit as well as ours, because they were major  
16 participants in developing the information.

17 Now, we have had some less intense interaction with  
18 Indian tribes related to the crystalline rocks because they  
19 were not quite the reservoirs of information and we did as we  
20 came to the point of review of the area of recommendation  
21 report, we have recently provided modest -- I believe  
22 twenty-three Indian tribes to review the report, but the  
23 question of grants is a subject that might be something we  
24 ought to talk about at another time, because it is a very  
25 important subject but a very difficult subject for us all.



1 I think, you know, the 9th Circuit has rendered a  
2 decision which gave us some guidelines and guidance with  
3 respect to State participation, and we are trying to work that  
4 through with the States. We have some good examples of, I  
5 think, effective interactions, but it is a very -- it is so  
6 discretionary there is no way you can define a set of rules  
7 that just say yes or no on a purely deterministic basis, and  
8 since it is discretionary, there are lots of people who have  
9 different views on the subject.

10 COMMISSIONER ASSISTANT: At the same time, it  
11 strikes me that it is terribly important to work out a  
12 mechanism that achieves as resolution of those things, without  
13 having to take them to court every time, or without you  
14 having to be taken to court every time to resolve the issue.  
15 I think the experience both in the Nevada case and also with  
16 Tennessee indicates that this is an area that can use some  
17 basic agreement on ground rules to go forward on a less  
18 adversarial basis.

19 MR. RUSCHE: I believe in the case of Nevada, there  
20 was a specific case with respect to grants, and I think the  
21 court by and large said the grant guidelines that we were  
22 using -- and we do have grant guidelines that are publicly  
23 available and that we all follow, we are all right except for  
24 one area.

25 So, to some extent the court validated the

1 guidelines. In the case of Tennessee, it was not related to  
2 grants at all. It is another entire situation. We can talk  
3 about that separately, perhaps.

4 COMMISSIONER ASSELSTINE: One concern I have heard  
5 equally from Indian tribes on the second round sites is the  
6 concern about can they now get up to speed in time to keep  
7 pace with the program you have, and I am glad to hear that you  
8 are beginning to look at those and talk with the Indian tribes  
9 on the second round sites in terms of grants and assistance so  
10 that they can keep pace with what you are doing.

11 MR. RUSCHKE: As I say, the problem is very  
12 difficult. We certainly want that to be the case, and it is  
13 clearly a matter of judgment as to where you start the  
14 process, how closely related ought people be.

15 We tended to look at the work in the crystalline  
16 area almost like contracts, in that we were asking the States  
17 to provide us information rather than a more typical grant  
18 relationship in which they are participating and overseeing  
19 and conducting to some extent their own evaluations.

20 They did that, but from our standpoint on a much  
21 more business like way. It was that is where the data is, and  
22 they are the people that can help get it, and they did, and it  
23 was very valuable.

24 Let me turn quickly to the MRS, and perhaps I should  
25 start by noting that the Commission very effectively and I

1 would say recognized with much appreciation on our part, did  
2 provide your comments in time for us to get the report out,  
3 and we have the report prepared and ready to go. The Federal  
4 District Court of Eastern Tennessee has a different view at  
5 the moment, and we have the report sitting on Roger Hilley's  
6 desk ready to go to the Congress, but I would want to thank  
7 you, and EPA as well, who were under the provisions obligated  
8 to give us comments and you did on time, and they were very  
9 helpful.

10 That was a case in which it didn't take an eight  
11 hour meeting. I think we had worked together  
12 beforehand, and I do appreciate it very much.

13 The Secretary noted that this was another case in  
14 which our working together had produced a good result. The  
15 actual situation is -- as I say, the proposal is ready to do.  
16 Concurrently, we did propose in the President's budget funding  
17 for '87, '88, and '89 in our tri-annual requirement, and the  
18 proposal -- we are enjoined from sending the proposal by  
19 virtue of an injunction issued by the District Court in  
20 Tennessee. We have filed motions in the 6th Circuit Court of  
21 Appeals requesting dismissal, and in the alternative, a stay  
22 and expedited hearing on the merits, and the Court has not yet  
23 acted. We hope we will hear something from them very shortly.

24 This is not the place for us to get into great  
25 detail, but I would note that for -- as a matter of interest

1 -- that the issues that are involved are far more than MRS  
2 issues. They go to constitutional issues. Our briefs have  
3 been filed, and of course are public, note that it is a very  
4 interesting legal situation as well as programmatic situation.

5 CHAIRMAN PALLADINO: What is the next step in terms  
6 of who does what?

7 MR. RUSCHE: We wait.

8 CHAIRMAN PALLADINO: Wait for what?

9 MR. RUSCHE: The court act.

10 COMMISSIONER ASSELSTINE: Well, it is an interesting  
11 issue. Because I know him for reasons we all appreciate  
12 maybe as well or better than he does, won't comment on the  
13 case, but the idea that an executive branch agency is being  
14 prohibited from presenting a matter to the Congress is an  
15 intriguing point of law to say the least.

16 CHAIRMAN PALLADINO: You said you are waiting. I am  
17 not quite clear. Are you waiting for the mandate, or --

18 MR. RUSCHE: We may not send the report until we get  
19 some resolution.

20 COMMISSIONER ASSELSTINE: There is an injunction in  
21 effect now.

22 MR. RUSCHE: There is a permanent injunction in  
23 place by the District Court. Of course, we believe the court  
24 does not have jurisdiction, but until that matter is resolved  
25 by the Court of Appeals, it stands.

1 CHAIRMAN PALLADINO: So that is the next step,  
2 appeal.

3 MR. RUSCHE: We have appealed. We have filed  
4 motions and briefs, and we are waiting for the circuit court  
5 to act.

6 COMMISSIONER BERNTHAL: I suppose you could send it,  
7 but that would be somewhat of a perilous task, a perilous  
8 approach.

9 MR. RUSCHE: I have had two or three people offer to  
10 take it. But they wanted to remain anonymous.

11 [Unintelligible]

12 COMMISSIONER ASSELSTINE: Somewhat like the  
13 situation this agency found itself in on the Sunshine Act Case  
14 with the budget.

15 MR. RUSCHE: Yes. We were in a hearing yesterday  
16 with one of the Committees, and I had one of my lawyers  
17 sitting very close to my right shoulder with his leg extended  
18 to be sure that I didn't put myself at too much peril, but it  
19 is an interesting situation. I don't want to emphasize the  
20 interestedness too much, because we ought to get on with it,  
21 and we are hoping the matter will be resolved very shortly.

22 Fortunately, we did have one hearing before the  
23 injunction. In fact, it was on the day of the injunction. We  
24 had a hearing and had an opportunity to discuss its content.  
25 The submission in the President's budget is tied to the

1     proposal, and therefore other than interested Congressmen and  
2     Senators who wanted to look at the review draft, which has  
3     been public now since well before Christmas, we are enjoined  
4     from discussing its content and are going to honor that.

5             COMMISSIONER BERNTHAL: I would have thought you  
6     would have had this locked away in a bank vault somewhere so  
7     Congress couldn't get its hands on it, Ben.

8             MR. RUSCHE: I trust Congress explicitly.

9             COMMISSIONER BERNTHAL: You what?

10            MR. RUSCHE: I trust Congress explicitly. I would  
11     not have any concern. Especially knowing a number of people  
12     who have been there and worked, I have high confidence.

13            COMMISSIONER BERNTHAL: It is just interesting to  
14     watch someone else go through some of this, Ben.

15            MR. RUSCHE: Well, I don't know what the right adage  
16     is, misery loves company or something or other, but I think  
17     that it is to everybody's advantage in the country to get the  
18     matter resolved, and I want to turn to that in just a minute,  
19     about the way the whole program seems to me to be shaping up.

20            I don't think of anything else, unless there is a  
21     question. I just have one other specific item with respect to  
22     status.

23            In the area of transportation, we have two matters  
24     that are very active with the Commission. Neither one of them  
25     do I care to discuss at great length unless you do, and in

1 fact I am not prepared to discuss them at great length, but I  
2 think it is important.

3 If you recall last year, we reached a state in which  
4 we made the determination that in the civilian program we  
5 would start out with the a priori commitment that we were  
6 going to make all of our shipments in NRC certified casks.  
7 That introduced a programmatic consideration that was and is  
8 very important to us with respect to some of the work we are  
9 doing with West Valley.

10 We are pioneering some work with some large casks  
11 which are to be used for one time only in shipping some of the  
12 material from West Valley, and we have run into some issues  
13 that are of technical merit that need to be visited, but I  
14 mention it only to call to your attention the fact that no  
15 matter in which area we are working, diligence in keeping our  
16 attention to getting the job done first with high quality, but  
17 also cost effectively and on time is going to be a matter  
18 that we all need to address. There is nothing that I would  
19 call to your attention now that is urgent or needs anybody's  
20 attention other than the work the Staff is doing.

21 I think the matter is proceeding, but it is an  
22 important issue.

23 CHAIRMAN PALLADINO: Ben, you say you are committed  
24 to using NRC certified casks. Are there new designs of casks  
25 anticipated, needed, and are new certifications going to be

1       needed by the NRC.

2               MR. RUSCHE:   Yes.

3               CHAIRMAN PALLADINO:   And is that all being factored  
4       into the schedule.

5               MR. RUSCHE:   Yes.

6               CHAIRMAN PALLADINO:   Are we up to a point where we  
7       should be looking at particular casks other than those that  
8       have already been certified?

9               MR. RUSCHE:   Well, the particular ones I mentioned  
10       with respect to shipment of material from West Valley, is the  
11       art of cask and the art of the matter before us right now. We  
12       are in the process of -- I guess we have a request for  
13       proposals on public review and hopefully proposals for a  
14       sizeable cask development program over the next several  
15       years, and that will bring a good many opportunities for new  
16       and novel cask designs aimed at making both more cost  
17       effective and more safety effective the casks that we will use  
18       eventually when the program gets cranked up.

19               But in the meantime, our working together, even on  
20       casks like this is important both from the standpoint of  
21       solving the technical issues as well as addressing the  
22       timeliness of our ability to work together, and the first of  
23       those is the most important one. We have to get the issues  
24       resolved appropriately, but we also must keep in mind the need  
25       to work with them on a timely basis.



1           The other matter that is before you has to do with  
2 the rural related transportation, and we are working with the  
3 Staff. It is a matter that is due your consideration sometime  
4 in the next little while. I don't think we need any more  
5 discussion today, but we are working with the Staff and may  
6 want to have some discussion with you when you get ready to  
7 consider that.

8           In terms of general status, I think that pretty much  
9 covers what I had, unless some of you think of a specific  
10 question.

11           Let me then turn to what I would call general  
12 management matters. I have had the occasion in the last month  
13 or two in both hearings and otherwise, to look at -- reflect  
14 on the program, and I recall early on -- maybe in one of our  
15 meetings, I indicated to you that the first couple or three  
16 years under the Act, even though the Act is one of the most  
17 prescriptive of Acts that I know about, maybe some of you can  
18 remember another one that is more prescriptive, but this one  
19 is pretty prescriptive, that even with that there still are a  
20 number of areas that are yet to be fully decided, and that I  
21 envisioned these first two or three years to be contentious,  
22 be fraught with the necessity to reach some decisions that  
23 were essential before we could move the program into what you  
24 can think of a more project-oriented activity.

25           We have to select the sites, we have to determine

1     what the system looks like. That relates to how many  
2     repositories we have, whether we have an MRS. We have to  
3     fashion the transportation system. That depends on what the  
4     system looks like; whether you have one or two repositories,  
5     whether you have an MRS and so forth, and I think I can see  
6     the light at the end of the tunnel.

7             I am not sure whether it is a red light or a green  
8     light, or a purple light or what, but it is my hope that by  
9     the end of this year or say by about this time next year, that  
10    we will know what the Congress is going to do with respect to  
11    MRS, and obviously it is our view that it is a real problem.  
12    Hope we will know what three sites we are going to be  
13    characterizing for the first repository. I hope we will have  
14    a feel for where we are with respect to the crystalline rock  
15    project, in which sites we are going to do some additional  
16    investigation on over the next four or five years, and that  
17    matter will be relatively settled. I don't mean by that that  
18    there won't be anybody who has a different view about the  
19    subject, but at least we then will have an idea of whether the  
20    system is going to be the currently authorized system, which  
21    is one repository and a transportation net, or what we call  
22    the improved or integrated system, which has the integrated  
23    MRS, a repository, and a potential for a second repository,  
24    and the associated transportation net, or I guess you could  
25    even say in the limit, nothing, because of either litigation

1 or changes in the mind of Congress or whatnot.

2 I believe the latter of those is a very unlikely  
3 prospect. I think enough we still are fraught with a number  
4 of litigation areas, that we will be able to get through  
5 those. They will add time, and therefore by the time we get  
6 this definition, which I hope will be about this time next  
7 year, we clearly are going to have to look back at the  
8 schedule. And as you know, we have talked, when we issued the  
9 mission plan, when we talked about the project decision  
10 schedule items and so forth. What you both liberally and  
11 under the Act participate in directly. So the project that a  
12 number of these early decisions will have been pretty well  
13 determined by next year, and together we'll have a chance to  
14 go back and look again.

15 CHAIRMAN PALLADINO: Ben, you mentioned doing  
16 nothing. I don't think that's a viable option, because, in  
17 truth, we have the fuel elements. They're going to be  
18 existing.

19 The reason I -- I know you know all this, but  
20 sometimes I think people accept that as an option and say,  
21 "Oh, well, we do nothing, and everything's all right." That  
22 fuel is in existence. More of it will become in existence,  
23 and it's going to be wherever we put it, and we can put it by  
24 default or keep it at the plant sites, or we can pick a  
25 responsible repository.

1 MR. RUSCHE: I couldn't agree more, Mr. Chairman. I  
2 appreciate your making that point. I used perhaps a poor  
3 choice of words when I said "nothing."

4 CHAIRMAN FALLADINO: No, I think it was -- but to  
5 get the point now, I think it was a good choice.

6 MR. RUSCHE: But I do appreciate the comment, and I  
7 think that Congress has spoken. I have, in the last month, in  
8 my continuing attempts to keep abreast myself and members of  
9 Congress of what's going on, I have yet to run into any member of  
10 Congress who would interpret that comment.

11 I believe the level of ignorance is at least as strong  
12 today as it was when the Act was passed. Now there are a  
13 number of members of Congress who are beginning to understand  
14 the Act a little bit more, and they may have a slightly  
15 different impression today than they did last year about what  
16 elements of the Act might impinge on their own interests. But  
17 even there, I have not yet run into anybody who wanted to say  
18 "Do nothing." They always want to say, "Do it somewhere  
19 else," or "Do it that way, so it doesn't bother me."

20 But that's not -- I think that's not something we  
21 have to despair over. I think that's normal institutional  
22 behavior, and if it occurred otherwise, I think we'd have a  
23 little suspicion about somebody must have a secondary  
24 objective in mind if they don't react that way in the first  
25 place.

1           And our job together is to be sure that the work  
2           that we do is sufficiently convincing that most of us believe  
3           it's the right thing and a valid thing to do, and that we get  
4           on with it and do it.

5           Well, in this context of working together in the  
6           management environment that I've talked about, I wanted to  
7           mention that we continue to work with the Staff, and I believe  
8           that we have a good and effective working relationship with  
9           all elements of the Commission Staff.

10          There is no question that we as the Staff recognize  
11          that technical quality is one of the things that we must  
12          believe that it's going to be important for all of us to keep  
13          in mind that technical quality does have a prescription or a  
14          definition, based on your rules and on the EPA rules and that  
15          we're going to have to continue to apply our judgment as to  
16          how we make that cost-effective and timely, not to compromise  
17          the technical quality, but that we serve the technical quality  
18          purpose with those other objectives in mind.

19          One of the matters that continues to loom very large  
20          in a successful execution of the program is early  
21          identification of issues and dispositive resolution of those  
22          issues, and Commissioner Bernthal's comment a moment ago about  
23          what we're calling a licensing support system, but an  
24          innovative, extensive, automated data system which will take  
25          the data that is being generated in the program, make it

1 available in electronic form to all the parties who have an  
2 interest, is absolutely essential to seeing the matter  
3 proceed.

4 It's more than having the data; it's also dealing  
5 with the data and dealing with the issues between now and the  
6 time we actually go to a hearing or have an application before  
7 you in a formal way.

8 I think we have a number of evidences of progress,  
9 and I'll not come here today, but I was pleased that our  
10 staff and your staff in the last couple weeks have gone a  
11 long way and identified for us and for John Davis a number of  
12 examples of areas where we can see benefits and evidence of  
13 progress as we're beginning to work together.

14 By no means have we arrived. I wouldn't want to  
15 mislead you to that extent. There are a lot of rough spots  
16 that we continue to have to work with, but we are making  
17 progress.

18 We are making progress with the licensing support  
19 system. That's a very important element. But we're making  
20 progress in it, beginning to identify issues, and it's going  
21 to require again a difficult balance in determining how much  
22 awareness, how much participation by Commission Staff is  
23 needed at some early stage in order to allow us to proceed  
24 rapidly at some later stage. I think all of us probably err  
25 in the direction of more rather than less. But we're going to

1 learn some lessons. And drawing that balance in respect to  
2 resource allocation and so forth is going to be a matter that  
3 we've got to keep before us.

4 If I had a problem that I could point to and say we  
5 just made a mess out of it somewhere, I would not be reluctant  
6 to tell you. That's not the case. But I can tell you that I  
7 know and I think you will know, as John knows, that it's going  
8 to require continued attention on all of our parts to be sure  
9 that we keep those principle objectives that we have in mind  
10 before us and have them properly balanced.

11 One of the problems that we explored in reference to  
12 your direction was how we interact with the ACNS, and I'd like  
13 to speak a moment about a meeting I had with the ACNS a couple  
14 weeks ago at the invitation of Dave Ward, the Chairman, and  
15 Dade Mueller, the Chairman of the Subcommittee, who has the  
16 greatest interest. I spent about an hour and a half or two  
17 hours with them and reviewed the program, attempting to  
18 identify how they and we and the Staff might work together in  
19 a manner that was constructive, and I think that -- we did not  
20 arrive at any final decisions; that was not the purpose of the  
21 meeting -- but I think they have a greater awareness now of  
22 some of the state of affairs, the state of evolution of  
23 things, and the bottom line that we came to was that we must  
24 maintain a dual emphasis on quality and timeliness, and that  
25 from their standpoint, it was important for them to maintain

1 an awareness of where we and the Staff were, and one mechanism  
2 for doing that, at least from the first repository standpoint,  
3 is through the biennial reviews, the six-month reviews that  
4 are required under the SEP approach, and I invited the  
5 committee to consider that as sort of a regular activity that  
6 we would engage in.

7 And secondly, I indicated to them, as we and the  
8 Staff move to the stage of what we would call identification  
9 and certainly when we get to the point of beginning to dispose  
10 of issues -- that is, put them in a form that would now be  
11 suitable for consideration as a historical issue that has  
12 been considered and disposed of -- that we probably ought to  
13 have their involvement, and I think that made sense to them as  
14 well.

15 We did not attempt to write a contract or set a  
16 prescription for the future, but I found the committee very  
17 interested and very responsive, and I think that if we keep  
18 ourselves working together, it can be a real constructive  
19 force in what we're doing.

20 CHAIRMAN PALLADINO: Did the ACRS indicate whether  
21 they were going to issue any public statements, comments on  
22 this matter?

23 MR. RUSCHE: They did not indicate, and I have not  
24 heard any, although the meeting -- I believe the meeting was  
25 open, and there were several members of the public who were



1 there, but to the best of my knowledge they did not.

2 CHAIRMAN PALLADINO: Well, meetings often result in  
3 public statements of their position or advice or questions or  
4 comments.

5 MR. RUSCHE: We did not identify either followup nor  
6 expectation of such further communication. I indicated I  
7 would come back at some appropriate time in the future, and we  
8 would continue the conversation.

9 I thought was worthwhile, and I think has the  
10 potential of being very productive.

11 Similarly, our meeting with some members of the ASLB  
12 later on this week to have their awareness of what we're  
13 doing, and that again suggests that we need to do what we can  
14 to put that process at its most efficient form when we get to  
15 it. But they are much further down the road. We shouldn't  
16 have a Board impaneled, I would guess, for another three or  
17 four years, maybe four or five years.

18 But they invited or urged that we sit down, and I'm  
19 certainly willing to sit down and talk with them and will do  
20 so, but I think it's like the whole picture of managing this  
21 multifaceted venture, that I think the objectives are pretty  
22 clear, and I think the participants are pretty clear, and  
23 we've got to be sure that all the participants are  
24 well-informed and carry out the roles that are envisioned for  
25 them within the context of a need to move the program on.

1 I would also note that another body who has an  
2 abiding interest in what we're doing is what I'd call NARUC.  
3 There is a Waste Management Committee of NARUC. Commissioner  
4 Asselstine spoke to the committee the day before yesterday.

5 COMMISSIONER ASSELSTINE: That's right.

6 MR. RUSCHE: And I followed the Commissioner. They,  
7 too, have a special interest, and I think they can be a  
8 positive force as they look at the reactions of their own  
9 states from the particular point of view that they operate  
10 from, and I welcome that opportunity for interaction.

11 We've been meeting once a quarter or maybe  
12 once every six months, and we'll continue to do that. We  
13 provide them with all kinds of information, and we'll continue  
14 to do that.

15 I think you know that in addition to yourselves,  
16 from a regulatory standpoint in the transportation arena, we  
17 do have specific interaction, a statutory interaction, by the  
18 Department of Transportation, and it's important for us and  
19 they and you, I think, to continue to work together, and we  
20 expect to do that in the future as well.

21 All of this brings me to a perception that we are  
22 far from the place of saying that we can predict with 100  
23 percent confidence a successful outcome of the program at a  
24 particular date, but I would venture that I have not found  
25 anything yet that leaves me discouraged, that the course that

1 we're on is not the right course. It will require course  
2 corrections, as we make progress, but I believe that we're on  
3 a course that meets the intent of Congress and will lead to  
4 putting in place a permanent repository, and if Congress  
5 agrees, a monitored retrievable facility and an operating  
6 system that will be effective for permanently disposing of the  
7 high-level waste and spent fuel from the commercial industry  
8 and from the defense industry of the country.

9 From finally I would note that there are a number of  
10 things that are going to be issue that may be of more than casual  
11 interest to you. The Staff gets these all the time.

12 Our annual report has gone to the printer, and it is  
13 a fairly definitive document. We are obligated every year to  
14 make a total system life-cycle cost estimate. That is  
15 circulating internally and should be available within a short  
16 time. It's purpose is to evaluate the fee adequacy, and that  
17 should be out fairly shortly.

18 Internally, we have developed some management  
19 documents which the members of the Staff are aware of. The  
20 program management system document is a definitive management  
21 contract, as it were, between me, my office, and the multiple  
22 parties in the DOE system, and it calls on not only our  
23 government experience, but some of the industry experience,  
24 and some of my Assistant Directors, Associate Directors, like  
25 I, have had some experience in the private sector, and it's

1 one of the better documents that I have had the opportunity of  
2 being a party to. It does put in place a management system  
3 and an information system derived from it that I think gives  
4 us a high probability of managing the matter well.

5 We've made continuing progress in QA. We've had  
6 extensive interactions with your QA Staff, and I think, though  
7 we have not fully arrived, we have met the commitments or are  
8 in a position to meet the commitments that we've said, in  
9 the case of having QA systems in place by the time we have  
10 the case of having QA systems in place by the time we have  
11 the case of having QA systems in place by the time we have

12 And finally I would note that the continuing  
13 interaction of our staffs leads occasionally to a  
14 fertilization of the effort from one side to the other, and  
15 one of the recent additions from the NRC Staff to the DOE  
16 Staff is Jim Knight, and Jim has been a very welcome addition  
17 in our expanding QA area, and he has made a real contribution.

18 That's where I was going to stop.

19 CHAIRMAN PALLADINO: All right. Well, thank you,  
20 Ben.

21 I think it is very important for us to have periodic  
22 reports from you, and I think it's very helpful for you to  
23 offer them when we don't even ask for them.

24 I think you and we supporting you in our efforts do  
25 have a very challenging problem, but I think one that this

1 nation must solve in one way or the other.

2 I don't have any specific questions. Let me turn to  
3 my colleagues and see if they have any questions or comments  
4 they'd like to make.

5 COMMISSIONER ASSELSTINE: I have just a couple of  
6 questions.

7 Ben, I think the meeting we had with the various  
8 interested parties on revisions to Part 60, one of the  
9 questions that came up on a point that you had mentioned  
10 earlier, you had mentioned that the states have sat in on some  
11 of the meetings, and I think the Indian tribes as well, the  
12 technical meetings between our Staff and DOE on the  
13 development of the site characterization plans.

14 One of the concerns that was expressed by one of the  
15 participants was, sitting in on meetings was what was  
16 permitted, at least in one case, rather than participation and  
17 discussion throughout meeting.

18 Have you had a chance to look at that? I know I  
19 raised it with the DOE representatives at the time, and I  
20 gathered the position of you and Headquarters was that  
21 participation means that people should be involved in the  
22 meetings and that that may have been an isolated instance.

23 Do you have any thoughts or comments on that?

24 MR. RUSCHE: I'm less familiar with the specific  
25 meeting you're talking about, so I'm not sure I can speak to

1       that.

2               COMMISSIONER ASSELSTINE: I'm not sure I know which  
3       one it was either. All we heard was that at least in one  
4       case, people were told, "You're allowed to listen to the  
5       meeting, but you're not allowed to talk during the meeting."

6               MR. RUSCHE: I think I have heard those words.  
7       That's not characteristic of what we intend. But there is an  
8       element that I think we all must recognize, and that is,  
9       whether it's states or Indian tribes or members of the public  
10      or who, even your Staff, when you begin to participate, I  
11      think that we all are entitled to presume a prior that you're  
12      prepared to be a participant, and I think that that's the kind  
13      of thing that we continue to have to wrestle with.

14              For example, in some of our coordinating committees,  
15      technical coordinating committees, which your Staff  
16      occasionally attends, mainly as a matter of discretion, it's  
17      not a direct DOE/NRC meeting, we have invited participation by  
18      some of the states, and I think in some cases they've come,  
19      and it's been very productive, very effective and they  
20      can contribute, members can contribute from the states.

21              On the other hand, when the contribute, and I look  
22      back after such contribution, it's not only mine, but I think  
23      we're all entitled to an expectation that if we have done  
24      something together, then what we've done is going to be all  
25      right. So the element of accountability begins to creep into

1 the picture, and I think the states have a legitimate question  
2 as to whether they care to participate to that level, and  
3 finding just where that participation is, is always going to  
4 be a struggle for us, but that needs to be.

5 And clearly, the kind of comment that you referred  
6 to is not even courteous, to say the least, or appropriate.

7 COMMISSIONER ASSELSTINE: Also, as you mentioned,  
8 you and I both had the opportunity to talk with some public  
9 utility commission representatives through the recent NARUC  
10 meeting.

11 One of the topics that came up was the licensing  
12 support system that you mentioned earlier, and I know that  
13 there's strong concern on the part of the PUC representatives  
14 that this be a cost effective program, and that costs be a  
15 consideration in planning for what's being done.

16 I wondered if you had a chance to talk with them  
17 about that and to at least lay out your view of the  
18 effectiveness of the kind of approach that's being taken,  
19 which is a state-of-the-art kind of program?

20 MR. RUSCHE: On that specific point, we did not --  
21 we spent the time on other subjects, but the point of  
22 cost-effectiveness was made in a much more general way. In  
23 fact, a comment was made that from their vantage point, there  
24 doesn't seem to be anybody who is concerned about the cost in  
25 the program.

1           Now I tried to disabuse them of that idea.

2           COMMISSIONER ASSELSTINE: Yes, so did I.

3           MR. RUSCHE: But we are concerned about it, and  
4 we're obligated to be cost-effective. In fact, I'm not sure  
5 how many times I've used the word this morning, but perhaps  
6 more times than you're accustomed to hearing.

7           But I believe we are being cost-effective, but until  
8 we get the system defined, it is much more difficult to  
9 establish a set of measures that give another party high  
10 confidence that you can tell whether we're being  
11 cost-effective or not. And I tried to make that point as  
12 well.

13           On the ISS per se, it seems to me, from what I know  
14 -- and, in fact, I came from a meeting that began at 8:30 in  
15 our office, and we internally were doing some work to proceed  
16 down the road that we have agreed to look at, and every time I  
17 hear of the outcome of a meeting, that people come away from  
18 the meeting enthused and convinced that not only can we do it,  
19 but we've found at least what appears to be techniques and  
20 equipment that will be cost-effective.

21           COMMISSIONER ASSELSTINE: One of the advantages of  
22 the system, and I've heard this both from our Staff and some  
23 of the other participants who are likely to be participants in  
24 the licensing proceeding, is that we could have one system  
25 that everyone could support and that everyone would use, so



1 that you've have a common database.

2 MR. RUSCHE: Absolutely.

3 COMMISSIONER ASSELSTINE: It seems to me that is  
4 both a creative idea and one that has real promise to try and  
5 at least come close to meeting the very optimistic schedule  
6 that we've all set for ourselves in terms of discovery for the  
7 licensing hearing.

8 MR. RUSCHE: Indeed, that does carry with it an  
9 interesting implication, though, and that is that the parties  
10 who are going to use it are going to participate in it, namely  
11 that the data that each of us have will be contributed to the  
12 system, so that it does represent that common database.

13 Now one of the interesting things -- and I don't  
14 want to sound unappreciative or even suggestive in the wrong  
15 way, but as we're looking at the second -- at the crystalline  
16 repository effort where most of the data came from the states  
17 who were participating, the states are now finding when they  
18 go back -- and maybe there's more data that they had that  
19 bears on the subject than we got, and that carries an  
20 implication when you begin to look at the licensing support  
21 system, that it's an obligation that not only we put into the  
22 system all of the data, the documentation, and that you do the  
23 same thing, but that all people who have data that bear on it  
24 put it in the system, so that we don't find out that the great  
25 effort that we've gone to to make discovery and completeness

1 possible is not compromised by some, "Oh, I forgot I had this  
2 in my pocket," in 1992.

3 COMMISSIONER BERNTHAL: Ben, since we're on this  
4 subject, Jim, I'd like to get just a little bit more detail.  
5 This agency is burdened with an excessively expensive and  
6 antiquated, archaic, whatever the word is, document system and  
7 has been for some years now. We're trying to find our way out  
8 of that swamp.

9 Could you give us a little more information? I  
10 don't want you to get highly technical, but tell us a little  
11 bit about where these plans are, what kind of systems you're  
12 looking at, what you think the capabilities of those systems  
13 will be, in three minutes or less?

14 [Laughter.]

15 MR. RUSCHE: Let me get my watch out here, so I can  
16 be sure.

17 I think the simple objective we all had was to find  
18 a way to create or put in place a physical system that was  
19 capable of rapid entry of information, and I think that  
20 essentially means that it must be put in electronic form or  
21 magnetic form, and capable of fast indexing and access and  
22 fast recovery.

23 Each one of those steps are doable in many different  
24 ways. It seemed to us like one of the real difficulties was  
25 finding a way to get material into the system. After you get

1 it into the system and in electronic form, so you can then  
2 begin to massage it and index it and abstract it and so forth,  
3 many people believe it's a lot more doable.

4 So our emphasis turned to the front end of the  
5 system, and we have found, we believe, an approach that's  
6 being used at least in one from by the Smithsonian group at  
7 the Air and Space Museum -- there may be others that I'm not  
8 aware of, but that is certainly one embodiment of the  
9 procedure -- which uses digital TV equipment for direct  
10 reading and allows very rapid reading of not only printed  
11 matter but pictorial matter, which would allow the material to  
12 be stored on laser discs for optical, very high-density  
13 storage and for rapid recovery. And concurrently we found,  
14 and your Staff, I think, has been involved, indexing and  
15 abstracting programs that have recently come on the market  
16 that have the potential for amazing facility in getting at the  
17 material.

18 And in a sense, based on what we understand to be  
19 the likely reservoir of material, it looked like we might get  
20 all of the information we're talking about in a system that  
21 would easily fit in the corner over there, and it would be  
22 such that we could ship it around on such discs. We could  
23 make it available to people who had an appropriate need or  
24 interest, and the equipment is not horribly expensive. In  
25 fact, one of the more surprising things is, the equipment

1 seems to be modestly priced, and most of it is off the shelf.  
2 To the best of my knowledge, it had just not been put together  
3 in quite this form, so far as we knew.

4 And that's what we're moving toward. I believe,  
5 with your Staff, we're beginning to try to develop a small  
6 prototype system that we can convince ourselves that it is  
7 that capable and use it.

8 Two minutes and 38 seconds.

9 COMMISSIONER BERNTHAL: Very good. Thank you.

10 CHAIRMAN PALLADINO: There is one point with respect  
11 to all these systems, is make sure that the data that go in  
12 are accurate and that the opportunity exists and the  
13 capability exists and the diligence exists to get rid of data  
14 that is proven to be wrong.

15 Of course, the problem we all have is, we can have  
16 a good data tracking system, the problem is evaluating it,  
17 assimilating it, and putting it to use.

18 MR. RUSCHE: That's true no matter what we do.

19 CHAIRMAN PALLADINO: That's right.

20 COMMISSIONER ASSELSTINE: It strikes me, though,  
21 that information management is probably one of the biggest  
22 challenges in this program. Not only are you and we  
23 generating a lot of information, but also for, I think,  
24 probably the first time in our licensing proceedings, we are  
25 going to have extraordinary well-funded and technically

1 capable participants.

2 MR. RUSCHE: Yes.

3 COMMISSIONER ASSELSTINE: Namely the states and the  
4 Indian tribes.

5 MR. RUSCHE: And we're hopeful they will put their  
6 information in the system, too.

7 COMMISSIONER ASSELSTINE: Yes. I agree with that.  
8 I think that's a great advantage of this.

9 It also strikes me that the challenge is going to be  
10 to set up a system and a set of ground rules on your part and  
11 on our part that all of the participants have confidence in,  
12 such that they are willing to say, "Yes, we're prepared to  
13 commit to this system and to use it and to put all of our  
14 information in it." But if we can do that, I think that's a  
15 real step forward.

16 MR. RUSCHE: If we don't we're going to be buried  
17 with the information.

18 COMMISSIONER ASSELSTINE: That's right.

19 MR. RUSCHE: Excuse me. Not with the waste.

20 [Laughter.]

21 COMMISSIONER ASSELSTINE: Two other points that came  
22 up, at least in my discussions with the public utility  
23 commission folks, that I thought were very interesting and  
24 more long-range kinds of ideas, and I thought it was  
25 particularly useful that they brought them up.

1           One was the question of the level of completeness of  
2 design information for the construction authorization  
3 application. I think our regulations don't define that.  
4 We've talked about a complete and high-quality application.

5           Is this something that our Staff and your folks  
6 ought to be focusing on at this point, particularly given the  
7 upcoming site characterization work, so that we have a common  
8 understanding of what kind of level of detail and information  
9 we're looking at when you complete site characterization and  
10 come in with the license application for construction  
11 authorization.

12           MR. RUSCHE: Well, I'm sure something that we ought  
13 to be talking about and, in fact, as far as I know, are  
14 talking about, because you recall that the timing is such that  
15 from the time we submit the application, the 27 or 36 months  
16 or whatever it takes you to consider the application, if we  
17 don't have in effect a construction quality design in hand,  
18 our ability to proceed to construction, upon your granting of  
19 the construction authorization, then we don't have a chance to  
20 make the ballgame work.

21           So we do have to have close to one-stage licensing  
22 in the activity, as it were.

23           COMMISSIONER ASSELSTINE: Yes.

24           MR. RUSCHE: And so we need a design that is fairly  
25 complete.

1           COMMISSIONER ASSELSTINE: I think that's a good  
2 point. And one of the concerns that the public utility  
3 commission folks stressed was, for goodness sakes, let's not  
4 do what we did, to a certain extent, in the reactor area,  
5 defer a lot of issues to the preoperation stage, to the point  
6 where you have another very large, open-ended proceeding with  
7 large numbers of design questions still open at that stage.  
8 Let's get the information, have a very complete design, such  
9 that as many issues as possible can be resolved at that first  
10 stage, and not lead to a more open-ended process later on.

11           It seems to me that's very wise counsel on their  
12 part.

13           MR. RUSCHE: I think it's entirely consistent with  
14 what we're both aiming at. We just can't make it otherwise,  
15 and that's the direction in which we're proceeding.

16           In fact, when you talk about cost-effectiveness,  
17 it's one of the cases in which it's very difficult to make the  
18 cost-effective argument, because we're designing three  
19 separate systems, or will be designing three separate systems  
20 as a minimum, and if we had a lot more time, we could avoid  
21 doing some of these designs two or three times, and that the  
22 variations that are site-specific are not all that large.

23           But in order to get to the point we're talking  
24 about, you almost have to proceed independently, and it's not  
25 as cost-effective as if we could do it on a different time

1 base.

2 But we cannot allow that to compromise the quality  
3 and completeness. So what we do is spend some more money.

4 COMMISSIONER BERNTHAL: That's a key point, though.  
5 I think one of the terrible mistakes that was made in this  
6 agency and its predecessor agency was this failing to  
7 cooperate and provide -- there was great reluctance, in fact,  
8 to cooperate and provide our safety design views, as  
9 information became available to us in the design process for  
10 our commercial power plants, for example.

11 The Federal Aviation Administration interestingly  
12 enough -- I saw a document the other day -- has had just the  
13 opposite philosophy for years. Their people are always  
14 working hand-in-glove with the airframe manufacturers, so that  
15 there are no surprises at the end of the process.

16 And I couldn't agree more. I think this agency now  
17 is finally approaching that responsibility the way it ought  
18 to.

19 MR. RUSCHE: This program provides the prototype,  
20 and if we don't do that --

21 COMMISSIONER BERNTHAL: That's right.

22 MR. RUSCHE: -- I think we both ought to be held  
23 accountable for it in the end, because when we talk about  
24 resolving issues between now and then, that's what we mean.  
25 We don't mean kind of putting them aside and hoping that



1 they'll be all right when we get there. The main point is that  
2 property is measured and that's what it is, then five years  
3 from now -- of course. If you find something that changes  
4 that, you always have to go back and look at it -- but barring  
5 some new finding, that issue is resolved.

6 That's going to be a new challenge for us both, but  
7 we've just got to do it in order to make the system work.

8 COMMISSIONER ASSELSTINE: Yes, I agree.

9 The last concern, in fact, touches directly on the  
10 point you just made, and that is, new information or surprises  
11 are one of the concerns.

12 Another concern that the utility commission folks  
13 raised is, "Do you have a mechanism or will you have a  
14 mechanism, after the issuance of the construction  
15 authorization, to bring to the surface any new information or  
16 surprises that you might find during the construction process  
17 and to get those matters resolved early on, again so you  
18 minimize the potential that at the end of the process, after  
19 the repository is substantially completed, you have new  
20 questions that have to be addressed, particularly questions  
21 that might be stoppers in terms of proceeding with repository  
22 operation?"

23 It struck me that that also was a very useful and  
24 longer-term kind of thinking idea that they raised.

25 MR. RUSCHE: It is indeed, and I think that fact

1 that we're going to characterize this as such an extensive  
2 activity, and we'll have \$300 million or a billion dollars  
3 invested and have 10 percent of the geologic work done -- I  
4 say ten; I don't know what the fraction is, but it's some  
5 substantial fraction of the geologic work done at the time  
6 that you see the construction authorization application.

7 So the major exposure we should have thereafter, and  
8 the surface stuff we ought to be able to resolve with little  
9 or no problem, so the geologic information is about as highly  
10 confident as you can get it, and unless you run into  
11 heterogeneities or unexpected heterogeneities when you continue  
12 the mining operation. To go from ten acres or whatever it  
13 turns out we mine out to a thousand acres, there's not much  
14 left to do.

15 So again, I think we have the opportunity, with  
16 these things in mind, to demonstrate that it can be done, and,  
17 in fact, I think if we don't do it. If I were given the  
18 opportunity, I would recommend a different kind of honor for  
19 all of us, and I think we've got the obligation to do it.

20 CHAIRMAN PALLADINO: Okay. Any other questions,  
21 comments?

22 [No response.]

23 CHAIRMAN PALLADINO: Well, thank you very much,  
24 Ben. We appreciate your coming over, and we look forward to  
25 continuing the dialogue as new events take place.

1 MR. RUSCHE: Thank you very much.

2 CHAIRMAN PALLADINO: We will stand adjourned.

3 [Whereupon, at about 3 o'clock a.m., the Commission  
4 meeting was adjourned.]

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5 This is to certify that the attached proceedings  
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11 Deskset No.

12 Place: Washington, D. C.

13 Date: Thursday, February 27, 1986

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