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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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D I S C L A I M E R

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF DOE'S HIGH LEVEL WASTE PROGRAM

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PUBLIC MEETING

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Nuclear Regulatory Commission

Room 1130

1717 H Street, Northwest

Washington, D. C.

Thursday, February 27, 1986

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

COMMISSIONERS PRESENT:

NUNZIO J. PALLADINO, Chairman of the Commission

THOMAS M. ROBERTS, Member of the Commission

JAMES K. ASSELSTINE, Member of the Commission

FREDERICK M. BERNTHAL, Member of the Commission

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

STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

S. CHILK, Secretary to the Commission

B. RUSCHE, DOE

H. PLAINE, OGC

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.

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

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

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

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

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

COMMISSIONER BERNTHAL: Sounds fine.

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

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

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

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

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

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

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

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

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

time recognizing that some of the things that you need to know in order to make the plan effective are things that you have to find out, so you are in that traditional developmental planning basis. I believe our staffs have worked out an approach that will meet your guidelines. I believe there is a Reg Guide that relates to the SCP, and I believe we are on a track that will allow us to get the SCPs in place, at least for the first two Federal sites some time early in 1987.

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

MR. RUSCHE: Yes.

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

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

COMMISSIONER ASSELSTINE: Ben, you said you could have the site characterization plans in place by early 1987, at least for the first two Federal sites.

MR. RUSCHE: That is our hope.

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

MR. RUSCHE: No, but I do --

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

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

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

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

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

And I must say that this effort which has been one

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

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

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

I think we have plenty of opportunity for that.

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

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

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

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

COMMISSIONER BERNTHAL: But a different one from --

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

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

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

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

I don't know if any of you remember, but at Savannah River, back in the 1950's, we looked at possible crystalline rock for a disposal project at that time, and it was abandoned late in the '60s.

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

COMMISSIONER BERNTHAL: Let me get to the second part of the question, and I have now heard serious proposals that volcanic tuff be seriously considered, that the salty rock be seriously considered, that crystalline granitic-type -- and granitic I guess is the right term -- be seriously considered, that salt be seriously considered.

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

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

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

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

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

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

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

COMMISSIONER BERNTHAL: Right, right.

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

So, isolation is the objective.

COMMISSIONER BERNTHAL: I was just curious. Thanks.

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

It is very important that we all recognize that we

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

consider it; doesn't mandate.

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

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

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

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

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

[Laughter.]

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

CHAIRMAN PALLADINO: Fewer people.

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

CHAIRMAN PALLADINO: To do what?

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

CHAIRMAN PALLADINO: Oh, I see.

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

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

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

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

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

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

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

COMMISSIONER ZECH: I presume that the States that

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

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

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

MR. RUSCHE: It is indeed.

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

MR. RUSCHE: Yes.

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

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

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

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

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

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

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

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

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

So, to some extent the court validated the

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

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

MR. BUSCH: [illegible] difficult. We certainly want that to be the case, and it is clearly a matter of judgment as to where you start the process, how closely related ought people be.

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

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

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

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

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

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

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

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

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

MR. RUSCHE: We wait.

CHAIRMAN PALLADINO: Wait for what?

MR. RUSCHE: The court.

COMMISSIONER ASSELSTINE: Well, it is an interesting legal [illegible] for reasons we all appreciate maybe as well or better than he does, won't comment on the case, but the idea that an executive branch agency is being prohibited from presenting a matter to the Congress is an intriguing point of law to say the least.

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

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

COMMISSIONER ASSELSTINE: There is an injunction in effect now.

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

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

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

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

MR. RUSCHE: I have had two or three people offer to take it, but they wanted to remain anonymous.

[Laughter.]

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

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

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

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

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

MR. RUSCHE: I trust Congress explicitly.

COMMISSIONER BERNTHAL: You what?

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

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

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

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

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

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

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

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

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

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

needed by the NRC.

MR. RUSCHE: Yes.

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

MR. RUSCHE: Yes.

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

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

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

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

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

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

We have to select the sites, we have to determine

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

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

or changes in the mind of Congress or whatnot.

I believe the latter of those is a very unlikely prospect. I think though we still are fraught with a number of litigation areas, that we will be able to get through those. They will add time, and therefore by the time we get this definition, which I hope will be about this time next year, we clearly are going to have to look back at the schedule. And as you know, we have talked, when we issued the mission plan, when we talked about the program decision schedule items and so forth, where you both literally and under the Act participate in [illegible] so that we will have a number of these early decisions will have been pretty well determined by next year, and together we'll have a chance to go back and look again.

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

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

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

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

MR. RUSCHE: But I do appreciate the comment, and I think that Congress has spoken. I have, in the last month, in my continuing attempt to keep abreast myself and members of Congress of [illegible], I have yet to run into any member of Congress that would interpret that [illegible].

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

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

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

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

There is no question that we, the Staff recognize that technical quality that is the first test that we pass. I believe that it's going to be important for all of us to keep in mind that technical quality does have a prescription or a definition, based on your rules and on the EPA rules and that we're going to have to continue to apply our judgment as to how we make that cost-effective and timely, not to compromise the technical quality, but that we serve the technical quality purpose with those other objectives in mind.

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

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

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

I think we have a number of evidences of progress, and I'll not take your time today, but I was pleased that the staff and those parts of the last couple weeks have got [illegible] and [illegible] for Dana David a number of purposes of areas where we can see benefits and evidence of progress as we're beginning to work together.

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

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

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

If I had a problem that I could point to and say we just made a mess out of it somewhere, I would not be reluctant to tell you. That's not the case. But I can tell you that I know and I think you will know, as John knows, that it's going to require continued attention on all of our parts to be sure that we [illegible] multiple objectives; that we have in mind before us a [illegible] properly balanced.

[illegible] of the problems that we explored in relation to your discussion was how we interact with the NCMS, and I'd like to spend a moment about a meeting I had with the NCMS a couple weeks ago at the invitation of Dave Ward, the Chairman, and Dade Mueller, the Chairman of the Subcommittee, who has the greatest interest. I spent about an hour and a half or two hours with them and reviewed the program, attempting to identify how they and we and the Staff might work together in a manner that was constructive, and I think that -- we did not arrive at any final decisions; that was not the purpose of the meeting -- but I think they have a greater awareness now of some of the state of affairs, the state of evolution of things, and the bottom line that we came to was that we must maintain a dual emphasis on quality and timeliness, and that from their standpoint, it was important for them to maintain

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

And secondly, I indicated to them, as we and the Staff move to the stage of what we would call identification and certainly when we get to the point of beginning to dispose of issues -- that is, put them in a box that would now be available for consideration at a hearing -- issues that have been considered and disposed of -- that we probably ought to have their involvement, and I think that made sense to them as well.

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

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

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

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

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

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

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

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

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

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

COMMISSIONER ASSELSTINE: That's right.

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

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

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

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

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

[illegible] I would note that there are a number of things that we expect to issue that may be of more than casual interest to you. The Staff gets these all the time.

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

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

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

We've made continuing progress in QA. We've had extensive interactions with your QA Staff, and I think, though we have not fully arrived, we have met the commitments or are in a position to meet the commitments that we've said, in the [illegible] QA systems in place by the time we have [illegible] authorization work ready to go, and we're going to [illegible].

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

That's where I was going to stop.

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

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

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

nation must solve in one way or the other.

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

COMMISSIONER ASSELSTINE: I have just a couple of questions.

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

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

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

Do you have any thoughts or comments on that?

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

that.

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

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

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

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

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

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

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

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

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

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

Now I tried to disabuse them of that idea.

COMMISSIONER ASSELSTINE: Yes, so did I.

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

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

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

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

that you've have a common database.

MR. RUSCHE: Absolutely.

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

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

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

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

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

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

[Laughter.]

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

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

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

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

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

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

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

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

Two minutes and 38 seconds.

COMMISSIONER BERNTHAL: Very good. Thank you.

CHAIRMAN PALLADINO: There is one point with respect to all these systems, is make sure that the data that you have are accurate and that the opportunity exists and the capability exists and the diligence exists to get rid of data that is proven to be wrong.

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

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

CHAIRMAN PALLADINO: That's right.

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

capable participants.

MR. RUSCHE: Yes.

COMMISSIONER ASSELSTINE: Namely the states and the Indian tribes.

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

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

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

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

COMMISSIONER ASSELSTINE: That's right.

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

[Laughter.]

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

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

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

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

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

COMMISSIONER ASSELSTINE: Yes.

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

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

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

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

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

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

base.

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

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

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

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

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

COMMISSIONER BERNTHAL: That's right.

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

they'll be all right when we get there. We mean that if the property is measured and that's what it is, then five years from now -- of course, if you find something that changes that, you always have to go back and look at it -- but barring some new finding, that issue is resolved.

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

COMMISSIONER ASSELSTINE: Yes, I agree.

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

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

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

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

that we're going to characterization is such an extensive activity, and we'll have $100 million or a billion dollars invested and have 10 percent of the geologic work done -- I say ten; I don't know what the fraction is, but it's some substantial fraction of the geologic work done at the time that you see the construction authorization application.

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

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

CHAIRMAN PALLADINO: Okay. Any other questions, comments?

[No response.]

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

MR. RUSSELL: Thank you very much.

CHAIRMAN BALLARD: It will stand adjourned.

[Whereupon, at 11:11 o'clock a.m., the Commission meeting was adjourned.]

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of COMMISSION MEETING

Title of Proceeding: Briefing on Status of DOE's High Level Waste Program (Public Meeting)

Docket No.

Place: Washington, D. C.

Date: Thursday, February 27, 1986

were held as herein appears and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission.

(Signature) Garrett J. Walsh, Jr.

(Typed Name of Reporter) Garrett J. Walsh, Jr.

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