BLUE RIBBON COMMISSION ON AMERICA'S
NUCLEAR FUTURE

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MEETING
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DAY 2
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FRIDAY,
MARCH 26, 2010
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The Commission convened at 8:30 a.m. in the Ballroom of the Willard Intercontinental Hotel, located at 1401 Pennsylvania Avenue, Northwest, Washington, D.C., Lee Hamilton and Brent Scowcroft, Co-Chairs, presiding.

MEMBERS PRESENT:

THE HONORABLE LEE HAMILTON, Co-Chair
GENERAL BRENT SCOWCROFT, Co-Chair
THE HONORABLE PETE DOMENICI
THE HONORABLE PHIL SHARP
MR. MARK H. AYERS
THE HONORABLE VICKY BAILEY
DR. ALBERT CARNESALE

MS. SUSAN EISENHOWER
MR. JONATHAN LASH
DR. ALLISON MACFARLANE
DR. RICHARD A. MESERVE
MR. JOHN ROWE
DR. PER F. PETERSON

ALSO PRESENT:

TIM FRAZIER, Designated Federal Official

MICHAEL MONTGOMERY

BRUCE BRESLOW

LAKE BARRETT

RICK MCLEOD

JUDY TREICHEL

PAUL SEIDLER

JOE ZEIGLER

JACK SPENCER

ALLISON DOMAN

ROBERT ALVAREZ

IRENE NAVIS

CHARLES POWERS

ALFRED MEYER

SCOTT KIRK

KEVIN KAMPS

MICHELE BOYD

ARJUN MAKHIJANI

ALLISON FISHER

DIANE D'ARRIGO

ELISA BROWN

ROBERT LIST

MARY JANE WILLIAMS

GEOFF FETTUS

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8:30 a.m.

MR. FRAZIER: Okay. We are going --

Congressman Hamilton?

CHAIR HAMILTON: Good morning. Thank you all for coming again. Let me give you a quick overview of how we will proceed here.

The first part of our session will be a discussion among the Commissioners. The first part of that discussion will focus on process questions.

I will identify at this time some of those questions that we would like the Commissioners to comment on. There may very well be others.

Should we establish subcommittees in doing our work?

Should we be visiting relevant facilities, both domestic and international, and if so, which facilities should we visit?

How frequently do the Commissioners think we should be meeting?

Should we have hearings outside of Washington and if so, where?

What kind of a staff should we be contemplating hiring, and consultants, as well?

Those questions then will be the core of the discussion this morning.

In the first session when we have covered those topics sufficiently, we will move on to a more substantive discussion, which will look at the specific technical issues we should address, how we should address them, and in what order.

At 11:00 we will suspend the discussion of the Commissioners and move to public comments. I have not at this point been fully informed about how many, or exactly how that will proceed. But we will have one hour from 11:00 to 12:00 for public comments. We will be announcing the process there a

little later on this morning.

We will adjourn at 12:00 noon.

Okay. Let's get under way with a discussion as I've suggested to you some of the process matters. The Commissioners informally have said a few things about this, but I think we need to get it out fully into the record.

Shall we begin, Dick, please?

DR. MESERVE: Thank you, Mr. Chairman. Let me make a suggestion as to how we might proceed for the group's consideration, in response to at least one or two of the questions you asked but not all.

Given the immensity of the charge that we confront and its importance, it does seem to me that it might be appropriate for us to proceed by creating a few subcommittees.

And it does seem to me that, at least from a technical perspective, they do fall generally into three areas: one that will deal with storage, one that will deal with

basically the fuel cycle/reprocessing issues, and a third that would deal with disposal.

That doesn't capture everything. There were some issues, like transportation, that we have to some way or another deal with. And there is, as well, an overarching issue about the institutional capacity to deal with these issues. Which I think probably ought to be evaluated within each subgroup, and then of course by the whole Commission as a whole.

The great disadvantage of subgroups, of course, is that we would not want to have the groups splinter into different directions in terms of its knowledge and capability. And we have the problem then of being able to integrate the output from the three subgroups. And I think that is going to be a challenge, and it's an argument for not having subgroups.

But one possible way to deal with that issue, it seems to me, is to have some cross-membership on the various subgroups,

given the willingness of the Commission members to participate.

And secondly, to allow any Commissioner to come to any subgroup. So if there's a particular issue that is of interest, they would then be able to come. That seems to be a way that preserves the capacity of everyone in the Commission to participate in all its work, because it's divided up in a particular way.

The other thing I would suggest that would be a general rule we might apply is, given the widespread interest that is reflected in the number of people who are in the room, as each of the subgroups works, the portion of those meetings which we've received input from people outside the Commission -- witnesses, various types -- be open as a general matter to the public so that everyone hears what we're being told and has access.

Now, there may be some instances in which there's classified information or

proprietary where that's not going to be appropriate. But that would be a way to assure that the process is as open as possible at both this Commission level and at the subgroup level.

That's a proposal for your consideration. Obviously, it doesn't deal with all the questions that you raised.

CHAIR HAMILTON: Dick, that's a very helpful beginning.

Susan?

MS. EISENHOWER: Well, I would just add -- Dick mentioned institutional matters being embedded in each of these three topics. I think we also want to embed non-proliferation questions, security, that type of thing, but also new technologies.

And that may be particularly important in light of what the secretary said yesterday about the long time frame. Because I'm sure there are new technologies that are being worked on in each of these areas. And

I think we should pay special attention to that.

CHAIR HAMILTON: John?

MR. ROWE: Mr. Chairman, I've been thinking about two aspects of this. The first is the travel one. I share the view that at least several of our meetings should be outside Washington. And Senator Domenici's suggestion that one of them should be at the WIPP facility in New Mexico makes sense to me.

I also think that would make our meetings accessible to some people who aren't in Washington all of the time, and that's a good thing, too.

Several members have mentioned to me the potential desirability of visiting some of the foreign facilities that are in different stages. To me, that raises two harder questions.

The first one is: would the public view the increased information as more important than the appearance that we're

touring the world on public money? We would have to plan it to be very spartan, if we were to do that.

The second is a mere matter of time. We have 18 months to do this. It's terribly important that we have a high percentage of attendance at the meetings. And if we delude ourselves into thinking that we have time for a week in three or four different places, we will have very weak attendance. So I think we should do some variation within the country.

I think perhaps the two of you, as Co-Chairs, should think very seriously about whether there is a way to learn something about the French, Swedish, or Japanese experience with a travel schedule that is both appropriately frugal, and is that with respect to time as well as money.

I've also been trying to think about the issue of getting more staff. And there are, of course, many people in DOE, the

National Labs, the universities, and a few in the industry with expertise based on a lifetime of work. Some of those come with too many biases, and that's true of one of those institutions as much as any of the others.

So it seems to me that we ought to look a bit for people like that on staff. But have some process where if any two or three members of the Commission think a proposed name is too biased, we have the usual requirement of a strong consensus before we hire anybody.

CHAIR HAMILTON: All of those suggestions are very good.

Obviously, several ideas have been put forward here. You can comment on them as you choose.

I do want the Commissioners to know that Brent and I are listening carefully here. We are going to be taking a lot of notes. And at the conclusion of all of this after the Commission has disbanded this

morning, we will put together these ideas in a memorandum to the Commissioners for further comment before we finalize these ideas.

Let's continue our discussion.

Allison?

DR. MACFARLANE: Thanks. I just want to react to some of the ideas I've heard already. And one is this discussion about institutional consideration and whether that deserves a separate subcommittee or not.

And upon reflection, I think that Commissioner Meserve's idea is good, that institutional considerations stay within the subcommittees that you recommended. Simply because I think the institutional considerations will be different, especially for the fuel cycle versus repository, or disposal; let's broaden it.

And then in terms of visiting other places, I share Commissioner Rowe's concerns about appearing to be too arrogant with the people's money. At the same time,

other countries have done a vast amount of work on a number of these issues. And we would be truly remiss if we did not tap that knowledge. Whether we go there or invite them here, I think we need to ensure that we understand what others have done so we don't waste our time reinventing the wheel.

CHAIR HAMILTON: Al?

DR. CARNESALE: Thank you, Mr. Chairman.

Two things; one, I like the division on the subgroups, but I would modify the reprocessing to be reprocessing and recycle. Because many of the issues that arise with regard to reprocessing arise really with what you do with the plutonium.

Also, trending for the economics; it turns out it's very important. There are many people who would be in favor of recycling if you could recycle the fuel, but otherwise would consider it not worthwhile simply for what it does for the waste. And there are

others who would think that recycling the fuel is a terrible idea because you have a plutonium economy. So simply being able to explore those issues -- I think that would be an important amendment.

The second thing I would mention is clearly, whatever choices are made for the subgroups initially has got to be adaptable. We may well find that we need more. It may be that at some point we do need an institutional group to stitch together these pieces, because our mandate is in large part to offer a comprehensive plan. And while that will be in large measure the result of the Commission as a whole, it will be important to have a subgroup that works on that once they have input from the other subgroups. I think that would be particularly valuable.

Third, I do share the view on the international scene. But it may also be true just as within the United States. It needn't be solely these subgroups that meet at

different parts of the country. It may be valuable in some domains to have representatives from each of the subgroups go visit a site and to do it together.

I think the subgroups is an important idea; that ought to be the function. And that's the principle framework. But we can cover a lot more territory and get a lot more input broadly if we also think about it needn't be the Commission or even an entire subcommittee that visits, whether it be France, Sweden, Finland, or wherever it is. Not to mention sites in the United States, where you're gathering information and seeing what's been done.

CHAIR HAMILTON: Thank you.

DR. PETERSON: I would like to add --

CHAIR HAMILTON: Per?

DR. PETERSON: -- to this question of the organization. While I know that each of these different areas will have somewhat

different and many specific institutional issues, I think there are also important issues that cross-cut across all of these.

In particular, one needs to have some integration of these different institutional considerations. Certainly, questions about economics and funding in the end have to be integrated across all of these areas.

We also face the question of human resources, which is going to be important and cross-cuts across all of these.

So I think that we do need to perhaps have a separate subcommittee which is charged with these institutional economic questions. Because ultimately, one needs to have a policy that integrates a strategy for all of these different areas and makes them all fit together.

Therefore, I would lean towards having a least one committee which is charged to look at those types of issues that really

do cross-cut across. For example, the storage, advanced fuel cycles, and security issues really need to be considered across all of these different areas.

CHAIR HAMILTON: Phil?

HON. MR. SHARP: Mr. Chairman, on this process it seems to me one of the helpful initial steps might be to try to develop a guidance document for each of the subcommittees that in fact lays out a template of what is the current status, what are the issues that appear on the table at this point, what are the technological questions that are developing or developing technologies, what are the institutional -- in other words, try to get some parallel categories that, at least to begin with, each subcommittee is going to sort of have a broad guidance of.

They might find they have to go in quite different directions. But I think if we develop that at each subcommittee level, we may find some people doing extensive work, a

little on institutions while the other is or not. And each can decide. But I just think that might give us the coherence of what we will need for a report that can be integrated at the end.

CHAIR HAMILTON: Could I ask Commissioners to address the question of frequency of meetings for just a moment?

John, I don't want to put you on the spot. But you indicated in a private conversation that maybe once every couple of months with some other -- would you elaborate on that a little bit?

MR. ROWE: Yes. My fundamental concern is that when we think of the magnitude of the task, we probably ought to meet every day for the next 18 months. And our attendance record would then become poor. So it seems to me we need to mix the need for serious deliberation, hard work in between meetings, and the practicalities of lives with many commitments.

And it's suggested by me just as a raw proposal that we have a meeting of the length we've had this meeting, say, every 2 months. And then have a long, say, 3 or 4 hour meeting on the telephone every other month in between. And of course, those calls should be on the public Web site or whatever so they're open.

That struck me as just one way of balancing the realities of commitments with the depth of the work. Now, whether that meshes exactly with Commissioner Meserve's Committee proposal, I can't be sure. Maybe subcommittee meetings would actually replace some of those phone meetings. I think we will want to be somewhat flexible as we go. But I threw that out to you as just a starting point for a schedule that might allow us to keep the kind of attendance and participation we all want.

DR. PETERSON: I would concur with that recommendation, particularly because I

think that we will most likely want to have some subcommittee meetings held physically.

And indeed, it may be that some of the best meetings to have outside of Washington will be meetings of the subcommittees where, again, we're striving to bring in as much public input and input from stakeholder's as possible.

So given that we'll have the opportunity to have additional meetings of subcommittees, a frequency of about once every 2 months for the full Commission to meet could be quite reasonable.

CHAIR HAMILTON: Dick, does that fit in okay with your subcommittee proposal?

DR. MESERVE: Yes, it does. I think that's a sensible proposal.

Let me just say that one of the dangers of a subcommittee is that you fracture off in different directions, and that you end up with the problem of people heading in ways that are incompatible between the

subcommittees.

And there are going to be a number of issues which cut across that ultimately -- the storage, reprocessing/recycling, which I intended to lump together, and disposal all have to be linked together in this whole system to work together as a system. So there is a need to integrate. And that's institutional, and at every level they need to integrate.

So what I would think is that you might want to have the subgroups focus on these that have a technical focus. Ask the subgroups to look at how we got where we are, what the legal constraints are, what the technical options are, what the policy issues are.

And the policy issues should obviously include the full range of safety, security, proliferation, environmental. All of those things should be part of the discussion.

But somehow we need to pull this together. So I think that a capacity for the full Committee to meet on a reasonable basis, so that there is feedback from each of the subcommittees on these issues that have to be integrated, is a way that will lead us at the end to something that fits together and hopefully reflects the consensus of the group.

Now, the frequency that should occur. It seems to me that depends on how fast we can get launched with the subcommittees. But aiming for a Commission meeting every other month or something seems to me to be sensible. I think we'll have to feel our way in terms of what fits in people's schedules.

CHAIR HAMILTON: Susan?

Thank you, Dick.

MS. EISENHOWER: Yes. Thank you, Mr. Chairman.

I'd just like to point out we only have 15 people on this Commission. And given

busy schedules and how hard it is to get people to turn up in the same place at the same time, we may want to -- this is just an idea, but we may want to have a chairman for each of these subcommittees. And then have the full Commission invited to each of the subcommittee meetings. Because 15 people, you can lose half of them without any difficulty. I just want to throw that out for the sake of argument, because this is a very small group.

CHAIR HAMILTON: Very good. Okay.

Al, go ahead.

DR. CARNESALE: I have a question about how it fits in with the subcommittees and how we'll deal with it. Two things.

One is initially picking some scenarios for the growth of nuclear power. I mean, how large or small of a problem are we talking about? We don't want each subcommittee to be going off with different ideas in mind.

The second one is the

technologies. Earlier on one of the things, as I recall in the charter -- I don't have it in front of me now -- is considering alternative reactor technologies, which may indeed have quite different effects on what the waste stream looks like.

And so we need -- whether it's the chairs of the existing subcommittees, whether it's a subgroup of this group or that group that has to do some work early on -- to sort of develop a range of scenarios. Not too select, but a range of scenarios that is fitting with our charter. Because it's rather broad and looks out quite a distance in time. And I think that would be missed if you simply cut it up into these pieces.

DR. PETERSON: I think that these are good points. I would also hope that in the end, recommendations we might make would result in an approach that would have the flexibility to actually accommodate gracefully all ranges of scenarios from, essentially what

we saw yesterday, no new reactors to substantial numbers of new reactors.

But we need to be looking at the technical opportunities. One of the things that we've done, and actually made major advances on the regulatory side, is towards approaches to regulate technologies in an approach that's much more technology-neutral.

So in fact, I don't think it's necessary nor probably appropriate to pick technologies. But to identify what the opportunities are is important.

CHAIR HAMILTON: Thank you, Per.

Allison?

DR. MACFARLANE: Well, in response to this little discussion here, I think this emphasizes the need for some kind of adaptable strategy, that we don't lock ourselves into any specific plan.

But I would caution about looking too far into the future. Because I think that if you look in the past at most predictions in

the energy field, they have been wrong. We have an excellent record at being totally wrong. So I would caution about how far we look out and how specific we get.

CHAIR HAMILTON: Phil?

HON. MR. SHARP: Allison is certainly correct about our incapacity to accurately predict, whether it's industry, academia, or government-owned energy policy. And I can certainly swear to that, having made many miscalculations along the way.

But obviously, as Allison is more aware than myself, there are some things here that are predictable. We are going to have a hell of a lot of this stuff around for a long time. We've already got it. And so, that we will have to deal with.

But also, we get to this question: should the Commission decide to make a recommendation on a path forward for this country on reprocessing? That leads to the point that Al was raising. As you've got

different waste streams, you might not be able to predict all the outcomes. You also know you're not going to do the same thing, or at least you get a different set of problems, is my impression.

CHAIR HAMILTON: Okay. I think we've made some progress here already. There are one or two other things that I want you to comment on.

There seems to be a consensus that we should have some meetings outside of Washington.

Incidentally, as I state any of this, if you disagree with my view then speak up.

There is a restrained view, at least, about foreign travel. And if it is done it should be done very carefully, certainly not -- I think John's word was "frugal."

One of the things we did on the 9/11 Commission was to assign to staff a lot

of the travel responsibility. Every commission is different, of course. But that's a possibility that we would look at.

We've talked here about the subcommittee structure that Dick put forward. And I gather there's broad agreement with regard to his subcommittee structure. We'll refine that, obviously, as we move along.

The frequency of the meetings -- I hear no objection to the once every 2 months as a full Commission. And perhaps a telephone conference call in between, which would be open. And that would enable us to go ahead. Subcommittees -- we don't want to get too precise here trying to prescribe subcommittee meetings and the like. But obviously, we'll have to have some flexibility there.

I would like some discussion on the question of staff, what kinds of staff and consultants you think we may need. As you know, we have two staff members at the present time. We are, of course, with Tim and his

colleagues; we have a lot of support. But we need to hire our own staff. Maybe you could direct a comment or two with regard to staff as to what you think we will need.

Dick?

DR. MESERVE: It seems to me that if we proceed with the subcommittees, it is going to be necessary to have some full-time staff just to handle the logistical part of it. So that's at least a person that's assigned to a subcommittee. That is a lot of logistics, lining up witnesses and all that, that will have to be handled.

It does seem to me that we might think about usage of consultants. And I'm recognizing that there are a large number of people who are very skilled in this area that we might want to call on, but have day jobs that they can't leave. They may care enough about this issue that they would make some time available to us. They couldn't be available to us on a fulltime basis, but would

be prepared to lend assistance as appropriate. That may be a way to augment our capabilities in a way which we have very capable people, but not ask them to drop everything for limited term employment.

CHAIR HAMILTON: Dick, thank you.

I gather most of you would agree that we will need some help on the legal side with counsel. Likewise, we would need some help in the broadly defined public relations, probably.

Brent and I are very open to suggestions with regard to staff at this point in time.

Phil?

HON. MR. SHARP: Just to go along with what Dick was saying, I think there's a lot of very useful organizing of the intellectual work. Much of this already exists.

And either you have to have internal staff or, I think in many instances,

you would run a contract out to somebody knowledgeable who tries to give us the overview of the issues, and things of this sort. And they prepare a document which is then public and challengeable by any outside source so that we make sure we're not getting an exclusive funnel of information.

A lot of that work can be done. And I would think that would be more likely done by a contracting kind of proposition, but that's up to you folks to do.

It may well even be on the legal side, since we have access to the legal department of the federal government. I'm guessing the legal help we're going to need is just reexamining the Nuclear Waste Policy Act, for example, and just giving us legal summaries of what are the issues.

Again, there's a ton of materials already done for Congressional Debate and things like that. But somebody has to do the drawing it together and getting it into one

place where we have it focused.

CHAIR HAMILTON: Yes, Susan?

MS. EISENHOWER: I'd just like to add, if we're going to talk about legal counseling, possibly public relations helping.

By the way, I think the public relations help isn't really necessary until our report is about to come out. I think probably many of us have fairly good instincts about these things in the interim, anyway.

We're on substantive issues at this point, which leads me to believe that we probably could use the help of an energy economist for some of our deliberations. Because I really think that what things cost, and how they are viewed within the energy community in terms of investments and other things, is a critical part of this endeavor.

CHAIR HAMILTON: That's a very good suggestion.

Al?

DR. CARNESALE: Mine is not so

much about individual people as to try and think of dividing in three parts, just as a checklist. One is the technical parts, one is the policy aspects, and the other you might call operations.

On the technical parts, it would align with the Committee's. Storage, reprocessing/recycling, depository, and somebody that has a good feel for the overall nuclear fuel cycle.

On the policy aspects: economics, safety and security, policy and law. Those are sort of the three pieces that relate.

And on the organizational side, that's where we have the things like logistics. And when we talk about general consult, it isn't just the laws that apply to nuclear energy. It's also the laws that apply to us, our operation and the like. Procedural things, writing skills, public relations skills are things that we'll need.

So when I think of those three

areas -- it doesn't mean you have to have a person to fit in every one of those boxes. But I think each of those boxes probably needs a check in it so that there's somebody that can help us with that.

CHAIR HAMILTON: That is very good. Thank you.

Per?

DR. PETERSON: In addition, there is an organization which was specifically formed under the Nuclear Policy Act called the Nuclear Waste Technical Review Board. It is formed from a set of experts that are nominated by the National Academy, and then selected by the President to provide advice to the country about technical issues associated with the management of nuclear waste.

They have a head start on us already in thinking about these topics. The chair, John Garrick, is a highly respected person in the area of risk assessment. And they have a lot of knowledge and capability.

I do believe that we need to look at how to leverage that. It's also paid for by the same sources of funds that we're funded by. And as I mentioned, they have some very, very good people.

DR. MESERVE: Let me just second that. As it happens, I know that John Garrick is very interested in having the Nuclear Waste Technical Review Board intersect with this group in an appropriate way.

CHAIR HAMILTON: Very good.

Yes, Allison?

DR. MACFARLANE: I would like to second the need for an economist. It's not clear to me whether we need an economist on staff, or whether we need to contract with an economist for specific items within the subcommittees. But we definitely need that advice. That's central to what we do.

As Phil said, there's a lot of work that's been done already out there that we should be accessing. Not just from the

Nuclear Waste Technical Review Board, but there's a variety of sources out there that are excellent.

HON. MR. SHARP: I would guess that's the main workload that is going to be required of the staff, trying to sort through and get to us. And many of us will have ideas of what that information is. So that's a certain kind of staff responsibility. A lot of that, I think, will need to be contracted for.

I don't know if this process might work, but people on the Commission may want to forward to staff sort of large questions they have. And then the sorting out, they can decide whether those questions are ones that ought to be contracted for, be done internally, or should be ignored. That's a kind of proposition.

But just thinking about the other international sites that have been mentioned, Sweden and France -- there is a need, and it

may already totally exist, of having a good paper that says: what is the status; what are the issues; how did they do it?

To be honest with you, I think somebody doing a lot of that hard work presenting to us, and we have a chance to interview them and maybe have outside witnesses -- to my money, that's a smarter way than visiting the facilities.

I love to visit facilities. I always learn something. It's not that you don't learn something. But after all, Sweden hadn't gotten this stuff in the hole yet. And France is at a certain stage of this. My impression is none of these are as far along as is generally advertised.

So what we see -- we're going to have to be talking to people. We're going to be talking to people about how they do things. We're not going to see that much. And I think that informational system, getting somebody or several people who really give us insight into

the main issues, can be done in a much more economical way than touring.

CHAIR HAMILTON: Brent?

CHAIR SCOWCROFT: I think Phil makes a very good point. All of these are wonderful ideas. But they all take time, and a Commission member's time is very valuable. When you go visit someplace you spend a day getting there, you spend one day there, and you spend a day getting back. And we can't spread ourselves so thin that we don't cover it.

I think one of the purposes of staff is to collect material and make our work easier. So we ought to look at it from that standpoint.

CHAIR HAMILTON: That's very good.

Allison? And then Susan.

DR. MACFARLANE: I understand your concerns about the travel to these places. But I would like to emphasize that I think you can learn a lot from going to a place, talking

not only to the officials but to other people involved.

I think the value of the Swedish situation is to go out to the communities because the communities have a huge approval rating. And that's what we really have to understand because that's where we failed.

HON. MR. SHARP: But let me just suggest to you, as someone who had to do the representation job of half a million people in the country, that you've got plenty of people you can go talk to. And to probe how the community views it in Sweden is something that will change and that we already have insights into. What we need to know about is the system they use, why it's an effective system.

Participation by the local community that created that -- is that actually replicable here or is that just special within the Swedish context, the special cultural norms of that place? And that doesn't make it quite as relevant to us.

The other is how big the compensation was. Now, the reality is we played this game of compensation over the last 20 years. It just didn't take. Maybe it would in this environment, in the United States, in a different way. We actually know certain communities would take the bait on compensation.

You may know, but what they're doing in Sweden is they've not only selected a community but they've compensated the loser community. It's about to get compensatory payments. I can't imagine us doing it that way in America. It would be hard enough getting people to belly up the original payments, let alone the compensatory payments.

My point is that I don't doubt what you say, but what is the most economical way for us to collect the information?

CHAIR HAMILTON: Susan?

MS. EISENHOWER: I just had a thought. I'm sure many people on this

Commission do a lot of foreign travel; myself, for example. I'm going to be in that part of the world three times between now and August.

So perhaps we should notify somebody on the Commission if we're going to be anywhere near any of these facilities. And maybe then it would be our responsibility to write a rather colorful and vivid report for the Commission.

I do think that in addition to that, however, we might want to invite some of our foreign counterparts as guests here to this country. But for instance, if I were to visit a facility during any of these travels, I can't imagine that there would be any expense involved to speak of.

So I just think that might be one way where we could have our cake and eat it, too.

CHAIR HAMILTON: Very good suggestion, Susan. Thank you.

HON. MR. SHARP: If I could add to

that, the Chair can even deputize so that the local community and the local officials are much more likely to cooperate -- if they understand that you're there representing the Commission and are going to come back and report.

DR. PETERSON: And then, to just follow on quickly, we could delegate staff to accompany. And they could pick up the part of collecting information and putting it into a format that would be helpful to us.

CHAIR HAMILTON: Okay. All very good.

Dick?

DR. MESERVE: I think that for this purpose I might make a distinction between foreign and domestic travel. A foreign purpose would be to gather information. And as we've discussed, there are various vehicles for doing that.

With regard to the domestic situation, there are some communities that

have direct stakes in the deliberations of this Committee. And the need for us to consider having meetings in those vicinities is a little different, because there are people who are going to want to talk to us, I suspect. Because anything we say may very well impact those communities.

HON. MR. SHARP: I certainly agree with that. I would not diminish the importance of that kind of role in this system.

CHAIR HAMILTON: Okay. I probably should introduce the two staff members we have. I've neglected to do that.

John Kotek will be our staff director.

John, why don't you stand?

Where is he? He's behind -- okay.

And then Marika Tatsutani is here. She will be a staff writer on the Commission.

We are very grateful that they are both willing to help the Commission. Both are

highly qualified people. And of course, as this discussion has made clear, we will be adding some additional folks to join them. But we are delighted to have Marika and John with us.

Okay. Anything further?

There's one other thing I want to hit upon. I don't want to put the Commissioners on the spot here, but we need to be thinking about the organizations and the individuals that we will ask to make formal presentations to the Commission. I'll not ask you to do that now unless you want to. But I do want you to be thinking about it so that Brent and I can begin to sort through that.

Who are the people; who are the organizations? We want to be as fair minded as possible here, listening to a broad array of opinions and assessments.

We also know that if we have only one meeting every two months, our public time is not inexhaustible. So be careful in your

recommendations here, if you would.

MR. ROWE: Mr. Chairman, on that subject, in addition to a variety of interests that may come to our attention as desiring our time, there will of course be a few that are obvious to all of us at this moment representing different perspectives on the problem.

I wonder if we might make a short list of those relatively early. Not only telling them they will be asked to appear, but asking them to, when they appear, submit a fairly detailed written statement of their suggestions for all aspects of this.

I'm just thinking offhand of people like the Union of Concerned Scientists on the one hand, or the Nuclear Energy Institute on the other. They will, of course, be asked to appear sooner or later. Let us make them work for their time.

CHAIR HAMILTON: Very good suggestion. We will certainly follow those

suggestions that you've made, John.

Al?

DR. CARNESALE: Just to pick up on that, something that would be very useful for us is if we could get written material in advance. There is a reason why they're called briefings. They're supposed to be brief. In other words, not just saying what the person thinks, so we could spend our time more in discussion and question and answers with the people that appear before us, rather than have them feel obligated to make a long speech. Because that's the only way we'll get the information.

But then we have the obligation to look at the material in advance so that we've actually read it before we show up for the meeting.

CHAIR HAMILTON: It is my impression that the Commissioners are not going to be bashful about asking questions.

We will insist on that format,

that they present us with a written statement beforehand, that they appear. And we will limit their oral presentation sharply. I don't know quite what that would be at the moment; 10 minutes, for example. And then spend the rest of the time on Q&A.

Mark, I'm sorry. I may have missed you and I apologize to you. Mark?

MR. AYERS: That's no problem at all. Thank you, Mr. Chairman.

Just going back over what we've talked about, I think it's very important that we assemble some of the brightest people that have already done extensive research, people that have worked in the other areas, so that we're not reinventing the wheel.

And I'm not trying to be negative, but personally, I don't see any value in us going to another facility and looking at the facility. I think the value is talking to the scientist, the experts overseas. If we have to go over there to talk to them, that's

great. If we can get them here, that's better.

But again, we have an 18 month timetable. If we meet every 2 months, and I'm not saying I object to that, that gives us nine meetings.

And I think this is of such national importance that we have to move this along as rapidly as we can. And I know all of you want to do that. Because it boils down to if we can determine that we can do all the issues we're talking about in a safe and reliable manner, then the United States has to determine if we're going to be a leader or a follower. And right now we're almost in the follow mode.

CHAIR HAMILTON: Okay. Thank you, Mark.

Per?

DR. PETERSON: In adding to this list of organizations that we need to hear from, we also have government. And in

addition to DOE, in fact, there are very important things that we need to take into account coming from Nuclear Regulatory Commission in terms of their current capacity and future capacity to license; the various types of facilities: storage, reactor, and processing; EPA in terms of standards.

We also need to look on the security side to the Department of Homeland Security, and the things that we've done since 9/11 to put in place policies around protection of critical infrastructure and key facilities. Which I think is a vital element of integration.

And then at the international level, we need to be looking at those people in the State Department who are responsible for our strategies there. And possibly also IAEA for their input on where things are going to go.

CHAIR HAMILTON: We'll try to cover all of those bases, Per. It's not going

to be easy.

Phil?

HON. MR. SHARP: Just quickly to add to John Rowe's recommendation that when someone submits something, they should be asked to submit a precis or a summary at the beginning that is the key points. And they can provide all the depth they want to them. But let them do the summarizing, not force us or our staff to do the summarizing to make sure we know what is in that document.

CHAIR HAMILTON: You're going to make it easy on the Commissioners, Phil.

HON. MR. SHARP: Listen, a brief is a brief. We instituted this in my subcommittee back in 1980 or so.

CHAIR HAMILTON: That's a very good demand.

HON. MR. SHARP: You cannot imagine the resistance from the lobbying in Washington. "This can't be done; oh my God." I said, "If you can't summarize it, you don't

know what you want."

CHAIR HAMILTON: I fully support that.

One comment I had is several of you have mentioned classified information and security matters, and I think also proprietary. We will do all we can, Brent and I, to keep our meetings open and transparent. We recognize the importance of that.

And yet it is also true that we will encounter some classified information, I think. We are in the process of making arrangements to how that would be handled. There are facilities, of course, in downtown Washington that can accommodate that. We will not have access to those all the time, so we're going to have to do some scheduling here. But Commissioners can be expected to attend meetings that will not be open to the public because of classified information, or proprietary.

Okay. I think we have pretty well

covered the process questions. Your suggestions have been really very, very constructive and helpful. And I think you can gather, as I and Brent have, the decisions that we will make to go forward from this point on.

Now, I think it might be appropriate to begin discussion of some of the substantive matters.

And Brent, I'll turn that over to you for leading the discussion.

CHAIR SCOWCROFT: Thank you, Lee.

I think now it's time for us to turn to what our task is. We've talked about how we're going to organize to do it.

The task is laid out in the charter and it has several aspects to it. It has eight, I think, specific tasks that we're asked to provide advice, evaluate alternatives, and make recommendations.

It includes beginning evaluation of existing fuel cycle technologies and R&D

programs. I think that's one which we need to spend a little time. Because while we're looking at the back end of the fuel cycle, how the front end of the fuel cycle operates is perhaps overwhelmingly key to what problems we face at the back end of the program. How do we go about this; how do we do it without looking so far into the future that we design away our problem?

So why don't we focus on that for a few minutes.

DR. PETERSON: I think that's a very important question. And to offer an analogy, besides nuclear waste, we actually regulate a number of other materials that are waste. And you can think about nitric oxide, sulfur oxide, the emissions that cause acid rain, carbon.

In general, there's a wide variety of technologies available. Sometimes the simplest thing to do is to simply put a price on it and create conditions where the market

can figure out how to minimize things. That can be a flexible mechanism.

That said, you have to understand the technologies and what their potential capabilities are. And I think that we'll need to look into those questions, both in terms of what there is currently, what there could be in the future, and then what sort of regulatory environment and capabilities are needed in order to see improvement in that technology.

DR. MESERVE: Let me suggest for a starting point of understanding, where we might be going is to get the Nuclear Energy group from DOE, whose whole purpose is to think through this issue. And to have an IRD program that is intended to expose the trajectories, costs, benefits, and various issues.

I think that might be the place to start. An extensive briefing from NE as to what they're doing would be a starting point

for us.

CHAIR SCOWCROFT: Yes, Allison?

DR. MACFARLANE: Well, I have a couple of thoughts. It seems to me that the reason you are focused on these potential technologies and the existing technologies is that you're worried about what kind of impact it will have, in terms of what you have to deal with on the back end, what wastes you have to get rid of.

Now, there's a way in which it doesn't really matter a whole lot. It doesn't really guide exactly the kind of repository you pick or the amount of space. Because hopefully, you decide to design a disposal system that is flexible enough to adapt to this. Otherwise, you've already eliminated yourself from the start. So there's a way in which the urgency of dealing with these questions -- I don't see that it's prompted by what happens in terms of disposal.

And if we do go to the Department

of Energy, which I think we should because they are the locus of a lot of this R&D, I think we also need to hear critiques of these different fuel cycles. And I can suggest a few people who have been working for many years who are very credible and can offer some critiques.

CHAIR SCOWCROFT: Well, I think I differ with what you're saying. Because it seems to me that what you do at the end of the fuel cycle depends importantly on what the fuel cycle is. And I think one of our problems now, the reason we've had so little nuclear power development is that we have not had a resolution of the problem.

Now, the problem works both ways. But it seems to me if you say it doesn't matter what you produce, how much waste, and what kind of kind of waste it is -- we have to deal with it. You're going to stifle nuclear energy.

DR. MACFARLANE: I'm not talking

about stifling nuclear energy at all. I'm talking about designing a system that allows an expansion in any shape or form, whether it's direct disposal or not. We don't want to preclude ourselves.

I think you could argue, and others have, that the system we designed with just looking at Yucca Mountain was potentially stifling the nuclear energy industry.

Frankly, I think in terms of what has stifled the nuclear energy industry, it's simply cost right now.

CHAIR SCOWCROFT: Yes, Per?

DR. PETERSON: To follow on to those points, it's important to recognize that nuclear energy is legitimately a technology that requires careful regulation, just as, say, with drugs or commercial air transportation. This is one of those technologies where we have to regulate for safety and security, and then also to achieve non-proliferation goals as well.

Now, our capability to perform regulation has evolved enormously over the last 20 years. The older approach is particularly prior to Three Mile Island, which was a wake-up call in terms of problems. We were highly deterministic and prescriptive, and greatly limited the flexibility in terms of the evolution of technology. And there's been enormous strides made towards understanding how one can have a more technology-neutral framework, make better use of simulation, and our capability to quantify uncertainty.

I think that the capacity to innovate and improve the technology today is substantively better. But only if we pay careful attention to, and make investments in, the capacity of the regulatory authorities to perform the necessary scientific and technical work to be responsive to license applications for innovative new technologies.

And of course, we have a gentleman

here who ran the Nuclear Regulatory Commission. I think that this is one of the places where substantive opportunity exists to address some of the things that in the past have restrained the capability to use nuclear technology, and reduced the flexibility.

CHAIR SCOWCROFT: Mark?

MR. AYERS: Yes. Just very briefly, I think one of the roles that the Commission needs to be aware of, and look at very carefully throughout this process, is to determine if we are investing adequately in research and development.

CHAIR SCOWCROFT: Al?

DR. CARNESALE: Obviously, as you've tried to start with item one on your list, the discussion demonstrates that they're all connected.

CHAIR SCOWCROFT: Yes, they are. It's the chicken and egg.

DR. CARNESALE: That's right, which makes it difficult. I would say on this

first item, though, existing fuel cycle, as we've learned yesterday and many of us knew anyway, we've got a big problem about what to do with the stuff we already have. And what to do with the stuff that will be generated even if another nuclear reactor were not built.

So understanding the current status of the fuel cycle, what we have, how it might be treated or not, how much of it there is, and the R&D program, even for dealing with what we have, is valuable.

Secondly, when you look at, say, the fuel cycle and the R&D program, one might say it may not make a big difference in technological innovations with regard to the waste program. And you can debate that but it's largely true. You can argue it at the margins, and you could argue either side at the margins.

It can be very important from some of the other considerations: economics,

whether you're going to reprocess or not; safety; security. In each of these cases the proliferation implication can be very important.

So just to illustrate once again, even if you take this very first item, it isn't just a matter of what is the R&D for the fuel cycle as it might relate to what you're going to do with the waste. It also relates to all of these other considerations that are important to us.

I think on this first item, the first thing is simply to get a status report. This gets back to what Phil said. Hear from the DOE people. What are you doing; where is it? And then when we look at that program, trying to look at it through these various lenses. What do we think of it?

HON. MR. SHARP: Mr. Chair?

CHAIR SCOWCROFT: Yes, Phil?

HON. MR. SHARP: This causes me to go to our previous conversation on the

subcommittees. And this is just a quick thought on how we might organize, actually, for the next full Committee meeting. And that is to have prepared for us in advance overview papers that are high-level, but they want on the storage system that we have today, and what is identified or argued about in terms of its problems.

Where are we on the fuel cycle today; where are we on the research for future fuel cycles; and third, on the disposal? That may help us get into the ballpark.

And then those papers must be viewed as preliminary identification of issues, because there will be dispute. And we may decide the subcommittees will then build from there. But I think that might give us an overall framework in which we start instead of --

CHAIR SCOWCROFT: I think part of our problem is the first three of our tasks are laying out the substance of it. The first

one is: do we look at alternatives to the fuel cycle to diminish what we have to deal with for storage and permanent disposal?

So, yes. They're all closely interacting. Do we look at each one of them individually? What competence and how much attention do we pay to these?

DR. PETERSON: I think another important thing, following from Commissioner Ayers' statement on R&D, is the question of how you translate R&D into commercially valuable products.

If you look at the history, particularly when you look at nuclear facilities for defense and civil applications, we have a string of rather spectacular overrun budget problem issues around construction projects that have not gone that well.

There's also been some more recent successes, actually, that are worthwhile to look at, such as the Advanced Light Water Reactor program that cost-shared the cost of

design certification and first-of-a-kind engineering for a reactor called the AP1000. Which, arguably, is one of the best designs that is out there today and is rapidly moving into commercialization.

But this question of how to bridge that space from what is R&D to what is new commercial technology is something that certainly requires careful consideration.

And how it is that you target federal monies so that they result in success rather than failure in these efforts is a key thing, too. Because to get innovative new technologies in, some federal support will be required. There are first-of-a-kind costs and there are market imperfections that will prevent us otherwise from getting better technology deployed. We need to do this in a way that will be efficient.

CHAIR SCOWCROFT: Yes, John?

MR. ROWE: As we look at the different technologies, I think we have to

look at alternative fuel cycles, even though I share Commissioner MacFarlane's view that a significant portion of the issue is here, regardless of which fuel cycle may develop.

But several different MIT task forces have concluded that, looking at simple economics, the existing light water reactor once-through fuel cycle is likely to be supreme for some time.

At the same time, the second of those task forces looked at it and said, given all the difficulties of siting nuclear waste repositories, best symbolized by the checkered career of the Yucca Mountain project, one has to ask whether nuclear technology can evolve without at least a largely closed fuel cycle.

So I think we have to address the fact that if you assumed significant nuclear growth with the current fuel cycle, the number of waste disposal projects gets larger than one can imagine the public accepting. So this is one of those cases where the economics is

substantially affected by public acceptability.

I was thinking of Commissioner MacFarlane's point that, at the moment, the cost of new nuclear plants is the principal obstacle to more being built. And that's certainly true. It's equally true for wind and even more true for solar.

A utility today, simply looking at today's economics, reaches the conclusion you should run old coal as long as you can, you should run old nuclear as long as you can, and anything new should be gas. And none of us think that economic model is answering enough questions to serve the public well. I think that's partly why we're here.

CHAIR SCOWCROFT: The reason I started with this one is that most of our tasks are fairly specific, to provide options and so on. This first one is to evaluate. So it seems to me we have more freedom of action on what we do here and how we go about it than

we do on the others.

DR. PETERSON: I'd like to raise another point about this area, which is to emphasize that when it comes to issues that relate to security and non-proliferation -- the areas of technologies both front-end and back-end where you handle nuclear materials in bulk form, and you perform transformations such as enrichment or chemical separations -- are the most complex and problematic elements of the entire fuel cycle.

In fact, most arms control and non-proliferation experts today believe that really the only way to manage this is to try to keep these types of activities that handle material in bulk form in a highly centralized system, and to avoid the dispersion of these technologies to large numbers of countries.

The reason I raise this point is that I think this is, of all the areas of nuclear technology, the one that most closely intersects issues of non-proliferation and

security of nuclear materials. And we need to assure ourselves that those considerations are dealt with very carefully, because they relate directly to our national security.

CHAIR SCOWCROFT: Yes, Al?

DR. CARNESALE: I don't know of a delicate way to frame this. But we also have to be careful not to focus solely on the technical questions. To come up with an optimum policy that cannot be implemented ain't optimum.

So for example, let me select where we nationally go. Let's assume that a different fuel cycle would reduce the amount of waste by a factor of 10. That'd be terrific; that'd be great.

Notice we haven't been able to deal with 1/10 of the waste we have now. It's not as if the people are saying, "Okay, let's put 1/10 of it in Yucca Mountain." The trouble is you guys wanted to put in too much.

So the public acceptability here

does not follow directly from technology, or economics for that matter. There is a concern about nuclear waste and high-level waste that is quite understandable. You don't have to be a psychologist or psychiatrist to appreciate it. It goes far beyond how many metric tons.

Does it matter whether the football field is filled 10 feet high or one foot high? The answer, I would argue, is no. It matters a lot technically, but it doesn't matter a lot if you're trying to think of a strategy for the United States about what to do about nuclear energy. So we need to find a way.

I use the word "political" in the finest sense of the word. It's how you make decisions in a democracy. We do it through a political process. And we have to have that in mind as we go about, and integrate all of these pieces in that context.

CHAIR SCOWCROFT: You're absolutely right. And that's probably why the

charter marches down through these. Because we're talking about the substance of it.

The next was: how do you manage this for public acceptability?

And the last is: what kind of legislation is required?

DR. CARNESALE: And my point is that's an iterative process. You can't come up with the ideal process and say, "How do we make it publicly acceptable?" Because the answer might be that you can't. So how do you modify that so that you can have a fine process that's also publicly acceptable?

CHAIR SCOWCROFT: Exactly.

Susan?

MS. EISENHOWER: Yes. I would just like to flag one thing. We tend to be talking about issues that are primary importance to the commercial field. But I notice that our mandate is actually very, very broad, to wit our presentations yesterday.

On the military situation, it's

storage; processing; disposal of civilian and defense used nuclear fuel, high-level waste, and materials derived from nuclear activities. This is actually extremely broad.

I just wanted to flag this in terms of how we're organizationally set up. Because some of the military waste is very old, indeed. Some of it is disposed of in controversial ways. And I think we need to keep our eye on that ball, too.

Now, how we structure that with a different set of questions -- not wholly different, but a slightly different set of questions -- for the commercial industry is another question.

And again, there are 15 of us and 18 months to go. So I just wanted to flag that.

CHAIR SCOWCROFT: Yes, Phil?

HON. MR. SHARP: I can't resist. Al Carnesale, who gave me one of my jobs -- I should point out I'm forever beholden to him

-- is absolutely correct on this. Political acceptability in a democracy is a very important principle.

But one thing I'd like to do is be very careful how we talk about political acceptability, because it's far more complex than generally happens in our discussions.

We got a flavor of that yesterday just on the indication. There are groups in Nevada that believe it should be there, and some of them are in the local community where it would live closest with it. There are different opinions there, as there are all around the country.

Now, make no mistake. This has a special emotional content that is different from many political issues. But we have to be very careful about identifying.

It was the same on the chart yesterday, suggesting that we are not building new nuclear power plants because of political acceptability. In fact, I think most people

who operate nuclear power plants find considerable support within the region of the people most potentially at risk, if there is a risk of the sites themselves.

Indeed, the applications that are in right now at the NRC which are new from the 1975 -- there hasn't been one since then. The fact is, those are in areas where there appear to be at the moment -- and that doesn't mean opposition won't arise -- considerable support for that activity.

So we want to be a little careful that we don't fall into the last two decades of, "It can't happen here because Americans don't buy it." Overwhelmingly Americans say, "Yes, it's needed." As they worry about climate change they say, "Yes, it's a component of it." So how we decide what is political acceptability is going to feed through this.

DR. PETERSON: This might segue into the next elements of discussion a bit,

because I think that this is a more generic issue that Phil has raised.

I think also it's worthwhile for us to look at those places where we have had some success. For example, Senator Domenici recommended to us to look at WIPP for lessons that are useful and, I think in particular, looking at how local and state governments execute their responsibility for oversight of these technologies. I think that's a crucial issue. And there are places to look.

There is also the fact that we have routine shipments of naval fuel to Idaho -- foreign research reactor fuel to Idaho and South Carolina. And associated with that, there's this whole structure of local community, state action, and oversight.

I think it's always important to build from examples of best practice. We need to identify: what are the best practices, where are the problems, and how do we make improvements in those areas?

CHAIR SCOWCROFT: I agree. And I think that this feeds back into our first discussion about travel and so on. Because I think this is a key aspect of our recommendations, to fold in the substantive recommendations we make with the political and legal acceptability of them.

DR. PETERSON: And to talk to the people who have been successful in implementing this who actually do the work, all the way down to the point of executing and being capable of handling emergency response and these other functions.

Because if you think about it, the most important ingredient for safety and security of nuclear technology is the training, ability of the people, and the resources that they're given to execute the work that is necessary.

And that doesn't emerge out of thin air. It emerges out mentoring, apprenticeship, and learning from people who

have the set of skills. We have a base of capability in the United States to do these things, but only at a very limited scale.

We're talking about the question of how to build this up to the point where it can manage this larger problem that we have of the eventual need to move large quantities of used fuel, and disposition it in an acceptable manner.

But we can build from an amazingly large long-term base of experience in this type of work and from problems that have been had, especially. Trying to identify success and examples of best practice, and then build upon that.

CHAIR SCOWCROFT: Yes, Richard?

DR. MESERVE: I would like to augment the very appropriate point that Per has made. I think there are lessons that need to be learned, not only from the successes but also from the failures.

We had a very instructive

discussion yesterday that sort of laid out the facts. But there is still a need, I think, for this Commission to understand that a little more deeply, and see what lessons should be learned from that experience.

Was there appropriate consideration of fairness and equity issues? Was there appropriate public engagement? Was there appropriate capacity to deal with changing situations?

So I do think that there's not only the successes that need to be looked at, but also where there have been problems.

On the general point of political acceptability, however, I think it's important that we not view this as some sort of given that's an absolute constraint. This is something that changes over time. And perhaps it even changes as a result of this Commission. We would hope that this is something where appropriate process, thoughtful education, and a thoughtful way of

dealing with the issues actually can change the political dynamic in a way that is helpful.

DR. PETERSON: I would agree. For example, I would argue that one of the most important reasons it's been difficult to develop centralized interim storage is simply the lack of credibility that it wouldn't become permanent storage.

So in some sense, you have to be capable to stand up all of the elements of a system and have a credible path forward to get any of the elements to work properly. Because otherwise, without this confidence that all of these pieces can be put in place, nobody wants to participate in picking up their piece of the problem.

CHAIR SCOWCROFT: You have just identified well the burden of our responsibilities.

DR. MACFARLANE: I guess I should try to be optimistic that things will change.

But I think history has shown us that things haven't.

Let me just read to you a brief sentence from a 1982 OTA report on managing commercial high-level radioactive waste.

In the summary it says, "The greatest single obstacle that a successful waste management program must overcome is the severe erosion of public confidence in the federal government that past problems have created."

I don't think that's changed.

HON. MR. SHARP: I dispute that. I really feel that is a misstatement, and we should not allow ourselves to be governed by that. And I don't mean to say -- there is no question this is politically controversial.

The highest order of contribution that we can make in this country is, exactly as Dick said, how thoroughly we do it so that people gain trust that we have been thorough. I don't know that that will change the world,

but I believe it will raise the confidence level.

I think many in this country are taking a different view about climate change, just as Jonathan Lash said here yesterday, because we have a whole nother set of problems we have to deal with. And while those are not the order before the Commission, that is a context in which we are living and being governed by, and has in the minds of many people a high urgency in this country.

MS. EISENHOWER: Mr. Chairman, maybe I could just add to that. If we're thinking about public confidence -- and of course, this 1982 study indicates that some lack of confidence in the federal government is responsible.

But I think, as was mentioned yesterday, there is also concern about moving nuclear materials around the country. And maybe when we have some witnesses it might be very interesting to hear from people who move

nuclear materials, to understand what their safety processes are; what their accident rate, if they've had one, has been; that type of thing.

I was trying to get at why there was a difference between immediate local acceptance and push-back at the state level, and somebody mentioned it was a transportation issue. I think that is a piece of this.

CHAIR SCOWCROFT: Al?

DR. CARNESALE: Briefly, it prompts me to say we should look carefully at publications of the National Academies. Because remember, they did a study not very long ago on transportation of radioactive waste, precisely that subject. There have been a number of these that the National Academies have looked at, and some that would have to be updated. But I think it would be useful.

Also, there have been international studies and national studies

done some time ago that -- at least, conserving waste to look at the problem. Not everything from the GESMO that was mentioned yesterday, the Generic Environmental Statement on Mixed Oxide Fuels -- not to look at that, which is 1970s. It was generated from the point of view of precisely what it does say.

But how they thought about the problem would be a useful thing to the International Nuclear Fuel Cycle Evaluation. How did other governments look at it and come together? I think there are many publications.

Third and finally, I want to make a distinction. I talked about public acceptability, that the process we use to go around what might be an optimum policy and what's publicly acceptable is a political process. Which is quite different from the implication that it has to be politically acceptable. I didn't mean it in that sense nor did I say it that way. I was careful to

say, "Acceptable to the public."

DR. PETERSON: I would like to add just one additional piece of evidence that things can change and are probably different now than they were 25 years ago.

I can report that coming into our universities today, into nuclear engineering and especially into graduate studies, are the brightest kids you can imagine. The quality of applications and the quality of the students who are today coming into this field is spectacular. It is not within my living experience. And I think possibly back in the 1950s and 1960s you may have seen the same thing.

This reflects the fact that a lot of very bright young people see this technology as providing a potential avenue to address some major problems that we have in the world. So the one thing that we do have going for us now is a base of extraordinarily bright and capable young people who are

willing to work in this area and to help us try to fix these things.

What we need to do is to enable them. Because ultimately, it's going to be their world and their children's world that will be influenced by what we're doing here today.

The base of human capital to do the things we need to do is there, and it's enthusiastic. And there are extraordinarily bright people available for this work.

DR. CARNESALE: If I could comment on that, I taught nuclear engineering in those earlier years. That was true until Three Mile Island, in which case we still got very bright students that filled up places like MIT. And they were from Iran and elsewhere. And now I think you're starting to see changes, but in very small numbers.

American students, interested once again -- they may fill the department at Berkeley. But it's also true that there are

very few departments of nuclear engineering left in the country. So it's still a very small number, which gets back to your point that we need more.

DR. PETERSON: I can tell you that today, as of this year, we turn away nine outstanding domestic applicants for our graduate studies for every one that we have a difficult time picking because the others are outstanding.

And we bring foreign students into this field to add diversity because we think that especially the ones that come from Europe, Japan, and China who have education -- as of today, the quality of students that are coming in is really spectacular.

DR. CARNESALE: The engineering departments in the country today is not 1/10 of --

DR. PETERSON: But the number of students is growing exponentially, and has been for about 5 or 6 years.

CHAIR SCOWCROFT: Okay.

MS. EISENHOWER: Excuse me. The question is: will we have an adequate number depending on a number of these scenarios? And I think we may want to mention that in our report.

CHAIR SCOWCROFT: It seems to me that this illustrates the problem we have. We have an immediate problem. We have a huge problem of waste right now for which, as we saw yesterday afternoon, there is no adequate resolution.

We need to map a way forward that gives hope to the people who see the promise of nuclear energy. Somehow we need to encompass both of those in this project, and that's a daunting task.

Are there other general comments now? I think we've covered the charter adequately enough. We didn't do the legal and legislative parts of it or the economic parts. You know, if you grab people's pocketbooks

their hearts and minds will follow, things like that. But I think it's premature to focus on those more esoteric aspects of the problem.

CHAIR HAMILTON: I think we can take a break at this point. And perhaps if anyone has any additional thoughts they want to give us on the items that have been discussed this morning, we can take a few minutes when we reassemble.

We'll take a break. We will reassemble around 10:30.

(Whereupon, at 10:01 a.m. off the record until 10:27 a.m.)

MR. FRAZIER: Excuse me, everyone. I've got a quick announcement to make.

We're going to move right into the public statement period at 10:32. As soon as the Commissioners reassemble, we're going to ask those wanting to make a statement to kind of be available behind the podium. And if you remember the order in which you were signed

up, that's the order we're going to take.

(Whereupon, at 10:28 a.m. off the record until 10:30 a.m.)

MR. FRAZIER: All right. I will make this announcement again because I think some people missed it. We are going to start the oral statement period of the meeting just as quickly as the Commissioners get filed back in here and get into their seats.

CHAIR HAMILTON: Okay. Let's assemble here and get under way, please.

The procedure here will be to hear from 21 people who have signed up to make statements to the Commission. We will allocate 3 minutes to each person. Tim Frazier will introduce them and line them up there.

We want to express our appreciation, of course, to the people who are willing to make statements to the Commission. We deeply appreciate that. And we consider this a very important part of the Commission

proceedings.

We will adjourn promptly at 12:00, if not a little before, because we have several Commissioners who have to be on the way.

Tim, why don't you get us under way?

MR. FRAZIER: Please state your name and affiliation.

MR. MONTGOMERY: Good morning. I'm Michael Montgomery. I'm the vice president of fuel technology with Lightbridge Corporation. We are located in McLean, Virginia.

I want to present to the Committee the fact that we've been working on advanced thorium fuel cycles for about 15 years. And we are very close to instituting a demonstration of this fuel cycle and a Russian commercial reactor within the next 2 years.

The key benefits of our fuel cycle is that it is a direct substitution for light

water reactor fuel. It doesn't require any reactor changes. It doesn't require changes in the control systems, pumps, valves, anything. You just put it in and it works.

What are the other advantages? We can say, based on our analyses and studies, 10 to 15 percent of uranium upfront.

In addition to that, very important to this Committee, the amount of waste at the end of the fuel cycle. Our fuel cycle and our fuel design is reduced by 50 percent in volume and 70 percent in weight. This is very significant because over the 60-year lifetime of a reactor, we estimate that the utility can save $300-400 million in waste disposal at the back end of the fuel cycle.

One of the other key aspects of our fuel cycle is that its non-proliferative. That's a key issue in your charter, I think. This is a once-through fuel cycle. It can also be modified to a closed fuel cycle depending on how you look at it.

But fundamentally, the isotopic content of the spent fuel does not allow you to make nuclear weapons with this material. If you try to reprocess it, you would have an extremely difficult time. Because even under a normal thorium reprocessing, as the Indians found out in their work, it's extremely difficult to do. And it doesn't lend itself to an economic commercial application.

So in general, what I want to point out is that we have a fuel assembly design that we worked on for a long time. We know that it will work in a Russian BVR. We will put demonstration assemblies in there in a couple of years.

We are now in the certification and licensing process with the Russians. We have done the concept studies for --

CHAIR HAMILTON: Your time has expired.

MR. MONTGOMERY: Okay.

CHAIR HAMILTON: I apologize for

being very strict here, but in order to get through the group we'll have to do that.

MR. MONTGOMERY: I've given Tim a copy of my prepared remarks for the Commission.

CHAIR HAMILTON: That's very helpful to us. Thank you very much. Okay.

MR. BRESLOW: Good morning. My name is Bruce Breslow and I represent the state of Nevada. I'm the executive director of the Agency for Nuclear Projects.

The state of Nevada has had a love/hate relationship working with the Department of Energy for many years, as most of you know. We worked with DOE for helping them bring more than 1,000 shipments of low-level waste onto the nuclear test sight. We worked with DOE to move the transuranic waste up to Idaho for characterization and then down to WIPP. And then we've had a few issues with the Yucca Mountain Project and the process.

I'm here to offer 25 years of

knowledge and wisdom that our Agency has gone through, and the state of Nevada has gone through, in helping you come up with a plan for the future that would work in a community where you have competition, where people are actually trying to get whatever plan and direction you come up with.

Sweden, most of you probably don't know, did this for 20 years and threw away their whole program. And then restarted it again, trying to create a competition where the community would buy into it.

There's many things as we sit back and go, "Well, if they had done this, this, this, and this, we wouldn't have had this issue, that issue, or that issue." And I think the state of Nevada as well as some of the counties and local governments of Nevada that have been in here for 25 years can be of help.

I'm glad you mentioned the Nuclear Waste Technical Review Board. Although we've

battled on science with them over the years, they are a fantastic group. They have an amazing staff, and their staff can be a great resource for you as staff. And they are already paid for; I know John Garrick has tried. But they have visited every site. And they have looked and had a reprocessing summit over just a few months ago, and things like that.

So we're here to help you find a solution. We think that selling nuclear energy to the public and making it politically acceptable, although not perfect because there are people who do not like nuclear energy, is half the battle. There's the greatest scientific minds in the world, but you've got to be able to sell what you have at the end to the majority of people.

Thank you very much and hopefully the state can work with one of your subcommittees.

CHAIR HAMILTON: Thank you very

kindly. We appreciate your remarks.

MR. BARRETT: Good morning. My name is Lake Barrett and I'm speaking to you as a public citizen today.

We made the nuclear waste and we have responsibilities to our grandchildren to dispose of it. We ethically should not just kick the trash down the road and give the disposal problem to our great grandchildren. It's wrong for a great number of reasons.

I remind the Commission that 50 years ago, the AEC said the Hanford tanks would be safe for over 50 years. We had a lot to learn about that. But words like that are even being spoken today by very important people who think it's perfectly fine to leave spent fuel and nuclear waste at our sites today for several hundred years.

In my limited time here, I recommend you focus on developing a politically sustainable Nuclear Waste Plan B that the nation can rationally compare against

the Plan A Yucca Mountain.

Yucca Mountain, which like it or not, and as imperfect as it may be, is the lawfully designated repository site. The alternative, which is your charter, I suggest should be a three-element Plan B where the most important element is the geologic disposal.

The geologic disposal is the key to your charter and your task. And it needs to be done in an ethical period, which in my opinion would be something like 25 years from now. Do not lose --

CHAIR HAMILTON: Okay. I think your time is expired. Thank you very much.

MR. MCLEOD: Good morning. Thanks to the Commission for the opportunity to speak.

I'm Rick McLeod, executive director of the Savannah River Community Reuse Organization. Ours is a nonprofit regional group supporting job creation in a five county

region of Georgia and South Carolina, near the DOE Savannah River site. We are unique among DOE's communities in that we have an area of interest that covers two states.

When the Department of Energy abruptly pulled the plug on Yucca Mountain, it left supported communities across the United States in the dark and frozen out of a process designed to answer the critical question: why abandon Yucca Mountain and what will it take to replace it?

DOE's action has the effect of turning the Savannah River site, and many other locations across the country, into de facto permanent storage sites. We consider this to be an intolerable situation.

Your work is important, as important as the safe long-term disposition of nuclear waste. We want your panel to succeed. We are here today not as adversaries but as allies. We have three specific suggestions for your consideration.

First, we respectfully insist that affected communities have representation on and direct input into the panel's deliberations. What your panel recommends will impact us in the nuclear communities.

Second, any review of potential disposition options for high-level waste must include Yucca Mountain. Yucca Mountain is the only known means to dispose of high-level waste, and it must not be discarded unless and until a better disposal option has been determined and verified.

Third, we support processing options as one means to reduce the quantities of spent nuclear fuel. The need for Yucca Mountain capability varies with the processing option to be developed. However, even if spent nuclear fuel reprocessing is chosen as an option, a permanent high-level waste disposal option will still be required.

Our organization has prepared a 27 page white paper, or strategy paper, for our

community. It was designed to be a catalyst for public dialogue concerning the implications of the decision to halt work on Yucca Mountain. I brought a copy of that paper for the Commission. And I'll leave an extended version of my comments, also.

CHAIR HAMILTON: Thank you very much.

MS. TREICHEL: My name is Judy Treichel. I am with the Nevada Nuclear Waste Task Force.

I want to caution all of you that it's so important when you talk about public credibility and public confidence. Those aren't just words like transparency and openness. People can read the minutes and they can hear that you said all of the words. But it just plain doesn't work unless you've got a way in which you actually have people buying in and trusting what you're saying and doing.

When the Yucca Mountain project

came to Nevada, it wound up getting there while people were still dealing with atmospheric and underground testing at the Nevada test site. The atmospheric was over but underground was still going on.

And people knew that they had been lied to by the Department of Energy. Because all through that time, all you heard was: there is no danger. And they saw people and animals suffering from the radiation that had happened. So it wasn't true.

When people challenged the Department of Energy on damage that they already knew had happened, what they heard back was, "That was then and this is now." And it was not easy for people to just turn the page and decide that this would be a new day. And they never really did.

Finally, Secretary Watkins, way back at another time, instituted a panel somewhat like this to examine trust and confidence with the public. And it had a lot

to do with the cleanup of weapon sites, but it also dealt with Yucca Mountain.

When that report and the work that the committee did was finished, they had some excellent recommendations. And as Secretary Chu mentioned, the report went right on the shelf and none of those recommendations ever took place.

So I would just caution you that right from the very beginning, if there's an assumption around the table that nuclear power is good and vital for the future, that may not be accepted by people. They may see that as a dedication to making the problem bigger. So you've got to get, right from the very beginning, some understanding and some way to find a way to at least talk to people.

And you have to give the people who disagree with you as much respect, time, and whatever as you do the people who agree with what's going on. Because we've always found that those that seem to buy in and agree

always seem to get a lot more respect and a lot more time to deal with those that were making the decisions. Thank you.

CHAIR HAMILTON: Thank you very much.

MR. SEIDLER: Good morning. My name is Paul Seidler. Thank you for the opportunity to speak today. I'm representing myself.

I've worked on the used fuel issue and low-level waste for the past 25 years, and have had the good fortune to work on the issue on behalf of the state of Illinois Department of Nuclear Safety, as a federal worker at SAIC, on the Yucca Mountain project on behalf of several local governments in Nevada, and for the nuclear industry as a senior director at NEI.

It's been an amazing experience working on the issue from so many different viewpoints. Perhaps the most rewarding period was early in my career when I escorted spent

nuclear fuel shipments through Illinois to the GE Morris reprocessing facility, and on the TMI shipments to Idaho.

The observation by Committee members about locals being more supportive than folks at the state level because locals benefit more is true. But it's only part of the story. They also stand to lose more and, in my experience, invest more time in forming that support. As a result, fear and politics become a much less dominant factor in decision making.

The other comment I'd like to make regarding yesterday's session relates to the fact that DOE should have but didn't mention implications related to the EISs covering the cleanup sites, and how not having Yucca affects their findings. I don't have time to discuss the complexities of that today, but the action will have a tremendous adverse impact on cost and the credibility of EM programs.

Yucca Mountain isn't the best site and the Nuclear Waste Policy Act is far from perfect. There is no such thing as a best site. And the idea of permanent disposal of this incredibly valuable asset makes no sense.

The NWPA was in many ways progressive legislation providing the state of Nevada hundreds of millions of dollars to be involved and challenge the project. Lincoln County and the other affected units of government have countless studies and war stories that we would gladly share with you.

This issue is far too politically complex to be managed by a large government agency. The director of the program is a political appointee who on average stays in the job for less than 2 years, running a capital-intensive project that must get political approval for funding every year. That just doesn't work.

The next program should provide tangible safety assurances and safety control

to local jurisdictions. And significant benefits, particularly ones that create jobs. These benefits should be provided as early as possible and on a silver platter to the communities and be well-defined. Don't make them come to you.

Finally, speaking as a Democrat and as an American who wants to see this administration succeed, I'm incredibly disappointed by the total lack of transparency and science-based decision making we have seen recently at DOE. There has been no access. No letters are responded to. We are first told that DOE will go forward with licensing because it will be a valuable learning experience, and then it is not. The role of the NRC is to determine whether the --

CHAIR HAMILTON: I'm sorry. I have to interrupt you. Your time is finished.

MR. SEIDLER: Thank you very much. I appreciate the time.

CHAIR HAMILTON: I apologize to

all of the presenters for being abrupt, but we do have to follow the schedule.

You may proceed, sir.

MR. ZEIGLER: Thank you. I'm Joe Zeigler from Nye County, Nevada.

On November 16, 2009, with the apparent abandonment of the Yucca Mountain Repository Program, a letter endorsed by the affected units of local government in the Yucca Mountain vicinity was sent to the Secretary of Energy. Those local governments include Nye, Clark, Lincoln, Churchill, Mineral, Eureka, White Pine, Lander, and Esmeralda Counties in Nevada and Inyo County, California. To date there has been no response to that letter.

The purpose of the letter was to point out the importance of local community involvement and whatever recommendations come from this Blue Ribbon Commission. To that end, a copy of the letter will be submitted in its entirety as comment to the Commission.

The key paragraph of that letter reads as follows.

Local stakeholder involvement will be essential to the success of whatever is ultimately recommended and implemented by the Blue Ribbon Commission. We, the individual affected units of local government, ask you to involve us in the Blue Ribbon Commission process.

We believe that sharing our collective years of experience participating in the oversight of Yucca Mountain in accordance with the various provisions of the Nuclear Waste Policy Act will assist the Commission in its deliberations. As individual local governments, we believe our respective county documents, reports, studies, testimonies, and subject matter expertise will be helpful to the Commission's work and should not be overlooked.

To facilitate the appropriate consideration of what went wrong and what went

right and implementing the current Nuclear Waste Policy Act, it's suggested that the Commission hold at least one of its meetings in Nevada. The local governments in Nevada are ready and willing to support the Commission. Thank you.

CHAIR HAMILTON: Thank you very much.

MR. SPENCER: Hello. I'm Jack Spencer with the Heritage Foundation but speaking on behalf of myself this morning.

Like some of the previous speakers, I also believe that Yucca Mountain is truly critical to the future of nuclear energy and should be considered by the Commission. We also recognize, however, that how we got to this point with Yucca Mountain probably is not optimal.

We believe that the Commission should use this as an opportunity to recalibrate how we approach Yucca Mountain. We need to come up with a system where the

Nevadans are truly in control of the process, one where they can use this as leverage and negotiating point with nuclear waste producers to come up with a workable solution.

If under those circumstances we still find that Yucca Mountain is not supportable by the people of Nevada, then it perhaps should not be part of the solution. But in order to get there, we need to make sure that the NRC is allowed to continue its review of the DOE's application for the permit there.

Secondly, we believe that in order for us to truly come up with a long-term solution to nuclear waste disposal, it has to be a solution that's rooted in the marketplace and that's driven by the private sector. We think that one of the primary obstacles to that is the way the system is really built right now, where the federal government has full control over how we deal with nuclear waste.

In order to bridge that gap, I believe that we need to put more control of nuclear waste disposal into the hands of those who produce it. At that point, you start to build competition both on the front and the back end, and activities to develop a long-term solution. Because they are the ones who should be highly incentivized to come up with that solution in order to continue their business. Then and only then will we come up with a way to do that.

I'll leave my remarks at that, but I will be submitting a longer statement to the Commission that lays out how we think we can transfer that responsibility. Thank you.

CHAIR HAMILTON: Thank you very much.

MS. DOMAN: Hello. My name is Allison Doman and I'm here on behalf of Energy Communities Alliance.

ECA is an organization of local governments impacted by and adjacent to DOE

sites. Our members include Savannah River, Carlsbad, various counties from Nevada, and all the communities around Hanford sites.

Last year we wrote a letter requesting that a local government official be included on the Blue Ribbon Commission. Although we are not represented on your Commission, our communities are very interested in and supportive of your work. We are encouraged by many of the Commissioners' comments yesterday and today regarding the importance of our communities and local governments.

We would like to reemphasize that we feel it is essential to get the input from these communities that will ultimately be most impacted by your decisions. As Senator Domenici mentioned yesterday, members of our local governments and communities are very knowledgeable and experienced with the issues, and their perspective is very important.

ECA would encourage the Commission

to visit our sites and the communities to discuss these issues further. To date, the communities that have been included in discussions from the beginning, such as Carlsbad, have been the ones that have experienced the most success.

Also, ECA feels that it is important for your Commission to fully evaluate all the options for waste disposal. We feel that this must include Yucca Mountain.

Please know the ECA can be a resource for you to work with communities. Thank you.

CHAIR HAMILTON: Thank you very much.

MR. ALVAREZ: Good morning. My name is Robert Alvarez. I'm a senior scholar at the Institute for Policy Studies in Washington, DC. And I'm also here at the request of Mr. Russell Jim, who is the manager of the Environmental Restoration/Waste Management Program for the Yakama Nation.

I served as senior policy advisor to the Secretary of Energy during the Clinton Administration and was recently asked by the Bulletin of Atomic Scientists about my views, about what issues this Commission should consider. And I have it here, which you may find of interest. I'll submit it for the record.

With respect to the concerns of the Yakama Nation, I just wish to bring two issues to your attention. One is that this Commission as a federal entity has trust responsibilities under treaty obligations with tribes and the United States government. The Department of Energy has a tribal policy which I would recommend that you consult to see exactly what it holds. But the heart of it is compliance with treaty obligations.

To a large extent, the Hanford reservation where the Yakama Nation has treaty rights to is a microcosm of many of the issues this Committee is going to be addressing.

It has an operating commercial nuclear power plant that has about 580 metric tons of spent fuel in a pool that's about 60 feet above ground.

It has about four times its original design capacity as a result of being the largest plutonium production center in the world.

It also has the largest volume of high-level radioactive waste stored in 177 underground tanks, 1/3 of which have leaked. Some of these wastes have entered groundwater which will enter the Columbia River.

Hanford also has at least a ton -- a ton of plutonium-239 buried in the ground out there. And the Department of Energy currently has no credible plans for its removal or disposal.

Recently the Department of Energy estimated that within less than 1,000 years, the migration of plutonium from those disposal sites would render the near bank of the

Columbia River uninhabitable.

I would respectfully suggest that among the places you visit that you visit the Hanford site because of these unique attributes. Thank you very much.

CHAIR HAMILTON: Thank you, sir.

MS. NAVIS: Good morning. My name is Irene Navis. I'm the planning manager for Clark County, Nevada's Nuclear Waste Oversight Program.

I'm a relative rookie in this program. I've only been at it for about 9 years out of the 22 years that Clark County has been involved in this program and executing our duties under the Nuclear Waste Policy Act.

First, a couple of mentions about the structure and content of your meetings. I think they're very valuable. The Web streaming, from what I understand from folks back home, is working very well. And we appreciate having that capacity. We also want

to suggest that you perhaps use Web streaming and Webcasting and those kinds of technologies for your future meetings, including your subcommittee meetings which would be cost-efficient and very effective.

We also hope that you will post the wonderful presentations that we received yesterday on your Web site, and to continue to keep that information flow going to those who couldn't attend the meeting.

Along with my colleagues from Nevada, I wanted to also offer us as a resource. We've spent many, many years looking at various aspects of this program. We have what I believe are excellent lessons learned and best practices in the area of safety, security, critical infrastructure protection, transportation, as well as community perception issues.

We've studied socioeconomic issues, institutional issues, stakeholder involvement. We've actually won numerous

awards for our public outreach and public involvement activities. And we would like to share those with you.

I also suggest that you use the Nuclear Waste Technical Review Board as a resource. They have completed a recent report on programs throughout the world. That would be an excellent summary and guide for additional studies.

The 2006 National Academy of Sciences' Going the Distance report is an excellent model, not only for stakeholder inclusion but also the types of issues that you have to address. One of the things that they did was they conducted an inventory of the stakeholders, their issues, as well as what resources are available to them. And that might be a good place for you to start, as well.

We also have participated in a number of conferences and presented peer-reviewed papers on many of the issues that are

included in your charter. Those conferences include the Waste Management Conference that takes place every year in Phoenix, the International High-Level Waste Conference that takes place in Las Vegas every 2 years, IEA and the Wessex Institute of Technology. So those are some resources where you can find readily available papers on the issues that you'll be discussing.

I also invite you to Las Vegas for a future meeting. The administration says it's great to travel to Las Vegas and we invite you out there to participate in meetings with us. Thank you.

CHAIR HAMILTON: Thank you very much. Your time has expired.

MR. POWERS: I'm Charles Powers. I'm a professor of environmental engineering at Vanderbilt, and co-principal investigator of the Consortium for Risk Evaluation -- with stakeholder participation, a group that's been working for the last 14 years on issues

associated primarily with legacy waste. But by virtue of the disposition, I've more recently been getting into the issues of commercial work. I am here to speak, however, as an individual.

Three things I want to sort of pick up from what you folks have been talking about the last 2 days. I am concerned a bit that the way in which you've sort of lined out the three -- I basically agree with what Commissioner Meserve suggested as a way of thinking about these issues. But I am concerned that you will not be looking hard enough at the problems created by the different definitions under the several different laws of defense, as compared to civilian nuclear waste and other ways in which those types of waste are classified.

It was in this classification they misplaced concreteness in the way in which those laws define those different types. And it really came out, I thought, pretty sharply

in the discussion that Commissioner Domenici had with Mr. Marcinowski yesterday in trying to work out the relationship. What is greater than Class C and how that relates to low-level waste, and how a source-based definition of high-level waste sort of reframes the questions in ways that are not helpful. And I hope you folks looked seriously at that question.

Second, I'm concerned that you pick up on Commissioner Sharp's suggestion that while you may come up with 35 or 45 different recommendations, your real value at this point is being able to come together with a system that actually works together and integrates across the three areas that you're planning to divide into subcommittee work.

You're thinking very specifically about the specificity of that report and who will use it, not only the secretary but also the way in which Congress has to think about these questions. And particularly the way in

which the institutional suggestions that you make -- they need to be thought through in terms of not just options, but ways in which the country can be led into a way of overcoming what has been the last 30 years of problems.

Finally, I'm going to suggest that you use three concepts that always seem to get desegregated in the way in which this system works. Safety and all the technical issues associated with that must always be tied, it seems to me, to questions of fairness and equity.

And also, it seems to me that making informed consent a fundamental way of thinking about what you do, with the division that's been operating and creating problems for you at Yucca Mountain, in a very interesting way overcame the very complex problem of jurisdictional differences, in the way in which the WIPP facility that Commissioner Domenici has been suggesting to

you is an important model.

It's not only a model for safety. It's a model of the way in which the equity issues have been worked out, and also the way in which informed consent --

CHAIR HAMILTON: Thank you. Your time has expired.

MR. POWERS: -- the federal and state government working together have worked so effectively for you. Thank you.

CHAIR HAMILTON: Thank you, sir.

MR. MEYER: My name is Alfred Meyer and I'm here as a private citizen. I want to thank you for extending the comment period for public participation. You may find that my comments reflect some of the public opinion that you need to win over.

I think Candidate Obama was correct when he stated that no nuclear power plant should be built until the waste issue is solved. The waste problem has not been solved in this country or any other country.

I do not see reprocessing as an answer. It's expensive and proliferation-prone. It may reduce the volume of some wastes, but it generates other wastes and still requires a geologic repository.

I don't see nuclear power as an answer to climate change. The fuel cycle itself emits carbon. We can't build enough nuclear reactors fast enough to create the carbon reduction we need now to stop climate change.

I would commend the book titled Carbon-Free and Nuclear-Free: A Roadmap for US Energy Policy. It's available on the Web for free download as a plan that will show you how we can reduce carbon emissions, coal-burning power plants, and nuclear power plants with existing technology.

Nuclear power is too expensive. Why does a 50-year old industry need nuclear socialism to have the taxpayer take the risk while private companies reap the profits?

It's too dangerous. Normally operating reactors emit radioactivity into the atmosphere, groundwater, and soil. The National Academy of Sciences Biological Effects of Ionizing Radiation Report 7 says that all radiation has risk and that all risk is cumulative.

And it's dirty. Any industry that leaves behind the most dangerous materials known to man which lasts essentially forever is not a clean source of energy.

This panel rightly identifies the need to gain public confidence. But this panel it appears is for the promotion of nuclear power. Solving the waste problem could be seen as an inconvenient truth that needs to be addressed to achieve this end.

I would suggest that it's going to be hard to achieve public support and scientific credibility when this investigation starts out with a predetermined outcome of supporting nuclear power.

Please base your report on reality. Please address what are the health and environmental problems presented by nuclear waste, and what policy will protect the human gene pool for the duration of the risk period, which is hundreds of thousands of years. Don't support a policy that assumes new technologies that do not exist yet. Support research and development but give us a reality-based policy.

We teach our children to clean up their mess before making another mess. I think that this wisdom should apply to radioactive waste. Clean up what we have before making more. Thank you very much.

CHAIR HAMILTON: Thank you.

MR. KIRK: Hello. I'm Scott Kirk. I represent Waste Control Specialists in Andrews County, Texas. I'm a health physicist.

I was pleased yesterday to hear that Secretary Chu acknowledged that the

charter of this distinguished panel will include low-level waste.

I also wanted to inform you that the WCS site -- we are licensed and we are currently developing the first, or what will be the first, low-level waste disposal facility in the United States since the Low-Level Waste Policy Act was enacted in 1980. Our facility will serve the Texas Compact as well as the federal government.

This is a tremendous achievement and one which cannot be overstated. Ten sites before us have failed and hundreds of millions of dollars have been spent on trying to develop new sites.

While our geology is ideal, our success is really rooted in the tremendous support of our local and regional community. I don't know if it was their pioneer spirit or just their desire to build and contribute to our great nation.

The community has a long history

of powering America. They have some of the richest oil deposits that were discovered in the Permian Basin. Oil was at that time maybe envisioned also as an alternative energy source, but today our leaders are moving forward to developing new and diverse energy bases that will contribute to reducing the carbon footprint.

There are huge wind farms there. They are developing solar energy sources as well as nuclear, both at the WIPP site, the LES site that we share a border with, and the WCS facility in Andrews County, Texas.

We wish the panel would come to visit us. We extend an invitation. I think you should come explore the values and the opinions of our local leaders as well as the citizens and understand why they embrace nuclear technology and nuclear energy.

Thank you for your time.

CHAIR HAMILTON: Thank you very much.

MR. KAMPS: Good morning. My name is Kevin Kamps and I represent Beyond Nuclear based in Takoma Park, Maryland.

I first became involved in these issues in 1992 when the Palisades nuclear power plant in southwest Michigan began storing high-level radioactive waste and dry casks 100 yards from the water of Lake Michigan. And found out the hard way about the Nuclear Regulatory Commission proceedings for such installations.

I have been working on this ever since. In large part because Lake Michigan is very special; drinking water supply for 10 million people and 30 million downstream, if you add it all up.

And I've had the honor to work with many great people, people like Grace Thorpe of the Sauk and Fox Indian Nation in Oaklahoma, also a member of the Pokagon Potawatomi tribe which is very close to Palisades. Her father, of course, is Jim

Thorpe the great athlete.

Her two great accomplishments in life were to restore her father's Olympic gold medals to the family, and also to stop a radioactive waste dump that was targeted at her reservation in Oaklahoma. And then she went on the road and helped stop 60 of these proposed parking lot dumps on Indian reservations.

And there are others I could mention. Corbin Harney, the spiritual leader of the Western Shoshone Indian Nation who devoted decades of his life to stopping not only nuclear weapons testing, but the Yucca Mountain dump.

And others who are still with us. Rufina Marie Laws of the Mescalero Apache who stopped a parking lot dump on her reservation in New Mexico.

Margene Bullcreek and Sammy Blackbear of the Skull Valley Goshutes in Utah, who stopped a parking lot dump targeted

at their reservation.

Joe Campbell of the Prairie Island Tribe in Minnesota, whose community daycare center is 500 yards away from a dry cask storage facility at a reactor that's leaking tritium into the Mississippi River.

Winona LaDuke at the White Earth Reservation of the Ojibwe in Minnesota whose line is that the best minds in nuclear science have been hard at work for over 50 years to figure out a solution to the radioactive waste problem, and now they've finally got it. Haul it down a dirt road and dump it on an Indian reservation.

So this industry and officials in government have been responsible for grave violations of environmental justice having to do with radioactive waste. And even though the wastes have not been delivered into these communities for storage forevermore, it's caused tremendous wounds to these communities. People have had to devote their lives to

fighting this issue and some have received death threats for doing so.

And why are they targeted in the first place? Because of their political powerlessness --

CHAIR HAMILTON: I'm afraid your time has expired.

MR. KAMPS: -- and their economic desperation. So I would ask this Commission not to continue that shameful history.

CHAIR HAMILTON: Thank you very much.

MS. BOYD: My name is Michele Boyd. I'm with Physicians for Social Responsibility.

No matter what we decide as a country to do with the spent fuel, this fuel is not moving away from the sites anytime soon. We have a real problem. There is an immediate threat that's posed by the current storage of spent fuel in densely-packed pools and vulnerable dry casks. This is the concern

of the local communities that live near these sites.

Two days ago we released what we're calling the Principles for Safeguarding Nuclear Waste at Reactor Sites, signed by over 150 national and grassroots groups from all 50 states.

The principles call for requiring a low-density, open frame layout for fuel pools, and establishing hardened on-site storage of spent fuel that would be resistant to severe terrorist attack. It also calls for protecting the fuel pools that are currently at the sites. And finally, prohibiting reprocessing which is extremely expensive, highly polluting, and a proliferation threat, and will actually complicate the waste problem.

This is a plan being called for by people who actually live near these sites. They are not calling to move this waste willy-nilly to somewhere else. They are saying:

let's take our time and deal with the real threat we have today. Thank you.

CHAIR HAMILTON: Thank you very much.

MR. MAKHIJANI: Thank you very much, Commissioners, for having this expanded public comment time. I'm Arjun Makhijani, president of Institute of Energy and Environmental Research. I've been working on nuclear waste issues for nearly three decades.

I think that transcribing these proceedings is very important and I really appreciate that you agreed to public comments -- that you should do that.

I also think that it might be useful for you to have formal presentations that are a little bit longer than 3 minutes so you can have a discourse with many people; state people, local people, Indian tribes, and others who have been looking at these issues for a long time.

As regards the substance of this,

reprocessing has a lot of mythology associated with it. And I hope that you will help demythologize this and base the discussion in reality.

I hope that you will truly investigate the French situation. France uses only about 5 percent of its uranium resource, even though it reprocesses. And 4 percent is in the first round. This idea that reprocessing is going to give you 90 percent utilization of the energy value of the fuel is really mythology.

I just want to give you one calculation. If you take the 100,000 metric tons of spent fuel that are either created or will be created by the existing 100-reactor fleet and reprocess it, put it in breeder reactors, convert all the uranium to plutonium and burn it, as many have to suggested to get all the energy value of the uranium, it would require 100,000 breeder reactors operating for 100 years. A hundred thousand reactor years

to get rid of all that uranium and turn it into efficient products.

If it costs a penny extra over existing waste policy per kilowatt-hour to do that, the total cost of it would be $8 trillion. That is considerably more than the value of all the electricity that would be generated by the current 100 reactor fleet over 60 years.

I would be happy to supply you the details of the calculations in writing, and also some other materials. But I really want to thank you for opening up the public comment.

Finally, I think public comment is truly useful when it is responded to. So I would really urge you, as somebody who has participated on all sides of federal advisory commissions -- I have been on advisory commissions. I've been technical support to one. I've been a member of the public. It really is not helpful if you take public

comment and don't respond to the substance of the public comment.

So I would really appreciate knowing of a process of taking public comment and responding to both the oral comments and --

CHAIR HAMILTON: Thank you very much.

MR. MAKHIJANI: I would be happy to send you a copy of my book that Alfred mentioned earlier.

CHAIR HAMILTON: Thank you very much.

MS. FISHER: Good morning. My name is Allison Fisher. I'm the energy organizer for Public Citizen, which is a national public interest organization located here in Washington, DC.

I'd just like to say a few brief words about Public Citizen and our interests here today before I get into my comments. We do have over 150,000 members and activists

across the country, many of whom reside in states that have nuclear facilities and the associated waste. We were founded in 1974. Since that time, the energy program has been a nuclear watchdog on safety, security, and waste issues.

Now, regarding the creation of this Commission, Public Citizen and its activists across the country participated in letters to both the administration and Congress urging them that we be involved and represented in this process. And I'm here today to continue that dialogue on how best to ensure transparency and maximize stakeholder and public participation.

So in that vein, I did want to extend my gratitude to the Commission for Webcasting this meeting and for extending the public comment period. The ability for the public to both have access to these meetings and ample time to provide comments, to not just the review process but the

recommendations, is central to the mandate of this Commission, and is well-reflected in the general directive of this administration.

I wanted to draw from a memo that was written by President Obama's administration in January 2009 where he writes, "We will work together to ensure the public trust and establish a system of transparency, public participation, and collaboration."

In order to do that, to help you meet those objectives, I've drawn from our membership to give you some concrete suggestions. Our membership had a lot of great ideas. The response was overwhelming. I wish I could share all of them with you today. I will submit them. But I did want to read from a couple of excerpts.

From a member in Glendale, California: "I would suggest that the Blue Ribbon Commission on America's Nuclear Future be pressed to produce regular, verifiable

reports for the public that provide accurate, up to date information relating to all aspects of the efforts at handling this problem. In particular, the American people must know where the radioactive waste sites are, how they're being managed, and how the waste is being prevented from contaminating adjacent lands, water tables, top soil, and residential areas."

From Boone, North Carolina: "Demand that public hearings in the affected communities be available, well publicized, and with adequate time for comment."

From Brewster, New York: The Commission should "one, hold all meetings in public session; two, have meetings well publicized in advance; three, hold meetings at various locations and times to include evenings, in order to allow maximum attendance by interested members of the public; and four, have a public input portion to each session."

From Portland, Oregon: "The people

impacted by the potential dangers of radioactive waste storage should have a major say in these decisions."

CHAIR HAMILTON: Okay. Thank you very much.

MS. FISHER: -- painfully aware that the storage there is a disaster waiting to happen. Thank you for your time.

CHAIR HAMILTON: Thank you.

MS. D'ARRIGO: Hello. I'm Diane D'Arrigo with Nuclear Information and Resource Service, radioactive waste project director.

First of all, we would like to applaud the administration for withdrawing the application to the Yucca Mountain site. It should have been disqualified a number of times before, and the changes had to be made in order to allow it to stay in the running. So we celebrate that it is off the table at this point.

I want to encourage that the panel look at the existing waste sites that we have

right now. I encourage Dr. Peterson's recommendation that we look at the existing defense sites, the Department of Energy weapons facilities, but also the West Valley nuclear waste site which was mentioned a couple of times yesterday in the briefing materials that you had.

It was the only commercial nuclear reprocessing that was done in the United States from 1966 to 1972. It also is one of the six so-called low-level radioactive waste disposal sites in the country. It's in highly erodible geology.

The projected cleanup cost for that site is in the range of $9.7 billion, about half of it for the reprocessing portion, and about half of it for the so-called low-level radioactive waste trenches. The reprocessing that took place was about half and half commercial and weapons fuel, because it was from 1966 to 1972 and there was a spill during that time.

That spill has resulted in a leak, a strontium-90 leak toward the creeks that cut through the site that drain into Lake Eerie and the water supply for millions.

The projection now is that it will cost about $1-1.2 billion to dismantle the reprocessing building and to clean up a portion of this leak.

The public in New York state is being told that the government -- right now the Record of Decision is expected any day from the Department of Energy -- that we will clean up this leak, and the reprocessing building which comprises about 1 percent of the radioactivity at the site.

And we will wait 30 or maybe 10 years to make a final decision on whether to clean up the rest of the site, which includes reprocessing waste and includes the low-level radioactive waste trenches.

This is unacceptable. If we'd have cleaned up that one leak earlier on, we

wouldn't have a $1 billion leak. And now we're being asked to wait 10 or 30 years -- we'll see what the decision is -- to make a final decision on the rest of the cleanup.

Clean up this site first before you even utter or consider reprocessing. It's not fair. It's not acceptable to the public.

I also want to mention that I've got a full cost accounting study, an independent study that was done on the options for cleaning up the site. And the safest, cheapest, cleanest option is to do a full cleanup now and make the decision now for the cleanup. I leave that --

CHAIR HAMILTON: Okay. Thank you very much for your statement.

MS. D'ARRIGO: And I do want to say that I've been working on the low-level radioactive waste issue and --

CHAIR HAMILTON: Thank you very much for your statement. I'm sorry. We can't permit you to go further. Thank you. Thank

you very much.

MS. BROWN: Hello. My name is Elisa Brown. I work with the Sustainable Energy and Economic Development Coalition, or SEED Coalition, in Texas.

We have gained intervener status in the NRC licensing adjudication of the South Texas Project and Comanche Peak, based on contentions we've raised which were deemed admissible by the Atomic Safety and Licensing Board dealing with severe accidents, existing water contamination, and the failure to consider alternatives to nuclear energy.

We appreciate the extended public comment period and Web streaming, and we ask for a continued commitment to transparency, accountability, and public participation. We ask that all of the meetings be Web streamed and that the video transcripts, PowerPoints, reports, and briefs all be readily electronically available for the public.

And the public participation

should not only be invited but responded to. And it definitely needs to be more than 3 minutes.

We appreciate Mr. Rowe's invitation of Union of Concerned Scientists to brief the Commission.

I would also suggest that you invite Dr. Arjun Makhijani, president of Institute for Energy and Environmental Research, as well.

We also work with many who oppose the low-level radioactive waste site in West Texas owned by a private company, Waste Control Specialists.

It's important for this Commission to understand the controversy surrounding this site. The TCEQ, the Texas Commission on Environmental Quality, technical team reviewing WCS's low-level license application and the technical merits of the site, unanimously recommended that the license not be issued to WCS due to the suitable geology

and hydrology of the site, and noted that the location of the water table was as close as 14 feet beneath the site. The politically appointed TCEQ commissioners ignored the scientists' findings and issued the license anyway.

And if this Commission accepts Waste Control Specialists' invitation, we also ask that this Commission talk to the scientists who reviewed the site as well, who quit because their scientific recommendations were concerned.

Overall, just listen to the science behind all of this. And realize there's a lot of political forces and there's a lot of money pushing for things that are in contradiction with the science. Thank you.

CHAIR HAMILTON: Thank you very much.

MR. LIST: Good morning, Mr. Chairman, Co-Chairman, and members of the Commission. My name is Robert List. I live

in Nevada. I'm a former Attorney General and former Governor of Nevada.

I've followed this whole process concerning Yucca Mountain for some 28 years. In fact, the Nuclear Waste Policy Act was adopted during my term in office.

Since my years in public service, I practice law and I'm also a consultant. I've represented the industry during this process portion of it. And I currently represent four Nevada counties in the Nuclear Regulatory Commission proceedings involving the licensing.

I wanted to, number one, say that I don't envy the job that you have before you. If you didn't get enough of a flavor yesterday for the scale and the scope of the challenge that this nation faces, I think you got a bit of a taste of it during the preceding 40 minutes or so. As the array of folks have come before you, it's obvious that there are hundreds and thousands of people in the United

States and around the world, all of whom have something to say, something to offer, and have a point of view.

I want to simply say this. There are a number of lessons that can be learned from the Nevada experience. There are some good things that have been done and unfortunately some things that could have been done much better.

One thing that I would mention specifically as an example is that the Nuclear Waste Policy Act contains language which enables the government in Nevada to be compensated or to be given grants to cover impacts that occur there. However, the Act fails to set up any decent mechanism to implement that.

On the government side, who can come forward and say, "We'll offer you $100 million or $150 million a year for 10 years," or $20 million for life, or whatever? No single entity can do that. The Department of

Energy can't do it; the White House can't do it. Congress would argue over how much money it ought to be and how it ought to be paid out. So there can be no effective negotiation from the government side.

It's also been true from the Nevada side. Despite what some of the publicity and the history has been, there are a good many people in Nevada who ask me almost every day, "What can we get out of this?" And the answer is: we don't know because nothing's ever been put on the table.

And if it were, the question then would be: who speaks for the state of Nevada? Is it the Governor; is it the Nevada League of Cities; is it the Nevada Association of County Commissioners? The money and the impacts of it, of course, affect all the various layers of government.

So one thing that I would suggest as an actionable item, Commissioner Sharp, might be amendments to the Nuclear Waste

Policy Act, which establishes a real process for the implementation of negotiations and compensation.

CHAIR HAMILTON: Thank you, Governor. Your time has expired.

MR. LIST: Thank you. Again, we stand ready in Nevada to offer our experience to you.

CHAIR HAMILTON: Thank you very much.

MS. WILLIAMS: My name is Mary Jane Williams. I'm doing a documentary about nuclear waste. I'd love to interview all of you if I could.

The father of the nuclear navy, Admiral Rickover, told Jimmy Carter, "I wish that nuclear power had never been discovered." When Jimmy Carter said, "Admiral, this was your life," Rickover said, "I would forego all of the accomplishments of my life, and I would be willing to forego all the advantages of nuclear power to propel ships for medical

research and for generating electric power, if we could have avoided the evolution of the atomic explosives."

Albert Einstein said, "I made one great mistake in my life when I signed the letter to Roosevelt recommending atomic bombs be made."

Like these two great men, many of us think that the whole nuclear era was a tragic mistake.

This Commission should be called the Commission on Radioactive Waste. It should confine itself to trying to figure out how to keep nuclear waste from the biosphere for hundreds of thousands of years. This Commission should not be pushing new nuclear power plants.

Nuclear should be phased out in our country. If that means cutting the generation of electricity by 20 percent, I think we should do that. We'll try efficiency; we'll try renewables. But if in

order to phase out nuclear plants, it requires cutting our consumption of electricity, we should do that. This is what we owe future generations. In World War II we rationed ourselves for an important cause. I think we should be willing to do it again if necessary.

I would ask you to think about the fact that during the lethal life of this waste, the United States of America will disappear as a country. We will actually live our entire life as a country and come to an end in the lifetime of this waste that our generation is leaving behind. Our language will disappear, certainly the electronic industrial age that we're now living in will disappear. Civilizations will rise and fall and rise and fall and rise and fall.

The only constant during all that future time will be our selfish, foolish generation's lethal legacy of nuclear waste. The appropriate attitude is shame, I think, and certainly not producing any more nuclear

waste. Thank you.

CHAIR HAMILTON: Thank you very much.

Are there others?

MR. FETTUS: Good morning. I'm Geoff Fettus with the Natural Resources Defense Council, an environmental group that's been involved in these matters for about four decades. I echo the governor of Nevada's comments that I don't envy you your task.

I'll quickly get to the point with my 2.5 minutes left to first express concern with some of the things we saw and heard yesterday. For example, a lot of the information that was provided to you in a host of the presentations was, from our perspective, either incomplete -- some of it was very good. Some of it was problematic from a political point of view. Some of it was inexact, or some of it was essentially two facts when you really need 10.

As one singular example, the

description provided by my friend Frank Marcinowski yesterday on the high-level waste issues. A number of things were presented that were descriptions of what he presented as facts. And respectfully, we see them as long held beliefs that are actually very controversial.

As a singular example of that, I don't know if it was made clear to the Committee that the Nuclear Waste Policy Act is different for different states as a result of the 2005 National Defense Authorization Act. And it's a very complicated matter that I simply don't have time to go into today.

But it moves me right to point two, which is as you proceed, we implore you that you must allow for the broad range of opinions and perspectives that you're starting to hear today already during this brief public comment period. And by that I mean please don't just lump the public interest groups into a singular day, or contrast the energy

communities' folks into one singular day.

But throughout subject matter areas, make sure you get the wide range of perspectives, viewpoints, and expertise. Because every single issue, whether it's low-level waste, high-level waste, spent fuel, transportation -- you're going to have a broad range of very thoughtful perspectives. And this panel will go far by hearing all those perspectives throughout the process.

Which leads me to my last point, which is the process. We have concerns about the balance of the panel. And of course, I've known several of the panel members personally and others by reputation for years. And I have nothing but the highest respect and regard for the integrity of all the panel members.

That said, as a whole, we deem the Committee to be basically unbalanced with respect to the broad perspective of issues that are going to be presented throughout the

course of your enormous task. And with that set of circumstances, we strongly encourage that in the public presentation of information, of all the information that goes before the panel as DOE sets up its Blue Ribbon Web site and makes all this material publicly available that goes before the Commission -- that all financial disclosures are put up. And all institutional ties are also presented as carefully and as completely and openly as possible.

Thank you very much. We look forward to seeing the Committee again in the form of my colleagues Thomas Cochran, Christopher Paine, and the wide range of public interests --

CHAIR HAMILTON: Thank you very much.

Any further speakers?

MR. FRAZIER: Sir, I might ask, there was an operator error, mine, on Mr. Barrett's presentation of his statement. I

cut him about a minute and a half short. So with your indulgence I'll just bring Mr. Barrett back up and let him finish his statement.

Sorry, Lake. I should have warned you.

MR. BARRETT: I will wing it. Thank you very much.

MR. FRAZIER: A minute thirty.

MR. BARRETT: I believe the Plan B for disposing of waste should have three elements. First, I talked about the critical disposal.

The second is advanced nuclear technologies, which I believe is the least important one because advanced nuclear technology such as recycling will not eliminate all the waste. And there's still going to be some waste residue. But it's very good and it has merits, as the Secretary said the other day.

The regime -- if we have a new

repository up in Yucca, it's going to be many decades in the future. And I firmly believe we need a regime interim storage which would be a volunteer interim storage facility, regional, that would bridge us from the current storage at reactor sites.

We have 10 shut down reactor sites where that fuel should not be. And it should be moved to this regime interim storage facility.

I believe it should be commercially based. It should be cited through performance contracts from DOE to the commercial industry. It should not be a federal siting program; that hasn't worked in the past. And these performance contracts could be done a long time. It could be enhanced by different management structures that I hope you will look at as part of your charter.

So I believe it's very important that you focus on disposal, as well as the

other parts. Thank you very much.

CHAIR HAMILTON: Thank you.

Tim, is that all?

MR. FRAZIER: Yes, sir. That -- that concludes.

If I may, I would just like to remind everyone, if you had additional statements that you'd like entered into the record please email them to me: CommissionDFO@nuclear.energy.gov. We'll get them into the record and post them on the Web site.

I'm done now, sir.

CHAIR HAMILTON: On behalf of the Commission, allow me to express appreciation to each of the presenters of the oral statements. I feel reasonably confident that the Commissioners would agree with me that each of the statements was thoughtful, succinct, constructive, and helpful. We are deeply grateful to each of you.

Many of you I know have sat

through all of these proceedings for a day and a half. And we are very grateful that we've had an opportunity to hear from you. The Commission takes very seriously its responsibility to hear other points of view, all points of view, and we will continue to do that as we proceed. Thank you all.

Commissioners, thank you for your public statements and those who have attended.

We now stand adjourned.

(Whereupon, at 11:37 a.m. the meeting was adjourned.)

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