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NUCLEAR REGULATORY COMMISSION

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STRATEGIC ASSESSMENT AND REBASELINING

STAKEHOLDERS PUBLIC MEETINGS

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ASSURING SAFE MANAGEMENT OF NUCLEAR WASTE SESSION

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FRIDAY

OCTOBER 25, 1996

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WASHINGTON, D.C.

The Assuring Safe Management of Nuclear Waste Session was held in the Jefferson Ballroom of the Washington Hilton and Towers at 1919 Connecticut Avenue, Northwest at 1:00 p.m., Malcolm R. Knapp, Deputy Director, NMSS, NRC, presiding.

PRESENT:

MALCOLM R. KNAPP

CHIP CAMERON

TIMOTHY C. JOHNSON

JAMES E. KENNEDY

JOHN H. AUSTIN

LYNNETTE HENDRICHS

PRESENT: (CONTINUED)

PAUL GENOA

TONY THOMPSON

RUTH McBURNEY

STEVE COLLINS

LYNNE FAIROBENT

RAY DANIELS

EDWARD REGNIER

JIM RICCIO

TOM HILL

JANE FLEMING

MEG LUSARDI

DENNIS BECHTEL

GREG GURICAN

JIM MILHOAN

SIDNEY CRAWFORD

CHRIS EINBERG

HENRY MORTON

LAWRENCE CHANDLER

A-G-E-N-D-A

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

(1:19 p.m.)

MR. CAMERON: I welcome everybody. This is going to be the session on the strategic arena assuring the safe management of nuclear waste. And for those of you who are here for the first time, the process is very simple in terms of audience participation. After the NRC makes a presentation on the low level waste paper -- in this case, that's the one we're starting off with -- then we're going to go to the audience for comments, suggestion.

And we've been trying to make this as interactive as possible in terms of not only having a dialogue with the NRC, but also having a dialogue with one another on the issues. So, after we're done, if you do have a point to make, raise your hand; and when you're recognized, just come up to either one of the mikes and I'll be out in the audience with Steve Struthers, who is assisting us today, with a hand held mike to make it a little easier for you.

And state your name and affiliation, if appropriate; and we'll just take it from there. After we finish one issue paper, we'll move on to the next one -- high level waste in this case. And I think at the end of that discussion of high level waste, it will be time for a

break; and then we'll come back for the last paper which is decommissioning on reactor facilities.

There is another concurrent session going on in the next room on NRC fees, if any of you feel so disposed to go over there. And we're going to do a short wrap up at the end of the concurrent sessions today back in this room.

Now, Mal Knapp did such a great job yesterday that we've asked him to come back today and to present -- you're going to do all the presentations, right; and you have the authors of the paper here, and they'll come up and join us, and you'll introduce them.

Take it. Okay, Mal Knapp.

DEPUTY DIRECTOR KNAPP: I appreciate Chip saying that I did a good job yesterday. I thought what you had actually said earlier was you're going to do it until you get it right.

MR. CAMERON: Yeah, it's 10:00 tomorrow.

DEPUTY DIRECTOR KNAPP: We are talking today about three issue papers dealing with waste management, core decommissioning. The first of these is the issue on low level waste.

To go back in history several years, in -- I believe 1994, under pressure to fit the budget reductions which were then being imposed, one of the things that we

had to consider was that we could no longer reduce our programs by trimming a little from each program. We felt that we had to eliminate a program.

Among the programs available were high level waste, low level waste, decommissioning, uranium recovery. Recognizing our responsibilities in those areas; and recognizing that in low level waste, in fact, the applications were going into agreement states; that in fact, much of our regulation was on the books, we had to seriously consider eliminating the low level waste program.

It's not that we wanted to do it and not that we felt that good progress was not being made; it's simply that given the alternatives, this was the one that we felt would have the lowest impact on public health and safety associated with waste management.

There are, however, a number of concerns about an action like that. It's extremely dramatic, and could not be accomplished in compliance with the law unless some changes were made to the Low Level Waste Act and the Low Level Amendments Act. So, we provided to the Commission later in 1995 a study of what some of the options might be in terms of the size of the low level waste program, and what we would have to do to make the changes, and what we'd be able to accomplish in such a program.

And the Commission by this time, having initiated the strategic assessment process, considered that it would be best to look at the low level waste program from the perspective of all of the NRC programs as a part of strategic assessment. Editorial, I think this was a very good idea, because I think it's appropriate to look at these things as a collection.

And we looked, I think, early on in some of the earlier decisions, too parochially.

Given these circumstances, the Commission led to the issue that you see on the viewgraph. What should be the role and scope of the NRC's low level radioactive waste program? And as you're probably aware, from the options that were provided, we certainly considered things other than reducing or eliminating the program. We also included expanding it.

Now, the next viewgraph shows some of the key factors that we have under consideration that are shown in the paper. The first I've already mentioned. All of the applications which are now under way are occurring in agreement states such as California and Texas.

Now, there is interest in progress being made in one or two non-agreement states, but the NRC does not anticipate receipt of a low level waste application at least within the next five years.

We also note as a factor that there is resistance to siting of a variety of facilities that are undesirable or considered undesirable. But this resistance has made itself felt in the low level waste facility siting. The fact that you're interest enough to be here suggests that you are familiar with these concerns and familiar with the difficulties at such sites as Ward Valley in California.

Another factor which will affect our decisions is that at the moment, unlike the situation in earlier years, there are waste management and disposal options available to most generators. That is, the Barnwell site is open and is anticipated to remain open for the better part of the next ten years.

And that some of the experience we have such as in the state of Michigan which was denied access, I believe, for five years or so; it indicates that under those circumstances, generators and brokers are capable of safely storing their wastes.

Now that's not to say that we are sanguine about this. As we look at the national collection of generators and brokers, occasionally we find one that gets into trouble. They get into financial trouble, they get into safety trouble; and something has to be done. And the NRC has had to work with these folks and with other

individuals or other firms to help resolve the issues so that the material could be stored or disposed of safely.

So please understand that while we believe that the situation is not as critical as it might have been two or three years ago, we still believe that the management and disposal of waste is something -- of low level waste is something which requires a lot of NRC attention.

The last bullet is the one that led us to where we are now. The program has been reduced in response to government efforts to reduce the budget and to streamline programs. At present, the low level waste program is operating with approximately half the staff that it had, I'd say, about two years ago at this time.

With these factors in mind, we provided a variety of options to the Commission. We tried to span growth, maintenance, and shrinkage of the program; as well as alternative ways in which the program could operate. The first: assume a greater leadership in the national low level waste program.

I say the national low level waste program. Should the NRC take lower of a view, for example, that safe disposal of low level waste is an important contributor to safe management of nuclear materials; and therefore, we should endorse that disposal; that we

should, to the extent we can, encourage disposal in whatever public form is available to us.

Our present posture is one of recognizing that disposal under our regulations can be done safely and making ourselves available for states and others who wish to submit applications; but we have not taken a position strongly encouraging the disposal of waste. Should we move in that direction? And if we were to move in that direction, how far should we move?

Would we be guilty of being involved in promotion activities; which, as you know, the NRC does not intend to do. Second, we could assume a strong regulatory role in the national program. By and large, this would mean a return to where we were a couple of years ago before we began to decrease the program.

It would be our intent to provide technical leadership, to provide technical assistance to states, to continue maintenance; and as necessary, improvement of our regulations, regulatory guides, and technology for estimating the future impact of waste disposal.

The third alternative would be to retain the current program which is very limited and which would probably move in the direction of doing the minimum amount of work required to comply with the law. The fourth alternative: to recognize progress and reduce the program

-- would be to take the position that in fact, the Low Level Waste Acts have worked.

Perhaps not in the way that they were originally anticipated, but the fact is low level waste disposal capacity is available in this country to most generators. Low level sites are being developed. License applications are being submitted and reviewed, and one license has been granted.

It has not turned out the way originally anticipated by Congress; but nonetheless, progress has been made. Given this, perhaps the NRC should reduce the program and direct it to ensuring safe operation of the existing low level sites rather than direct it towards supporting technologies needed to develop new sites.

Another alternative would be to transfer the program to EPA. EPA is heavily involved, and they are making good contributions to the disposal of TRU at WIPP. The disposal of TRU at WIPP is not unlike disposal of low level waste. Much of the technology is similar; many of the problems are similar.

Arguably, if we wish the Federal Government to become more efficient, EPA could do a good job of regulating the disposal of low level waste. We would also note that just as the NRC has agreement states, EPA has authorized states; so they could have a similar

relationship.

The last option would be to accept assured long term storage. It's been a matter of policy with the NRC for quite a few years that it is technically sound; that it is safe; and it is appropriate to permanently dispose of waste, including low level waste.

But there are those that say that this is politically very difficult to achieve, and that a more reasonable goal would be to move in the direction of assured long term storage -- storage in a way that waste could be safely managed for certainly decades, if not a century.

In the past, the NRC has not favored this practice or this possibility, but we might. There are arguments out there in favor of it, and the question arises should be rethink that position. I would like to say about the options that -- for those of you that may not have heard this earlier -- these are intended to be a broad set of options.

They're intended to reflect "out of the box" thinking. I would expect that everyone here can find at least one that they can disagree with. But we did want to expand the way we think about low level waste management and disposal to give the Commission, and to give you, an opportunity to see what might all be available.

I'd also say that while these options are drawn broadly, we are not looking at a particular option. We are prepared to look at elements of options. There may be aspects of one and another that you might find appropriate. You may come up with a different option that's not even been mentioned. And in a few minutes, I'd like to hear your views in that area.

But first, I'll tell you what the Commission's preliminary views are. They would assume a strong regulatory role in the national program. That means we would return our low level waste program to the size that it was two years ago. The Commission also seeks your comments on a couple of aspects of this -- of low level waste.

Should it involve itself to a greater degree in implementing this option to look at an integrated approach to handling processing, recycle, and disposal? Put another way, we have certain regulations for disposal; certain regulations for storage, for handling.

Should we step back and look at the entire suite and say if you're envisioning a process that would store, perhaps minimize, or compact, handle, and dispose, what is the optimal way from the perspective of protection of health and safety and from an efficient and cost effective waste management to do this?

We might want to look at these as a whole. We'd like your comments on whether you think that would be an effective thing to consider. And the last: how should we address unauthorized disposal? Colloquially, this is sometimes referred to as "midnight dumping"; a practice which very rarely occurs, but can happen by those who simply do not feel they have access or who do not have financial ability to dispose of waste.

Is there anything in that area that we should consider beyond that which we are doing now?

Those are the options and the Commission's preliminary views. And now I would like to turn it over to Chip. But before I do, I would -- for those of you that have been here before -- at this point, Chip will lead you through your comments and questions; and we'll do our best to answer them.

And when I say "we", I want to include Jim Kennedy, who is the principal author of the paper and one of the best of NRC's experts in low level waste regulations. I was delighted to have him serve as an author, and I intend to refer every question that I can't answer to him as fast as possible.

Chip?

MR. CAMERON: Thanks, Mal. That was a very effective job at laying out the options and the factors.

Maybe we should start with factors. They seem to be very critical to the options in this paper. I guess I would ask as the first question: are these key factors accurate? Do you think that they might change? Do they support the preliminary option that's been selected?

For example, does anybody have any views on the fact that disposal and management options are available today for waste generators? I think the paper did a fairly good job of laying that out. Or, the lack of broadly based public acceptance for waste facilities -- I'm just trying to test the validity of the factors that are so important to the options in this case.

Does anybody have any comments on factors?

Lynnette?

MS. HENDRICHS: Lynnette Hendrichs. I'm the Director of Plant Support at NEI, and I have responsibility for program management of low level waste. I guess looking at the factors and the analysis, I don't disagree with any of the facts. However, I think it paints maybe a snapshot picture, and would maybe not go to the broader issue of where are we going here; which I think would in turn suggest maybe NRC should be taking more of a leadership role.

For example: yes, we do have disposal today; and the most optimistic projections are that, you know,

barring political changes in South Carolina, that will continue for five to ten years. However, lead times on facilities and the process of siting new facilities has been problematic at best.

So, if we don't approach it from the perspective of where are we going and actively show leadership, I think five years from now or maybe even sooner, we may see the error of our ways. And the -- and then another thing that may be not be reflected here is the fact that we currently have disposal and we have reduced volumes and small volumes because we're mostly looking at the perspective in terms of operational waste.

And the decommissioning situation has quite a different perspective on that. The waste volumes are very large, and the situation -- all of the dynamics of the situations change, which I guess would suggest a very dynamic situation here. This kind of says maybe we're okay and, looking at those facts, that, you know, we don't need to do too much other than respond in a regulatory sense.

And I guess I would suggest that the dynamic nature of where we need to go, and the difficulty in getting there, and the different perspective -- put on the problem by decommissioning waste would paint a very different picture. That in fact, we do need a lot of NRC

leadership in this area.

Thank you.

MR. CAMERON: Thanks, Lynnette. That's exactly the type of comment that's going to be helpful to us.

Mal?

DEPUTY DIRECTOR KNAPP: Yes, I have a response to that. First, thanks for the comment.

Second, as I mentioned, one of the concerns we have with this leadership role is that we do not want to get ourselves into an advocacy position. I don't want to put you on the spot now; but in your comments either now or in your written comments, any suggestions as to how we can demonstrate leadership, how we can be constructive without going beyond what is our appropriate agency job, be happy to hear them.

MR. CAMERON: And Lynnette, if you want to tackle that now, that's great.

MS. HENDRICHS: Sure. I guess I'm a little perplexed about your concern over advocacy. I mean, your role is public health and safety, and you've indicated in the past that disposal is preferable to long term storage. So, your role and taking a leadership role and doing what NRC can to help site appropriate, safe disposal facilities seems to me to be without conflict, unless I'm missing

something.

An example would be, to put it in particulars, the Ward Valley situation where the Department of Interior has inserted itself in a role that many of us question and maybe saw that NRC could have played a maybe slightly stronger leadership role. And I know this question of what your role is was -- came up.

And maybe if you could help us understand your concerns, we could understand where the question of too much advocacy comes in on NRC's part.

MR. CAMERON: Okay; thanks, Lynnette.

I think this is a useful thread to follow in terms of what other people have to say about option one and would it be appropriate for the NRC to take a leadership role; would it be helpful for the NRC to take a leadership role.

Any other comments on that? Did you want to say something?

MR. GENOA: Paul Genoa, also with the Nuclear Energy Institute. And just adding one other dimension -- that I can see where the NRC would be concerned about advocacy, for instance, of the use of radioactive materials and technologies. And clearly, that is not the role that we're talking about.

Society has already determined that it is

going to use radioactive materials as enjoying those benefits today. What we're talking about, rather, is acknowledgement that safe disposal of the byproducts of that use is a safety and health question.

And clearly, you have that responsibility in advocating that position aggressively. It appears to be necessary because, you know, quite frankly, as your paper points out, in the last 25 years, we've only had one facility come on line to provide additional capacity, and it's only a limited amount of capacity. And that's after spending about $512 million dollars, you know, in trying to develop new capacity.

So, I would just add that perspective. Thank you.

DEPUTY DIRECTOR KNAPP: Thank you.

MR. CAMERON: Okay; thank you, Paul. We're discussing the feasibility, the appropriateness of option one, which is the NRC taking more of a leadership role in assuring the disposal -- the development of disposal capacity for low level waste. Keep in mind that the Commission's preliminary option was option two, which is assume a strong regulatory role in national low level waste programs.

Tony Thompson.

MR. THOMPSON: I think if you look at waste

disposal perhaps in a slightly broader perspective, the importance of NRC taking a leadership role comes through a little more clearly. We've had a couple of papers here on probablistic performance based -- or PRA and performance based licensing. And if you're going to do that kind of thing, you're going to be taking a lead because EPA's approach to regulation is not really geared to approach things in that fashion.

You've got states that are addressing NORM disposal issues which are waste disposal issues. You've got an enormous amount of information on performance assessment that has been developed by your low level waste people over time that is, I think, going to be -- would be tremendously valuable in all this context.

You've discussed whether or not -- if not through your hand, perhaps through Congress's hand -- that you would be addressing perhaps regulation of DOE wastes. In which case, you have to take -- you have to be prepared to maintain an aggressive position on leadership with respect to technical waste disposal issues.

And ground water is a very problematic issue. That is one that the advisory committees have said that NRC needs to take another look at in this area. It's turning out in the uranium facility area to be the most problematic issue of all. And so there's experience there

that -- I'm not sure that there's talking -- necessarily as much cross pollenization *(sic)* between the -- inside the NRC as there probably ought to be on these issues.

And finally, the whole mixed waste issue -- I think NRC's position that there is no conflict between the low level waste standards and the RCRA approach to regulation is silly, and you ought to reevaluate that position because it's standing in the way of getting rid of and disposing a lot of waste.

In a much shorter time, rather than trying to treat everything, you could put a lot of this stuff right into a low level waste facility because radiation is the prime hazard.

MR. CAMERON: Okay; thank you, Tony. Before we go to Ruth McBurney, Mal or Jim, did you have any comments at all?

MR. KENNEDY: I have one, and I'd be interested in hearing particularly more about this term leadership.

Tony, you just used the word leadership, and it sounded like it had the idea of being a technical leader. That is, having a strong technical staff in performance assessment and so forth. And that's kind of like our option two, which is to have a strong regulatory role.

Lynnette was using leadership in the context, I think, of sort of a single minded pursuit of promoting disposal in the country, like testifying before Congress and things like that, I think. Not in the context of technical issues, but in the context of just -- as a policy matter promoting disposal.

So, that's what I'm interested in is -- leadership has two different meanings, and --

MR. THOMPSON: Well, I guess I would say that because of the technical capability that you have and that the -- and the expertise that you've developed over time, --

MR. KENNEDY: That's a form of leadership.

MR. THOMPSON: -- that is the basis for being able to go out and be a more aggressive leader in the policy sense of --

MR. KENNEDY: The two go together.

MR. THOMPSON: Yeah, I think the two go together.

MR. KENNEDY: Okay.

MR. THOMPSON: I don't think you can do what Lynnette is talking about if you don't have the strong --

MR. KENNEDY: The foundation.

MR. THOMPSON: Right.

MR. KENNEDY: And so you're advocating both?

MR. THOMPSON: I am; indeed.

MR. CAMERON: I think that's a good point is maybe we're putting too fine a point on the distinction between option one and option two.

Ruth McBurney?

MS. McBURNEY: Yes; the CRCPD Board of Directors would support, as we mentioned yesterday, with NRC maintaining oversight over Department of Energy's radioactive materials. It could also justify an existence of a strong program if NRC accepted regulatory responsibility for DOE waste -- a low level waste.

And certainly the need would remain for NRC to provide training, document review, oversight of developing waste disposal technologies. For example, consolidation with DOE and oversight of the DOE's low level radioactive waste research efforts would probably save a few federal dollars -- and then regulatory program review in the agreement states.

So, NRC wouldn't have to advocate new disposal capacity from a policy standpoint, but certainly take a strong regulatory leadership role in these other areas.

MR. CAMERON: Okay; thanks, Ruth.

I think it's interesting that we are getting some comments on the factors that lay under these options. Lynnette pointed out the decommissioning waste that might

be coming on board. Tony and Ruth both talked about the possibility of NRC assuming jurisdiction over DOE facilities.

So, we may go back to those to test some of those other factors in a minute; but how about further comments on -- we've been talking about option one and option two here.

Steve?

MR. COLLINS: Steve Collins from Illinois Department of Nuclear Safety, but representing the Organization of Agreement States. There were six states that provided input to the Organization of Agreement States on this particular issue that we consolidated. Those six were Texas, Washington, Colorado, Illinois, Tennessee, and Utah.

So there's a conspicuous absence of two states that are key there: South Carolina and Nebraska. Those two states did provide information to CRCPD, which Ruth is representing to you. So, they have provided input; just not through the Organization of Agreement States.

For option one, five of the six states were opposed to NRC assuming a greater leadership role from outright opposition to the belief that it is not desirable that NRC, as a regulatory agency, should promote new disposal capacity.

This should be advocated by the licensees needing the capacity.

There is also opinion indicated -- the NRC does not need to advocate disposal capacity. Waste disposal demand will make such a determination.

One state believed that NRC should assume a leadership role as a strong advocate for new disposal capacity. One mechanism for doing this would be to establish a strong regulatory stand regarding the storage of low level waste.

That one particular state was Washington that differed; and I'll read to you their option one comment which said, "The NRC should take a leadership role at sites nearing completion." So even their support was qualified. "However, since the Low Level Reactor Waste Policy Amendments Act objectives have basically been met, they should not dedicate a lot of effort in this area."

I don't understand that. I can't explain it. But that's what they said. Okay, strong leadership role, but not a whole lot of effort. Okay.

I didn't say I can't, did I? I don't understand it yet. I will eventually, but --

"The NRC should not pursue disposal at US DOE facilities because such efforts may interrupt the progress that has been made in development of disposal facilities."

That last sentence again was a State of Washington comment which doesn't reflect the overall position of the CRCPD or the Organization of Agreement States with regard to independent oversight of the whole organization and all of its uses of material.

Then we go into option two. Or do you want me to wait?

MR. CAMERON: Why don't you go on to option two since we've sort of been maybe -- danced between them.

MR. COLLINS: For option two, all of those six states were opposed to NRC assuming a strong regulatory role that encompassed all low level waste activities. Three states questioned the need for an enhanced staff to await receipt of a low level waste facility application.

Other states indicated the NRC should continue in a variety of tasks, including topical report reviews, guidance documents, report reviews, storage of low level waste, training, oversight of development technologies -- developing technologies, and regulatory program reviews.

But there was no consensus on how these tasks should be prioritized. Most commenting states felt that states involved in the low level waste management programs, including those with existing sites, were doing an adequate job in protecting the environment and the public.

One state indicated that some functions are not needed now, such as further low level waste rule making. Another state indicated NRC might justify the existence of a strong program by accepting the regulatory responsibility for DOE's low level waste.

MR. CAMERON: Okay; thanks, Steve. And we'll be back to both you and Ruth when we get into some of the other options.

Mal, did you have any questions or clarifications on this?

DEPUTY DIRECTOR KNAPP: I had a couple of questions. With respect to the comment about whether it would be disruptive to the current developing low level sites for NRC to pursue disposal of low level waste or mixed waste at DOE sites, I just was curious whether there are any other people here that hold views on whether that would be a good or bad idea.

MR. CAMERON: Okay, do we have a -- Lynnette?

MS. HENDRICHS: Yes, I don't see that it would necessarily be a bad idea without knowing more of the details or, you know, better indication of how much resource -- how many resources it would take. But it doesn't seem -- I guess that's kind of a qualified statement to necessarily be a bad idea if that oversight is needed and there's some integration of the commercial

and DOE programs.

MR. CAMERON: Okay; thanks, Lynnette.

I believe -- do we have a -- did you have a comment back there, sir, in the cardigan? No? Okay.

Anybody else want to respond to Mal's question at this point?

Lynne?

MS. FAIROBENT: Lynne Fairobent. Mal, I'm not sure I completely followed your question, but I think what you're asking is whether or not DOE capacity could be utilized for commercial waste if NRC takes over external regulation of the DOE facilities. Is that what you're after?

DEPUTY DIRECTOR KNAPP: Not exactly, and I may ask Jim to clarify it. One question, for example, that has been kicked around is disposal of mixed waste. Tony Thompson mentioned a few minutes ago the concerns about the mixed waste problems because of the dual regulation. An alternative that has been discussed -- and I think DOE has mentioned it once or twice -- is that they would accept responsibility for disposal of commercial mixed waste; the argument being that compared to the amount of mixed waste DOE has to dispose of, commercial mixed waste is not particularly large in volume.

That could suggest -- in fact, it might almost

be implicit in such a move that once you changed whatever laws and regulations you might need to change to be able to do that, disposal of what we might call "ordinary" low level waste -- commercial low level waste at the DOE facility -- could also be practical.

It could be doable. The real question that I think we're asking is: absent NRC being given broad regulation of DOE, is it a reasonable way to go to perhaps ease the stress on present low level waste generators; or, would it in fact be disruptive, say, to those who are trying to develop sites?

Therefore, it would be a -- either a good or bad idea, depending on your perspective; and perhaps on other factors that we're not familiar with.

Jim, do you have anything to add to that question?

MR. KENNEDY: That's a good answer. You know, our primary interest and overriding interest is assuring that there's disposal capacity for all the generators in the country into the far, foreseeable future. And having a DOE facility -- existing DOE low level waste facility take commercial waste could be one means of attaining that objective.

Whether we had to regulate it or not is another question. I think there's some efficiency

arguments that would tend to say that we might be best to regulate it because we have a regulatory program in place and guidance documents and so forth. But they're not necessarily related.

MS. FAIROBENT: Let me see if I can give a couple of views then. First off, this particular issue paper was one of the few that I saw any interrelationship between the issue of NRC taking over external regulation of DOE facilities and the options being discussed within any specific paper, which I think personally I would have liked to have seen more interrelationships on those issues as the various options on each of the topics were being laid out.

A couple of comments on the DOE processes. DOE does not utilize the waste classification system per se that NRC regulates under the A, B, C, greater than Class C on a formal policy wide basis. Okay, so I think to begin with, both NRC and DOE would have to go back in and look at whether or not the disposal facilities that DOE has operating and their performance assessments that are currently ongoing -- whether there would be any real difference, whether it was commercial waste being put in or DOE generated waste.

Technically, I don't think it would be. Perception may be a different issue. DOE also is

currently, right now, going through the process of rewriting their waste management order. And some of these same questions you're throwing out are things that they are wrestling with as they develop the order rewrite.

But I would also flip it a little bit and say that in talking with people out in the industry in a broad sense, a question has also come up. Because of the fact that if we look at where we've come since the advent of the Low Level Waste Policy Act; and the volume of low level waste being generated commercially; and the fact that if, in an ideal situation, all of the compacting processes -- if the politics of those processes allowed us to have all of the state compacts open, I would question on an economic basis whether or not we truly need all of those sites based simply on commercial volumes today.

So the flip side of it could be maybe, in fact, we ought to be putting some of the DOE low level waste into these compact state sites that are being proposed, being developed, versus developing new DOE disposal capacity for low level waste.

If you take a look at the DOE waste management programmatic and environmental impact statement, the final of which is due to come out mid November -- but if you go back in and look at the draft, there is new capacity for a low level waste disposal being talked about in that.

I'm not so sure that it makes total sense that we develop new DOE disposal capacity in light of the amount of commercial capacity under way if we can overcome the politics that's keeping that progress from being implemented. On the other hand, maybe the quid pro quo is that DOE in fact takes commercial mixed waste and we do some trade off balancing.

You know, I just don't know that -- well, let me back up. I know we're not in the same situation we were when the original Low Level Waste Act was passed. And politically, I don't think anybody wants to advocate we reopen that process again. But on the other hand, I'm not so sure as a taxpayer that it doesn't make sense that we go back and look at that.

The economics simply are not there to support 13 commercial sites or 11 commercial sites today. As far as capacity wise, if the three current sites stay open, I think there's adequate capacity for the commercial low level waste today that's being generated.

MR. CAMERON: Thank you. And that's a very intriguing way to look at it, and I might ask Mal and Jim -- when you look at it from that perspective, does that change the options that would be selected in any way? What are the implications for the options if you look at the disposal of DOE waste in commercial facilities?

Obviously it's an important point, but does it have an implication for the options?

DEPUTY DIRECTOR KNAPP: Jim may want to say something; but frankly, I'd like to think about that for a while. That's just not something that I had --

MR. CAMERON: Okay.

DEPUTY DIRECTOR KNAPP: -- I had considered very carefully prior to this. I appreciate the concept. I don't know.

Jim, do you have any thoughts on that?

MR. KENNEDY: I'm like you Mal. I can feel myself sort of resisting it, and that means that's good because it's a new idea and I need to think about it. I think you said a lot, and it's something I hadn't thought of -- or we hadn't thought of.

MR. CAMERON: Jim's our barometer on that.

Lynnette?

MS. HENDRICHS: Yes, this is somewhat of a different question than I thought I was responding to initially, which was NRC oversight of both types of facilities and not necessarily the concept of sending waste to their sites or theirs to ours.

A couple of points I'd like to make in that regard is -- well, the main theme, if you will, is flexibility in our thinking. Because if anything is

important, it's -- this is a dynamic situation, and I think the more flexible and the more market forces can be relied on, the better the solution ultimately; and better meaning that it will fit the need and may even have some efficiency in cost effectiveness in the process.

But in that vein, I'd like to suggest that maybe there's not necessarily a need to overlay the regulatory systems. I mean, we've found with mixed waste that when that happens, the result is a disaster. And perhaps DOE waste sites can accept commercial waste under their own system. If it hasn't been proven to be broken, why do we need to fix it?

And I guess flexibility again is the theme in terms of, you know, who are we to stand back and dictate that it goes one way or the other? I mean, ultimately, I think our objective as a nation for DOE or commercial waste is we want a few sites, we want adequate capacity. We're not in a position to go back and necessarily dictate the solution, but to be flexible and recognize all opportunities and options when they present themselves.

It might be a better approach.

MR. CAMERON: Thanks, Lynnette.

MR. KENNEDY: I want to add one thing, Chip, with respect to what both Lynnette and Lynne said. And that is, with respect to DOE and the states, one of the

main reasons for having the Amendments Act in the beginning and something NRC has supported all along is states making a choice as to where their waste goes and working it out among themselves.

So, I'd be particularly interested in hearing from the states what they would think about DOE taking commercial waste-- not just mixed waste, but commercial waste in; particularly maybe in light of -- you know, I think when you compare the curies that they're going to be leaving on site versus the commercial site, the waste streams, I think, are enormously different.

I mean, that would argue for going that way. But --

MS. McBURNEY: That is a big consideration. This is Ruth McBurney.

As I understand it, however, DOE is also looking for commercial sites for their waste. We've got a situation --

MR. THOMPSON: Yes, they're doing it.

MS. McBURNEY: Yeah.

MR. CAMERON: Yes; that's a good point too, Ruth. I don't know if we want to get into an in depth discussion of that.

Tony, do you have -- why don't you go ahead and then we'll go to Steve.

MR. THOMPSON: Okay, I was just going to make that point that there is a lot of mixed waste, for example, at Hanford that, if it could be disposed of in an existing low level waste facility -- it wouldn't even have to go off the Hanford reservation, and they could save the United States Government one hell of a lot of money if you can solve this mixed waste dilemma and acknowledge that -- and address what the risk is -- this gets to your sort of risk based regulation.

And if the risk if the radionuclides involved and you can work out a problem, DOE could use an existing commercial waste facility right there and save a lot of money.

MR. CAMERON: Thanks, Tony. Steve?

MR. COLLINS: Steve Collins attempting to represent the Organization of Agreement States.

MR. CAMERON: You have a number of different guises. Either you're a private citizen or you represent them, and now you're attempting to represent them?

MR. COLLINS: Well, you threw a question in that wasn't in your papers that you're asking.

MR. CAMERON: I see. You're very careful.

MR. COLLINS: And I haven't even had legal training.

MR. CAMERON: No, I thought Mal probably

and then over to Ed Regnier.

MR. DANIELS: Ray Daniels, Defense Nuclear Facility Safety Board staff. I'm speaking as a private citizen here. But it's my understanding at Hanford there is an environmental restoration disposal facility, so-called ERDF, which has capability for five million cubic meters which is accepting mixed waste.

And in fact, all of the waste that's being generated in the environmental restoration side is going into that facility and it started work this summer. So, I'm surprised that they're looking for off-site disposal for Hanford. Maybe there's some special case wastes that are involved, but -- just a bit of information.

MR. CAMERON: And thanks for that information, Ray.

Ed?

MR. REGNIER: Yes, Edward Regneir, Department of Energy. I just wanted to add another note of -- another consideration, I guess, or perspective to throw in on the acceptance of commercial waste by DOE. And that's an observation that, although DOE sites are DOE sites, they are located in a state.

There must be no one from the State of Nevada here, or you would have probably heard from them in that certainly I think our best, if -- or certainly one of our

better sites for disposal technically of low level waste is at the Nevada Test Site in Nevada.

In many of our sites -- we'd like to send waste there. However, that state is quite concerned about the issues of equity and becoming the single or primary centralized disposal site for all of DOE waste to the point where, you know, out of respect for this opinion at this time at least, there has been a moratorium on any additional sources or generators of DOE waste going to Nevada such that we are not now allowing, as I say, any new generators of our own waste to be shipped there.

From that perspective, I would presume that the State of Nevada would have opinions on that or certainly probably want some type of consideration of a quid pro quo or other benefits that would go along with what they would probably view as a disadvantage of being the -- even though it's a DOE facility, they're still the state it's sited in, and they look at it that way.

MR. CAMERON: Okay; thanks, Ed. There are people here who live in the State of Nevada, but they don't represent the State of Nevada, and they probably won't be responding to that but will be active later on in the high level waste discussion. Let's go back to a couple of threads that were suggested by some of the Organization of Agreement State comments.

One of the things the Commission is interested in is well, if you choose a particular option, how do you implement that. What are some ways of implementing that? And I think just something to keep in mind and we can go back and talk to it later -- the suggestion was made in the agreement state comments that one way the Commission could assume a greater leadership role -- not a regulatory, technical role, but a greater leadership role -- would be to prohibit the storage of low level waste.

Is that correct, Steve? And I mean -- was that the comment that was made? From the State of Washington, I believe.

And while he's looking for that, I'd just -- I'm just bringing that up as a -- just think about that. What does that mean to assume a greater leadership role? How do you do that? And I guess another thread is -- was suggested also in the agreement state comments, and I think people might have comment on this, is that if you assume that all those factors are correct, does that justify the preliminary option, option two; which I think was raised by the majority of the agreement states?

So why don't we look at that for a minute.

Lynnette?

MS. HENDRICHS: I'm your buddy, Chip, to help you whenever you're killing time and people are looking

for things. I have a couple of points to make. Kind of going back a little bit, NEI has developed a set of principles on how we intend to navigate this landscape of low level waste disposal and the dynamic nature of it and the many changes.

And I wanted to clarify that one of our primary principles is that the host state's desires should be respected. In no way should the solution be implemented in such a way that it would override, for example, any host state that didn't wish to take certain categories of waste.

What we are leading for, I guess, is more the option that if it would permit such a state one, to go ahead and build the facility -- you know, if you build it, they will come -- and then in the future, if the option -- if it made more sense to their public than it had in the past, that other waste streams could help defray costs or, you know, made sense then, that that would be acceptable.

But in no way some of the -- I didn't want some of the remarks that I had made to be misconstrued as not being respectful of what the states are doing and their right to not accept waste as it stands under the Low Level Waste Policy Act.

To go to the second question of what that leadership role might look like for the NRC, I think part

of the issue that will plague NRC or anybody else in trying to take a real strong leadership role is to have a better sense of what our direction is. And in that regard, in order to apply these principles that we have, we are interested in getting a dialogue going and coming up with a plan that is -- again, doesn't dictate actions, but perhaps recognizes the uncertainties and can be more flexible and not necessarily radical.

You know, we're not necessarily talking about throwing out the act and dictating a whole new solution, but can in fact help us all -- all the participants have more of a sense that we are going in a common direction; that there are some uncertainties, but that an optimal system will look to address those.

And of course, NRC would be a key player and leader in that objective.

MR. CAMERON: Okay, and just before we go to your colleague Paul, would that dialogue include all of the affected and interested parties: not only the NRC, but citizen groups, state government, local governments?

MS. HENDRICHS: Yes, it would to a point. I mean, our first objective then -- I presume that's what Paul was going to mention, is we're having a workshop in Knoxville, Tennessee the 12th and 13th of November, and that's just a first in a series. We don't intend to have

it answer all questions or come at it from all perspectives, but as a way to open that dialogue.

We specifically solicited regulatory agencies, companies developing disposal sites, and processors. We have not, to this point, solicited direct participation from who might -- you might consider your public interest groups.

MR. CAMERON: Okay, but that might -- as this dialogue continues, that might occur because of obvious importance of having those viewpoints.

Yes?

MS. HENDRICHS: The answer is yes.

MR. CAMERON: All right.

MR. GENOA: Yes, Paul Genoa again. And I just wanted to get back to one of your key factors, slightly different. But you asked how could the NRC be an advocate, for instance, or play more a leadership role. One of the key factors acknowledges the lack of broadly based public acceptance and the fact that that has significantly affected the development or slowed the development.

I think one role, leadership role, is to stand up for the health and safety implications of the existing regulations to essentially -- to make it very clear to the public in a convincing way, in a public way, and out front

that in fact the rules as they exist are protective.

And the public does not -- is not sure of that. They hear many different stories and they believe those stories. And there is not confidence that low level waste can be managed safety in this country. And in fact, if you believe it can, that that view needs to be put forward.

And that would be an example, I believe, of a very supportive and helpful role.

MR. CAMERON: Okay; thanks, Paul. There's another specific example of how the NRC might implement option one if the Commission chose to do that.

Mal?

DEPUTY DIRECTOR KNAPP: Thank you. I would like to throw out a question to follow up on that. I think we do have some folks here that may represent citizens' groups or may be able to speak informally, even though they may not represent them, but who have the concerns that citizens' groups have.

Any thoughts that they might have on Paul's suggestion, sometime, as we continue this discussion, would be gratefully appreciated.

MR. CAMERON: Okay; thanks, Mal. Steve and Ruth -- are they still here?

MR. COLLINS: Yes.

MR. CAMERON: Good.

MR. COLLINS: Steve Collins --

MR. CAMERON: Did you find us --

MR. COLLINS: -- from the Organization of Agreement States. What we said was out of the six states that comment, five strongly opposed a greater leadership role. The one that did favor a stronger leadership role was the state of Tennessee.

And their comment is "Tennessee believes that the NRC should assume a leadership role as a strong advocate for new disposal capacity, option one. One mechanism for doing this is to establish a strong regulatory stand regarding the storage of low level waste, option two.

"And this requires the NRC to totally abandon its promotion role and become a full fledged waste and control regulator that allows the use of radioactive material provided to public workers, patients, and the environment are adequately protected. It is not the regulator's role to promote any use of radioactive material.

"The acceptance of this concept will help with the perception the public has of NRC. The requirement that a licensee will not be allowed to store waste beyond a certain period without shutting down and a moratorium on

new licenses in areas where there is no disposal capacity could force the issue.

"Another approach is to require significant financial assurances on accumulating waste," and that should probably be done anyway, "a recognition that most of the states have gone beyond shallow land burial to enhanced technology for disposal of low level waste could lead to a greater acceptance of the assured storage concept, option six."

MR. CAMERON: Okay, that's an interesting suggestion, not only that -- I think the implication is that -- forget about assuming a greater leadership role. That remark from Tennessee implies that we're doing something counterproductive in terms of a long term disposal strategy.

How about the comment on the fact that the factors don't support the choice of option two? In other words, if all of those factors are true -- now forgetting for the moment Tony and Lynnette's points about -- and Ruth's about DOE and decommissioning waste. If those factors are true, why does that support taking a stronger regulatory role rather than just maintaining the status quo?

I believe that was another comment from one of the states; is that correct, Steve?

MR. COLLINS: It wasn't from the state that I work in, so I don't remember it.

MR. CAMERON: Okay. Anybody have any comments generally on the connection between the factors and the Commission's choice of -- preliminary choice of option two?

Okay, now -- Paul, did you have -- do you have something to say on that?

MR. GENOA: I don't want to dominate the discussion here this morning.

MR. CAMERON: Well, no one else is speaking at the moment; so if you want to say something, feel free.

MR. GENOA: The point -- it had to do with the factors and essentially the assumptions on the internal/external issues. Now, whether they were valid and accurate and whether the options would support resolution -- and some of the issues that need to be addressed -- I have to go back and say the concept of a snapshot is probably a good way to look at it.

That I think an important consideration that was not fully developed is the sort of dynamic, yet tenuous, status of the existing waste treatment and disposal capacity. I don't think it envisioned that a very simple, unilateral decision like changing the rate structure at Barnwell from volume based to curie based

would completely turn the entire waste management and waste processing arena upside down overnight.

You know, it's totally going to change the way the waste is processed after November 1st. I don't think that was fully explored, the fact that Barnwell's operation is totally dependant on the support of general assembly and governor, and that that needs to be essentially reestablished annually.

It is extremely tenuous and a very dynamic situation. The collapse -- it's sort of a house of cards. Any one card falling could collapse the entire system. And so we could give more thought to that. The discussion of decommissioning waste is one element, but the issue of electric utility restructuring is going to put dynamic forces in place on the competitive nature of nuclear power in this country.

And after all, nuclear power does produce large volumes of the waste, and decommissioning wastes are very large. If they are shifted ahead or behind in time, the rate of generation changes dramatically. Some of the disposal facilities are only planned for 20 year periods. And you know, decommissioning waste coming ten years sooner or ten years later could totally change the operational and financial dynamics and viability of those disposal sites.

So, some real thought needs to be given into how that plays. I think an issue that's very important and difficult to grapple with is the issue such as de minimis levels of radioactivity, clean up standards, beneficial recycle clean up issues. Those things, if factored into the discussion can have, again, profound influence on the volumes and amount of waste that needs to be disposed of -- huge amounts.

Just simple decisions on your part on what clean up standards might be or might not be. Those things would be, you know, useful to explore. And there's some others; and of course, we're going to provide those to you in detail.

MR. CAMERON: Thanks for giving me the mike back, Lynnette. And thanks, Paul. Those are very constructive points.

Mal, do you have a question or response?

DEPUTY DIRECTOR KNAPP: I do have one question. If you can elaborate today, I would like to hear it -- and in any case, in your final comments -- your concern about the impact of rate structure. Could you just walk through that one more time or the deregulation? I'm not sure I quite followed your views on what that linkage might be and how it might affect --

MR. GENOA: I'm sorry, there are two different

issues. The first, the rate structure in Barnwell.

DEPUTY DIRECTOR KNAPP: No, I'm sorry; I mean the rate structure for utilities in general, the deregulation.

MR. GENOA: Okay. Deregulation of electric utilities will put significant financial pressure on utilities and competition and so forth, depending on the rules of the game. We acknowledge that in a perfect situation, it wouldn't have any impact: everything would happily continue.

But the rules of the game may not be totally equitable. And there may be an economic disadvantage placed on the nuclear utility industry. That's possible. If that were to occur, you could expect decommissionings earlier than you would have anticipated. You could also expect that life -- or that license renewal will not -- may not occur as was anticipated.

So instead of plants decommissioning 15 or 20 years or a life extension for 30 or 40 years longer; in fact, they may be making decisions today to decommission. And I think we've seen some announcements recently that would verify that.

DEPUTY DIRECTOR KNAPP: Thanks for the expansion.

MR. CAMERON: Thank you. We do have to --

MR. COLLINS: Chip?

MR. CAMERON: -- in a few moments move on. And let me provide a segue for you hopefully, because I think you have more comments on some options.

Clare, could we see the options again?

Okay, I just wanted to make sure that if we -- people had comments on any of these options, that we go to them. And some of the outliers here are transfer the program to EPA, perhaps accept assured long term storage. One of the arguments that the assured storage advocates make is that assured storage would be more acceptable to the public than disposal.

And I guess I'd just be looking for anybody who wants to comment on either of these two options.

And Steve, did you have some more comments on the options for us?

MR. COLLINS: Steve Collins, Organization of Agreement States. Yes, Lynnette bought me enough time to finally think through this earlier question, and then I'll go that one.

The factors, I think, were pretty much right on target and accurate for a snapshot. One exception that might -- could have been added with regard to low level waste was that there is no real disposal or management option that is acceptable to us for americium or americium

beryllium.

That needs to be worked out much better so we don't have to go through this process of getting it to a DOE facility that we currently have to declare an emergency practically to get it done. But with that in mind, all of the states that were commenting being against the NRC taking a stronger regulator or regulatory role was basically because anything that you do stronger there gets back into that concept of -- perception of you're changing the rules in the middle of the game or something like that.

And while technically that might not be a problem, it just has too much potential to stop the progress that's being made in any one or all of the states.

Do you want me to go to other options now?

MR. CAMERON: Yes, why don't you. Why don't you go through --

MR. COLLINS: And you skipped three and four and went to five and six, did you not?

MR. CAMERON: We're at that point, I think, where we need to sort of sum up and go on to high level waste. So, if you could -- if you could run through those comments for us, and I think Tom might want to say something. And let's get some last comments. Jim Riccio

will get in there. So, let's -- you know, let's go through this.

Why don't you two guys finish up, and then we'll go over to Jim Riccio.

MR. COLLINS: Okay, we've been through option one and two fairly thoroughly. For option three, retain the current program, the states were "somewhat split between options three and four being the appropriate role for the national low level waste program. States tended to believe that this role was more appropriate than options one and two.

"This option indicated that NRC would do activities that were legislatively required or significantly contribute to the national low level waste program." That was a quote.

"However, some states felt that the NRC had gone beyond this mandate such as in the development of a branch technical position on performance assessment. Another argument for having some level of program was to ensure national consistency in the low level waste program."

That's all for option three.

MR. CAMERON: Okay; yes, I think just go through them. And you know, these comments are coming into the NRC obviously, so that we're going to see them

and everybody out there is going to see them if they want to tune into the Internet. But I think it's valuable for all the participants to hear what the states' view in this case is.

So, go ahead, Steve. Is this going to take --

MR. COLLINS: Five more minutes at most.

MR. CAMERON: Okay, go ahead.

MR. COLLINS: Option four: recognize progress and reduce the program. Two of the six states indicated that NRC should declare a victory and reduce the program. This was the preferred option of one state. This is based on the progress that has been made in siting new facilities in states where sites appear to be adequately protecting the public.

Two states with low level waste sites had mixed views relating to the reduction of the program. There were questions relating to how much of the program would be reduced. One state indicated it could survive even if the national low level waste program was completely eliminated.

For option five, transferring low level waste program to EPA, four states are -- of the six are strongly opposed to any transfer of the low level waste program to EPA. The recommendations range from strongly against to not acceptable for many reasons.

Some of these include the disruption to state programs and siting efforts; the diminution of expertise in the originating agency; the lack of depth and support in the receiving agency; and the shifting of the financial burden from one agency to another.

For option six, accept assured long term storage: four states are strongly opposed to the storage concept. One state's very critical and suspect of the option. Two states point to the failure of the high level waste program to sell assured storage with the monitored retrievable storage program.

Another state indicates that it does nothing but delay the inevitable use of disposal. Two states recognize that there may be some merit in assured long term storage. However, one state recognizes some of the barriers that need to be overcome such as the public distrust of NRC regulation reactor materials, and the need for financial assurance for storage facilities.

Further, the states suggest that limited licenses or moratoriums on new licenses for storage could force the issue. The states' comments on discussion and subsumed issues -- I'll skip those. The conclusions -- there's four one sentence conclusions after boiling all this down.

The majority of commenting agreement states

opposed options one and two, whereby NRC takes a stronger role in siting and regulatory functions. A majority of the commenting states believe a national low level waste program rests somewhere in options three and four.

And this is consistent with the results obtained through public comment associated with SECY-95-201. A majority of commenting states believe that transfer of the program to EPA is not a viable option. And a majority of the commenting states believe that assured long term storage is not the answer in helping to resolve the low level waste problem.

MR. CAMERON: Okay, we're going to go to Tom Hill quickly and then to Jim Riccio from public citizen, and then I think we're going to zoom into high level waste.

Go ahead, Tom.

MR. HILL: Tom Hill representing the CRCPD Board of Directors. All regulatory programs dealing with radiative material should remain in one federal agency. Consistency in approach and standards would be best served by keeping a strong, central, and complete program. Moving the low level waste program to EPA or another agency should not be an option considered by NRC.

It would probably result in the loss of expertise in the originating agency and the new low level

waste program which would lack depth and support in the receiving agency. The NRC has not considered the consequences and the havoc this would create for the agreement states who do have low level waste responsibility and have, over the years, worked diligently to assure the safe disposal of this waste.

Safe disposal, rather than the acceptance of long term storage as described in option six, should receive greatest consideration. It would seem that the acceptance of long term storage for low level waste would do nothing -- let me go back and reread that. I don't think that's coming out -- I think I left a word out.

Safe disposal rather than the acceptance of long term storage, as described in option six, should receive greatest attention -- safe disposal. It would seem that the acceptance of long term storage for low level waste would do nothing for the current long term storage versus disposal debate, except to delay the inevitable use of disposal for low level waste.

The CRCPD Board of Directors supports option four. We recognize progress and reduce the program as the option of choice. This option would formerly recognize the work toward fulfilling the objectives of the Low Level Radioactive Waste Policy Limits Act and the progress toward development of new facilities in several

states.

This would allow the NRC to use its limited resources in appropriate areas of the agency and terminate the expenditure of unnecessary activities in the low level waste program.

MR. CAMERON: Okay thank you very much, Tom. And I think we'd just like to thank the states generally for all the comment they've given us on a lot of the issues. They've put a lot of work into it.

Jim?

MR. RICCIO: I just wanted to link up this paper with the decommissioning paper and point out that --

MR. CAMERON: Good.

MR. RICCIO: -- the Office of Technology Assessment several years ago put out a study showing the different decommissioning options and the results on the low level waste program. And it seems to be running counter to where the industry is headed with this rapid decommissioning. But they did note that if you use the safe store option, you would significantly reduce the low level waste burden that this industry's going to have to bear.

And I think you should take a look at that report.

MR. CAMERON: Okay, that's something to think

about in terms of the impact of decommissioning wastes and -- Jane, a short comment?

MS. FLEMING: Yeah, just one real quick comment. I just, as a member of the public, would like to support the position that was entered by Lynne and just state that I'd like to see you expand your options to at least include a look into the possibility of using DOE facilities.

Economically, I think it's the most sensible way to go. Environmentally, the sites are already there. It makes sense to use them.

Thank you.

MR. CAMERON: Okay; thanks, Jane.

And Mal, would you like to do the overview of high level waste?

DEPUTY DIRECTOR KNAPP: Certainly. The change of quotes that you see up here -- we have here John Austin and Meg Lusardi, who are the co-authors of the paper. The slide only mentions John, so I think what we'll do is we'll put it John with any of the errors in the paper, and we'll put it Meg with any of the successes.

The issue is: in recognition of current uncertainties, how should NRC approach the present high level waste situation? The current uncertainties are many, but certainly two that were foremost in our minds

have been the legislation that has been offered in the previous Congress and that may well be offered in the next Congress which would change the program, which would change the standards, which would change the emphasis between storage and disposal of high level waste; as well as the uncertainties introduced by congressional action to reduce the DOE budget and the NRC budget.

Frankly, at this point, I'm certainly not prepared to guess what will happen. I'm not prepared to guess what the next Congress will look like, let alone what actions the next Congress may take. So, I think we are faced with dealing with the future for waste management -- high level waste management in the NRC and I suspect in DOE where we don't quite know what our direction's likely to be, and we're going to have to do it with reduced funding.

I'd like to move on to some of the key factors. These are some key factors that DOE raised some years ago. And I noted the other day that although they're several years old, I think for the most part they are key factors today which is a comment of some sort on the difficulty progress has in this particular area.

Lack of consensus among the scientific and technical community and the major interest and affected parties on fundamental elements of the program. That's a

lengthy way of saying that folks don't agree on a variety of the aspects of the Yucca Mountain site as to what some of the technical conclusions are at this point, as to its safety, or whether in fact conclusions can even be drawn at this point.

The second concern is the unprecedented nature of geologic disposal, the difficulty of predicting the performance of a high level waste repository for hundreds to thousands to -- depending on whose advice you get -- hundreds of thousands of years into the future.

The problem in existing law, which may change, on the linkage between siting and construction of a monitored retrieval storage facility or central interim storage, if you like, and the licensing and construction of a repository.

The next concern which was raised in the low level area as well was the strong public resistance to waste management and other undesirable facilities. And last, general -- indicates that DOE programmatic and budget constraints -- I will try to speak for DOE on behalf of the budget and direction difficulties they've had over the years, but they have had them, and those have had a ripple effect on the NRC since they will be, should a license application be submitted, our only applicant and our only licensee.

With these factors in mind, we provided a variety of options to the Commission. If you have not had a chance to look over the paper, please note that although we have only shown five options here, each of the options have some alternatives or some ways they could be implemented that expands this set a bit.

First, we could approach Congress and the administration to refocus the national program. In some ways, this is not unlike the option we spoke to a few minutes ago on low level waste where we would take a larger role in management and disposal of waste.

If we were to approach Congress in such a way, there's a variety of things we could suggest. Among them, that perhaps Congress should make this decision. That the decision on whether or not a high level waste facility should be licensed in Nevada may be so difficult and so politically important in this country that perhaps the decision would be best vested in Congress rather than the NRC.

There are a variety of other suggestions that appear in the paper. Another alternative would be to reduce uncertainty by modifying the NRC's program. For example, as I said a moment ago, there are a large number of unresolved issues about the site. In some of these, progress has definitely been made.

Perhaps we are at a time when we can resolve these through a stipulation process or a rule making process. And if we get into details on that, I'm going to have to ask Larry Chandler to say a few words about it. I'm not sure whether they'll be pro or con. But in any case, the idea of attempting to resolve some of the issues now prior to when they might appear in a licensing arena early in the next century.

Another alternative: because a number of people believe that NRC has asked a great many questions that are difficult to resolve, could be the creation of an NRC internal review group to ensure that the technical issues that we raise with DOE are entirely in focus.

The third alternative would be to maintain our existing high level waste repository program. Now candidly, you have to recognize that this is kind of a moving target. Our budget has decreased by approximately 50% over the last several years, and so we will not at this time be maintaining the program that we had, say, in 1993 or 1994.

But we would continue within the resources that we have to maintain the program with its present direction.

The fourth option is interesting: take a minimal approach to our high level waste repository

program. We've been looking at this thing now -- I've been with the agency working on high level waste at least a fraction of that time for over 17 years. By and large, new standards from EPA were going to come out any year.

EPA was going -- I mean, DOE was going to submit an application within a couple of years. And that was the view we had in 1979, and that's the view apparently we will have in 1997. There is at least a suggestion that until more visible progress and commitment is made, that the NRC's resources to protect health and safety, our overall mission as an agency, might be better spent in other areas.

And that we should consider a position that, when progress is made, we will be happy to bring staff on board and tune up; and until then, we will maintain a watch on what happens.

The last option, which overlays some of the others, is to take a position on the storage of spent fuel. If you're aware of the DOE obligation which the courts upheld this year that they must take responsibility and whose responsibility -- as opposed to title and possession, because I'm not quite clear exactly where title and possession lies -- but they have to take responsibility for spent fuel January 31, 1998 which is now about 15 months away.

How they will do that, where we will head toward a centralized storage facility, or whether waste will be stored for the rest of this century and part of the next at reactor sites is an issue that perhaps the NRC should take a position on and try to provide some leadership to the nation on what works best.

Those are the options that we had provided to the Commission. And the Commission's preliminary view is that they would like to maintain our existing program in option three. But they would like to explore taking a more active role in resolving some of the issues that I've just described -- again, consistent with our mission.

And the Commission, as in a number of other areas, particularly seeks comment on what additional activities we might reasonably take.

With that set of factors, options, and preliminary views, I would now again like to turn it over to Chip to hear your comments.

MR. CAMERON: Okay; thanks, Mal. Why don't we take a look at the factors again and then start there, at any rate, and see if anybody has some comments on these factors according to DOE. Any comments on the lack of consensus among the scientific and technical community?

Does everybody think that that's a true statement? I don't want to necessarily go through and do

a true and false, but if there's a factor up there that you think doesn't ring true that might have an implication for the Commission's selection of options, it would be important for us to be able to hear that.

Anybody have a statement on the factors? Okay, well let's go to the options.

Oh; go ahead, Jim.

MR. RICCIO: So long as this agency and DOE are gearing towards trying to dispose of high level radioactive waste, you're going to meet with massive opposition. And the rationale behind that is that we don't see how you can dispose of something that you can't keep out of the biosphere for its hazardous life.

And so, as long as you keep on going down this track of where it's going to basically open up a hole at Yucca Mountain and throw this stuff in, you're going to meet with opposition. Monitored retrieval in perpetuity: that's basically where the public is coming at is from this point.

And it's interesting to note that there's accepted assured long term storage in the low level section, but not really a mention of it in the high level section.

MR. CAMERON: But is that -- I though that your statement was leading to the fact that this last --

and this is a good point. Is this last option that we have -- take a position on the storage of spent fuel, would that match up with -- was that compatible, analogous to the last option in the low level waste paper?

MR. RICCIO: I think -- and taking a position would be nice, but --

MR. CAMERON: I'm asking -- for your benefit, for all of our benefit, I guess I'm asking that question. And then, depending on the answer, I would go back to you, Jim, to see if your understanding of the factors would lead you to an option of long term monitored storage rather than disposal. Is that correct?

MR. RICCIO: I think that's where the public is at this point on high level waste, although Jane, I think, wants to speak for the public as well.

MR. CAMERON: Okay, but let me get a clarification from Mal or John or Meg on that.

MR. AUSTIN: Yes, option five I think is compatible with your suggestion. In the past, the Commission has tended to urge ultimate disposition of the disposal of the spent fuel. This would be a shift in that direction.

MS. FLEMING: And another voice of the public that doesn't agree with Public Citizen's voice is I am -- and I know there are others of me out there -- all in

favor with the NRC getting involved, pushing this forward; DOE pushing this forward; find a solution; find a site. Many members of the public are in favor of storage.

I am personally very much against long term site storage. I do not want to see 60, 70-odd high level waste dumps spread across this country. I thin economically it's going to be very expensive to run. Security wise, it is very dangerous. Environmentally, it is not a good idea.

And this member of the public is all for find a solution.

MR. RICCIO: If I could just clarify, I didn't say to leave it at the site. I said you're going to have to watch this waste in perpetuity.

MS. FLEMING: No matter where it is?

MR. RICCIO: No matter where it is.

MS. FLEMING: Even in a hole in the ground?

MR. RICCIO: Well, we already have seen that. Basically keeping this stuff at the reactor site is posing problems like with the drain down of Dresden One in that spent fuel pool. Obviously, keeping this stuff at the site is a problem with the problem you've already had of basically the hydrogen explosion in the dry cask -- dry cask disposal is a problem.

I'm not saying that we have a solution. We

are saying we have some opinions as to what is not a good idea. And shoving it in the ground and trying to forget about it isn't going to work. At least not in any public manner. You're not going to get any public acceptance so long as you fail to recognize this stuff cannot be disposed of.

DEPUTY DIRECTOR KNAPP: Could I pursue that for just a second?

MR. CAMERON: Yes; go ahead, Mal.

DEPUTY DIRECTOR KNAPP: One of the comments we got earlier is that in some areas, there's perhaps not been enough interaction between the various issue papers. I think what I just heard is all right, we're talking about spent fuel or high level waste; at least there is an element that says we've got to watch this stuff, you can't dispose of it.

Let's shift back for just a moment to low level and that assured long term storage option. Would you have any comment on whether there should be some consistency in this philosophy; or for whatever reason, you do not hold that assured long term storage of low level would be appropriate -- any comment on the relationship between those two areas?

MR. RICCIO: I would think that long term assured storage of low level would be wise too in light of

the fact that every dump that you've built is leaking. So, I think that would be a viable option for low level waste as well. Although, again, it would run counter to the interest of this industry.

MR. CAMERON: Okay, and that's a comment that we might want to go on to explore later on.

I think we have Dennis Bechtel from Clark County. Go ahead, Dennis.

MR. BECHTEL: For the record, Dennis Bechtel, Clark County, Nevada. You made a couple of comments about the factors. As the conversation on the options goes forward, I can speak to that maybe a little bit later. I would not limit the factors to just DOE factors.

There's a lot of other factors that are kind of unstated on your sheet there; one of which is just the fact that geologic disposal is a national policy now. And we seem to be talking about, you know, proposed legislation and interim storage legislation. And as of right now, the policy is permanent storage of material.

And so, I think that needs to be emphasized more.

There are other issues. A large issue is just the transportation of the waste. You so note in your background that the public is probably the -- more of the public is going to be exposed by waste transport than the

publics that are actually around the reactors. And once the -- if an interim storage site is selected, it's going to be interesting to see just how this plays out nationally, just the transfer of the waste, because rightly or wrongly people are fearful of things radioactive.

And I know the industry has had a safe record in transporting materials, radioactive materials, but you're talking about larger volumes of materials and there's going to be accidents. How the public is going to consider that is going to be I think a bigger issue than people have discussed heretofore.

Also, another factor that could be added to your list there is the fact that the NRC has recognized that waste can be stored safely at reactor sites. In fact, in some ways, dry cask storage is safer than in pool storage. I mean, it's a passive system.

Because of the technical uncertainty of the Yucca Mountain site, and the transportation issues I just mentioned, I think we feel that it's probably better national policy to leave the spent fuel at the commercial reactors. And I think that's also -- I mean, the fact that waste can be safely stored at reactor sites, I think that's a key factor that should be I think added to your list.

That's all I had.

MR. CAMERON: Okay. Thank you, Dennis. And I guess based on your last statement, what option would that support? What implications would that have for the options?

MR. BECHTEL: I think there is several options that you mentioned that I think we could support. I think option 1 -- let me see here. You know, just indicating -- well, taking a stronger stand I guess that waste can be kept on site safely, I think that's something that -- I believe -- I mean, I live in Nevada and obviously I have a bias, but I think as far as national policy, I think that seems to make sense.

And I feel that with regard to option 5, the NRC I think needs to take a stronger stand on that. I think also the NRC -- we have been kind of going through this dance with DOE, just on this viability assessment over the last year or two, and it's a little uncertain in my mind. They need to have -- as I understand it, they have collected pretty much all of the data that they're going to collect for their viability assessment determination in 1998.

And having been involved in this for a number of years, I do not feel that they have really gathered enough information really to even make a viability

assessment. As they're tunneling in the Mountain, a number of things have come up. They have a chlorine-36 issue. They have run into other faulting zones.

And I really think that says to me that they really need more data, and it's a little uncertain in my mind, once they get to this 1998 date, the viability assessment, what is NRC going to do at that point to kind of -- during the licensing phase, you know, to require the Department of Energy to collect more information, I mean to actually prove that the site is suitable?

MR. CAMERON: I think that question is one of the fundamental questions that we need to address in deciding on these options and going and deciding on a strategic direction.

MR. BECHTEL: So I think with that in mind, I think we would support, and I would hope the public would support, a stronger role by NRC -- being the oversight, the watch dog agency -- to ensure that the site is suitable and --

MR. CAMERON: So that might lead you to one of the other options, although you were saying that option -- this last option on storage of spent fuel would also --

MR. BECHTEL: Yeah, right.

MR. CAMERON: -- be important. And in that sense I think you and Jim Riccio agree on the option, but

your storage mechanisms would differ.

MR. BECHTEL: Yeah.

MR. CAMERON: Jim would be off site, monitored, retrievable, and you feel that the on-site dry cask storage is --

MR. BECHTEL: Right.

MR. CAMERON: -- suitable.

MR. BECHTEL: Yeah, and I --

MR. CAMERON: Okay.

MR. BECHTEL: -- I see there is bits and pieces of alternatives I think that NRR finds acceptable.

MR. CAMERON: Okay. Thank you, Dennis. I think we're going to hear some other viewpoints now.

MR. GURICAN: Greg Gurican again, Patriot.

I have a couple of comments. I'd like to go back to the key factors for a second. I guess the slide itself right from the start having the parenthetical statement speaks to the question of NRC's leadership in this area to begin with. Why do we not see a slide that says "key factors according to the NRC"? And I'd like to know what your key factors are that you are considering.

Chip wrote up the question of truth and reality here with regard to these key factors. And I think if we look at factor number 1. I'm not sure of the intent that DOE has in making this particular statement.

However, I don't believe it.

I believe that there is a significant amount of consensus in the industry, especially in the scientific community and amongst various parties who are interested in the program, whether or not they're interested in the (quote) "fundamental elements of the program," and whether or not those elements are specific or within its entirety with respect to a given program versus a different program. I don't think that has been addressed.

So if someone were to define what the program is and/or define what the fundamental elements were, then we could possibly discuss what it is that they may intend by that particular statement. But I think if you look at the issue, for instance, that was brought up and widely publicized in the news not long ago that there could be a potential explosion if you will of the spent fuel in Yucca Mountain once it was placed there, I think that has been significantly discredited by the scientific community, and we see that there is consensus at least in that area. Okay?

Maybe you have two scientists out there who don't agree, but you have a consensus of the majority of people who are in the scientific community and the technical community who would say that it is a possible or a viable option in a safe location perhaps.

So given that, I'd like to know what NRC's key factors are and if they differ with DOE's, and then where you might go with regard to the options once I hear those key factors. But I would advocate a stronger leadership role for the NRC, and if anyone has any question as to the definition of "leadership" let's go to the word "to lead" and let's go a la Steven R. Covey, "Seven Habits of Highly Effective People," who would say that to be a leader is to have a vision, to promote that vision, and then you will have others who will follow.

Thank you.

MR. CAMERON: Thank you very much, and I guess I would go to the panel for an answer to the question of why we chose to restate the DOE key factors, or why we chose the DOE factors as our key factors. I don't know if you mentioned, though, when you were talking or not, Mal, but if -- it seems like there's a question on the floor for you on that.

MR. AUSTIN: Well, we have to start somewhere in picking factors. Being an author, a co-author with Meg, I tried to step back and be truly objective and not let my own biases creep in in characterizing a program that has been underway for many decades and with a lot of people saying "with no progress."

I thought it would be better to take a DOE

characterization of the national program rather than insert my own biases. Certainly, we can take a look at developing factors according to NRC. It's a good question.

MR. CAMERON: Mal, do you have something to add?

DEPUTY DIRECTOR KNAPP: Yes. I'd just like to note that, you know, one of the reasons we are here is to hear comments on the key factors, and we will be pleased. We heard a number of factors already and, please, those which are here that you don't want us to use for one reason or another, or those which you'd like us to add, we'd be very much interested in hearing that in the comments.

MR. CAMERON: Okay. And I might add at this point, just as a generic issue -- and I would ask Jim Milhoan to correct me if I'm wrong about this. The issue came up yesterday in a discussion of the co-regulator status of agreement states. There is a lot of things that are written in the issues papers. The Commission reviewed the issues papers, and they gave a preliminary option. But the Commission didn't necessarily endorse every factor, everything that was put forward in an issues paper. I mean, they were basically a discussion vehicle. Or is that a difficult question to answer?

MR. MILHOAN: No, it's not a difficult question to answer. In fact, as I said in the opening remarks, our work was to produce to the Commission an issue paper with a wide variety of options.

The Commission, in its comments back to us in the staff requirements memorandum, did select a preliminary view. But with respect to those others that they did not select, I really can't say they reviewed every detail and would have agreed with every statement made in there, because the purpose of the papers was to be able to focus a discussion on these directional setting issues so that we could then determine the direction for the agency to incorporate in their strategic plan, which is the primary document that will be produced.

The issue papers have a function, a limited function, and a one-time function, and we will not carry those issue papers forward. Rather, we will incorporate the Commission's preliminary views into our strategic planning document; and, therefore, at that time the issue papers have served its very limited purpose.

MR. CAMERON: And served the purpose of being a vehicle for getting comment from the public on those issue papers, so that that can go to the Commission for incorporation into their decisionmaking.

We also I think heard an endorsement of

option 1, the Commission assuming a greater leadership role. There is a number of suggested mechanisms in option 1 -- a congressional acceptability finding. I don't know how that relates to the other suggestion in option 1 of the Commission certifying rather than licensing. Is that an either/or proposition or --

DEPUTY DIRECTOR KNAPP: I think the fundamental concept in option 1 -- that we would simply take a greater leadership role than we have now. There are a number of things that we could advocate to Congress, such as certification rather than licensing.

MR. CAMERON: I see.

DEPUTY DIRECTOR KNAPP: Such as a decision by Congress.

MR. CAMERON: Okay.

DEPUTY DIRECTOR KNAPP: Such as a change from DOE's development of the facility to the development of this facility by a private corporation. What we were simply looking at was going beyond where we are now, which is to develop regulations and the ability to implement them, and saying, "This is what we think needs to be done nationally to get the job done." John may want to add to that.

MR. CAMERON: To coin a phrase, why don't we take a vertical slice on --

(Laughter.)

-- option 1. Do people have opinions about some of the solutions that are offered in option 1? "Solutions" is probably the wrong word. But some of the suggestions by how NRC could take a stronger leadership role? Are there any comments on any of those?

Okay. How about other discussion on other options? I thought it was interesting in option 2 that the suggestion was made that we somehow try to close out issues earlier. I believe it was on option 2. Rulemaking was suggested, some type of licensing activity where we would close out issues.

I know that issue closure has always been a hot issue for the State of Nevada. I don't know whether you want to say anything about that, Dennis, from a Clark County perspective.

MR. BECHTEL: Well, just the fact that it kind of goes back into just the uncertainty in the program right now and the fact that I'm not sure I totally agree with the vertical slice approach. I'm not sure sometimes you can extrapolate from a smaller issue, you know, the entire problem. But I think wrestling with all of the issues as early as possible I think is, you know, something that should be done.

MR. CAMERON: Okay. Thank you, Dennis.

Anybody have any comments on issue 2? We have heard some support for option number 1 and option number 5, and the Commission's preferred or preliminary option was option 3, maintain NRC's existing high-level waste repository program. And why don't we go to the agreement states, or are you going to be a private citizen?

MR. COLLINS: Steve Collins representing the Organization of Agreement States.

Each state that did comment on these through the Organization of Agreement States does currently have operating power reactors within its boundaries, and the states that provided comments were split between options 2, 3, and 5, and we have heard about 2 and 5 already from the other people here.

For option 2, as the courts have already decided, DOE is legally obligated to take the spent fuel. The NRC should presume on the assumption that DOE will and resources should be dedicated accordingly. NRC should assume that the important elements of the national high-level waste program include not only a repository and centralized interim storage, but also on-site dry cask storage. Simplification of the hearing process, pursuing binding resolution, and early negotiation of issues are all worthwhile for NRC to explore.

For option 3, NRC should maintain its existing

high-level waste repository program, and for option 5 something must be done soon to address the storage of spent fuel in the near term before a repository opens. Option 5 offers the clearest option for this to occur.

The interim storage of spent fuel should be the preferred option. Options that short circuit the characterization process should not be accepted. The repository itself has become very politicized. Whatever is done with high-level waste and spent fuel must be safe. Full licensing of the repository is preferred. No shortcuts should be allowed.

If Yucca Mountain proves to be unsuitable, it should not be used. If that occurs, a fallback such as interim dry cask storage should already be in place to avoid a crisis. In the event Yucca Mountain is unsuitable, other long-term solutions should be in place. The most cost effective option is to allow dry storage at this point.

The NRC should encourage Congress to move towards dry storage and using DOE sites for MRS facilities. DOE owes the electric utility something for all of the wasted time and utility's money on this issue. DOE should be a part of the interim solution.

Look at how long it has taken for DOE to get the WIPP started. At DOE's current pace, the process of

finally siting a repository will outlast the lifetime of all of our reactors.

MR. CAMERON: thank you, Steve, and again, thank the agreement states.

Mal?

DEPUTY DIRECTOR KNAPP: Steve, I had a couple of questions on that you may or may not be in a position to clarify. I think you said that interim storage is the preferred option. Just to be clear, I infer you mean centralized interim storage as opposed to at reactor storage? Or is an intent available from what you have in front of you?

MR. COLLINS: The statement doesn't qualify which. It is basically indicating that every one of those options -- the interim storage at a site is something that is needed right now in the current, but that's not a desirable long-term -- you know, that's why we --

DEPUTY DIRECTOR KNAPP: All right.

MR. COLLINS: -- are in favor also of MRS. Don't leave it at the reactor sites long term but have an MRS until you do get a disposal facility, because we do agree that something deep underground and retrievable would be the long-term permanent solution.

DEPUTY DIRECTOR KNAPP: All right.

MR. CAMERON: So you would essentially -- you

and Jim Riccio are on the same page on that in terms of long-term monitored storage.

MR. COLLINS: Yes.

MR. CAMERON: Do you want to put that on the record or --

MR. COLLINS: Yes.

MR. CAMERON: Yes.

(Laughter.)

And, Mal, do you have other clarifications at all?

DEPUTY DIRECTOR KNAPP: There was a comment I think about shortcutting the process. If you could read that again, I think that may lead to a question.

MR. COLLINS: Yes. The statement is just "No shortcuts should be allowed." A full licensing process, with no shortcuts, should be --

DEPUTY DIRECTOR KNAPP: Okay. I could --

MR. COLLINS: -- by an independent regulator is what we're talking about.

DEPUTY DIRECTOR KNAPP: Okay. I could infer several things from that, possibly including a comment on DOE's viability assessment. When you provide your final written comments, if that were to include that that would be helpful to us.

MR. COLLINS: We'll try to do that.

MR. CAMERON: Okay. Thank you.

Do we have some other comments? I think we have gone through most of the options.

MS. FLEMING: Can I ask one question on option 1?

MR. CAMERON: Sure. And let's go back to Jane Fleming and Jim Riccio, if you want to comment to on anything that --

MS. FLEMING: Under option 1, there is a discussion in the paper of a quasi-government agency. I was hoping that I would hear some discussion on that to get a position one way or another on that. Right now, knowing little about that, I don't think I'd be in favor of that suggestion, but I was hoping to hear from some of you people as to what you think. Now I want to be facilitated, too.

MR. AUSTIN: Actually, that is not an original idea. Back in 1983 when Congress passed the Nuclear Waste Policy Act it mandated such a study. Should the program be moved out of the extremely large Department of Energy complex, separated into an organization dedicated to a solution for the high-level waste problem?

That study was carried out by a blue ribbon panel. In I think it was 1984 they submitted their report to Congress, and the response back was: it would delay

the program if you did this.

(Laughter.)

So the thought is to have dedicated people focused solely on the solution to the high-level waste program -- no other interest, but a safe solution, perhaps a restructuring of the salary levels that these people would be paid -- so that type of -- have I clarified it enough?

MR. CAMERON: Okay. Thanks, John. And that suggestion in the paper is in the context of things the Commission might advocate as part of their stronger leadership role in terms of refocusing the program.

Jim, do you have anything to say? Okay.

Anybody have any final words on this before we take a break? Sure.

MR. CRAWFORD: Sid Crawford with SAIC.

One of the problems I see here right now is that we don't appear to have all of the interested parties involved to discuss this particular part. In particular, is there anyone here from DOE RW? Okay. I haven't heard much comment on what DOE's position is with respect to these particular items. I know I haven't heard anything from DOE EM on the high-level waste program that is going on.

I think that these all need to be brought into

the record before the NRC makes final decision on these. I think that the Senate certainly expressed its sense in the Senate 1936 debate concerning on-site storage versus centralized storage, and I think that ought to be considered as well. In other words, I think there's a lot of opportunity for additional viewpoints still to be raised.

MR. CAMERON: Thanks, Sid. I think we would agree with you on that, and we would hope to hear from DOE, not necessarily now if you don't want to say anything, but at least in prepared comments. And I take it you'd like to comment.

MR. EINBERG: Chris Einberg, DOE.

Presently, we are reviewing the issue paper, but preliminarily I have to say we're probably going to support option 3. This will give the revised program plan the opportunity to go to fruition and support the viability assessment that we're working on currently. And so our preliminary views are option 3, and we're going to submit detailed comments before November 15th.

MR. CAMERON: Okay. Thanks. It's Chris? Thank you.

Do we have any other silent stakeholders out there, so to speak, who might want to put something on the record at this point?

Yes, Lynne?

MS. FAIROBENT: Lynne Fairobent.

Just to follow up with what Mr. Crawford said, I believe it was, from SAIC, when I read the paper it's heavily focused on high-level waste program as it relates to the issues of spent nuclear fuel. He brought up the issue of DOE's high-level waste program that is not the RW activity but is the defense high-level waste program that EM is currently working on the processing, treatment, whatever you want to call it, storage aspects of it.

I continue to be perplexed in that every time the high-level waste topic is brought up that amount of material seems to be conspicuous by its absence. And if you take a look at volumewise and curie content and stuff, there's a lot of real issues that are associated with that, especially in light of the fact that the demonstration project for the defense high-level waste tanks at Hanford, the TOURS project, is getting underway, and NRC's role now in being prepared to regulate the privatization aspects under that program coming up. I was a little bit concerned that I didn't see discussions in that vein in this option paper.

The DOE PEIS for waste management does have a high-level waste chapter, and that chapter is focused on the defense high-level waste and not DOE spent fuel. They

are currently in the process of manufacturing processing the high-level waste canisters, both at Savannah River and at West Valley. So I think th. perhaps as you go back in and look at this issue paper it may be helpful to also take a look at the considerations on the defense high-level waste side and not simply the spent fuel issues.

MR. CAMERON: Okay. Thank you again, Lynne.

Let's take a break until 25 to.

Okay. Dennis, one last comment.

MR. BECHTEL: One last -- I'd like to make just a continued pitch for your licensing support system advisory review panel. I was kind of sorry I didn't see that in the paper.

For those of you who aren't aware of that, it's a multi-jurisdictional group who -- the first work done in negotiated rulemaking -- I think it was Part 2 -- and in the course of our work have discussed a lot of other issues as well, and I think it has been an opportunity for involvement by all of the affected counties, the State of Nevada, Department of Energy site. I think that's -- I would hope that that support will continue.

I know you've had some funding problems with that for the last couple of years, but I would hope that more funds would be put to that, because I think it's a

good group to discuss issues like this.

MR. CAMERON: Thanks, Dennis. I think that's probably an important point in terms of, for example, option 2 perhaps, reducing uncertainty.

But thank you all for that great discussion on low level and high level. Let's take a break and be back at say 25 to. That's a short break. But we have a scheduled 4:00 wrap-up. I don't think we're going to need 4:00 to 4:30 for a wrap-up. So if we go to 10 after or so on the very important subject of decommissioning, we can do that. But let's try to get back in about 12 minutes or so.

(Whereupon, the proceedings in the foregoing matter went off the record at 3:26 p.m. and went back on the record at 3:42 p.m.)

MR. CAMERON: Okay, everybody. We're going to get rolling now for the last paper in this arena -- a very important issue, obviously, the decommissioning of non-reactor facilities. And we've already seen the potential efficacy or transferability of some of the options from this paper to perhaps the reactor decommissioning area.

And we're going to take this as far as it goes, but I think at around 10 after 4 we're going to have to wrap it up so that we can have a final brief closing session, and I'll get one idea out right now. Just

remember there are other ways to comment -- Internet, hard copy. There is comment forms here if you want to jot a short comment down. There is obviously this form. And don't forget the video cam. And that guy is going to be there for, what, th next month so that people can come in? I think he'll know, okay.

DEPUTY DIRECTOR KNAPP: Okay. The last issue paper. Reminds me of the way that Johnny Carson used to open the last envelope.

This one is on decommissioning, non-reactor facilities. And the specific issue is: what should the NRC's strategy to take advantage of new and different approaches to optimize site remediation of the site decommissioning management plan and other problem sites? Our real focus here is on decommissioning of problem sites.

We have had many licensees over the years. We have decommissioned many of them. Almost without exception this goes smoothly, but there have been exceptions. There are sites out there -- right now I think they number about in the forties -- where there are simply problems. In a number of cases, we have licensees who do not have the financial ability to decommission, decontaminate, remediate as needed.

In some cases we do not have licensees. We

have responsible parties, but the licensees may no longer exist as an organization, and sometimes we have trouble finding responsible parties and convincing them that they are responsible parties.

These sites take a great deal of time and energy to remediate. They require a great deal of staff time. They require a great deal of management attention. The process takes longer than we would like; it takes longer than the public and Congress would like.

What we were looking at in this paper were ways that we could make this work better. We think that we could do this more effectively. We think it would benefit the public, it would benefit us, and in some cases we think it would benefit the licensees or responsible parties.

One of the concerns we have -- as I look at the key factors, you can see I've already spoken briefly to the first one, where we have people who are responsible, who are unable or unwilling for various reasons to decommission. Unwilling could be, among other things, that they do not wish to spend their company's resources in that direction, or they are concerned that if they do it it could open them up by simply accepting responsibility to future liability should the site need to be cleaned up further in response to some future standard

that could be promulgated.

There are limited NRC resources available to address all sites within the timeframes desired by the Congress and the public. We would like to move faster, but these are time-consuming projects. Our legal authority is limited at most of the sites because of the relatively low levels of contamination and risk.

We also have a concern that as we proceed towards remediation the proposed groundwater requirements by EPA -- that is to say, four millirem -- we could find rather difficult to have the licensees implement at some of these sites within the financial capabilities that they have.

With these key factors we developed a set of nine options. I'd like to note that these options were developed by Tim Johnson, the author that sits with me. Tim is principally responsible for our site decommissioning management program. And among the alternatives that we offer here are continue the existing program. We could change the decommissioning review process.

The process currently involves our, in some cases, reviewing site characterization plans. Once they have been approved we review decommissioning plans, and then finally we approve the completion of the

decommissioning and survey to certify decommission has been properly carried out. We might change that process to reduce or eliminate some of the early reviews by the NRC and have the licensee proceed directly to decommissioning without our review of characterization and planning processes, at least in the detail that we now do.

The third option would be we could change the residual contamination criteria and review standards. We could increase the amount of contamination that would be permitted to remain at a site, particularly in the case of a site where there would be some sort of institutional controls, or we could look at the stands. There are those that argue that our present method of applying our decontamination criteria is extremely conservative, and perhaps less conservative methodologies could be used.

We could adopt the U.S. EPA Superfund approach. Those of you who are familiar with that know that EPA has the power to tackle responsible parties. Whether they are licensees or not, if they have been contributors to the site, EPA has the power to assess triple damages. This can tend to make it much easier to convince responsible parties to do the right thing in a timely way.

We could regulate some of the material in these sites, source material, consistently with what is

now being done on naturally-occurring and accelerator-produced materials, NARM. In a number of areas there are tailings piles out there which very much resemble the ones that NRC regulates, but because they are not source material they are not regulated.

It might be worthwhile to consider whether if they do not need to be regulated to that extent, if they're outside the NRC's purview, is it a good use of resources to regulate them as carefully as we do simply because they're within NRC's purview?

The next option is to focus on decommissioning where progress can be made. That is, if we have a willing licensee, a financially capable licensee, we proceed. In the event that we get stalled, we would transfer these to the EPA's Superfund program, giving them an opportunity to use the legal tools at their disposal, recognizing as well, however, that the priorities assigned by EPA might not be as high as they would be by the NRC simply as a result of the large number of sites EPA has on its plate.

We could take an aggressive position to develop a regulatory framework for lower cost options. For example, if we have material that very much resembles uranium mill tailings, perhaps it could be disposed of at uranium mill tailings sites at an advantage -- financial advantage -- for the site operator and for the person

responsible for the SDMP site.

We could develop a strong litigative strategy. As I mentioned earlier, because of the low risk associated with a number of these sites, the NRC's legal ability to move rapidly can be limited. Perhaps we should reexamine our regulations to give us the tools that we need to move rapidly to do such things as impound funds of responsible parties so that we can assure they are available for site decommissioning and not available for something else.

Finally, we could seek Superfund authority.

The Commission's preliminary views. They had quite a few.

The overall sense of the paper and the sense of the Commission's views -- this provides some additional flexibility that the staff can use, and some additional power that the staff can use, to get these sites remediated in a more cost-effective way.

Among the things that the Commission endorses in a preliminary view would be to change the review process, to focus on sites where we can make progress and transfer stalled sites to EPA, take an aggressive position to come up with lower cost options, and to develop a strong litigation strategy.

They did have a couple of thoughts. We are concerned that if we were to reduce the amount of

preliminary review work we do on decommissioning that some of the licensees and responsible parties may not be technically competent to do the job properly. In fact, they might attempt to decommission, do it poorly, and result in higher costs to the NRC and to the responsible party.

So it would make a great deal of sense in the Commission's preliminary view to test this on a pilot scale and determine whether or not this would, in fact, be successful on a broad scale. We should seek volunteers to participate in this process, and we should seek comment -- we do seek comment -- as to whether we should hold workshops or seminars for licensees and responsible parties to help them better understand what they would need to do.

The last one, with regard to option 6, transferring sites to EPA Superfund, the Commission should look at transferring sites where we have -- where the risk is low. We also might want to consider stalled high-risk sites or low-risk sites where progress is being made. You can sort of have a box -- stalled high risk, stalled low risk, progress being made in low risk, progress being made in high risk. And they would have us look at both risk and progress on site remediation when considering whether to transfer a site to EPA.

The Commission would not like to have us just do this. We should not preclude the Commission itself from reviewing a site where conditions warrant. So this is what we're thinking about. Again, to state it very simply: the Commission's preliminary views would give the staff additional tools in a variety of areas to move more efficiently and more aggressively to get these sites cleaned up.

And with that, I'd like to turn it over to Chip for your comments.

MR. CAMERON: Okay. Thanks, Mal.

There is a lot of options that were under consideration here, and I guess I would just start off with, does anybody want to make any general observations about this issue, the factors which I think were well stated by Mal and some of the -- I think that Terry was pretty creative in coming up with some of these -- a lot of these options. But do we have some general observations? Steve, do you want to start off?

MR. COLLINS: Steve Collins, Organization of Agreement States.

The first sentence of the summary comments for the States was basically what I read as an agreement with the Commission's views. It says, "The agreement states believe that adequate flexibility should be available in

both policy and regulations to allow unique approaches to decommissioning and the funding of decommissioning."

MR. CAMERON: Is that clear, Mal, what that comment is?

DEPUTY DIRECTOR KNAPP: Think -- again, I would interpret that as Steve has, that that's pretty much consistent with the Commission's preliminary views.

MR. CAMERON: Okay. Good. So that's consistent with the preliminary option.

Do we have some other comments on the Commission's preliminary option, or any of the options here?

Lynnette?

Tom, go ahead. We'll let the States finish, and then let's go to Lynnette.

MR. HILL: In looking at what the Conference of Radiation Control -- Board of Directors of the Conference state, I think it is fair to state that their discussion of the options is they're in agreement with the Commission's preliminary views as well.

MR. CAMERON: Really? Okay.

MR. HILL: I think so.

MR. CAMERON: Okay. Lynnette is going to defer to Henry.

MR. MORTON: Henry Morton.

I think that there are a number of good thoughts among the options. And I think also, in the interest of looking through these to try to find ways where progress can be made that would help the agency to set its direction, there are a number to choose from and a number of things to consider in here.

With respect to decommissioning non-reactor sites or materials sites, one of the factors is large volumes of very low activity soil and debris, and what can we do with those, and what affects the volumes of those, and what affects the ability of the licensee to make progress in decommissioning. There are a number of things I think to consider.

One of the things that I mentioned this morning, that I'm generally in favor of the risk-based performance-oriented regulation, and in this regard there is an item to consider. While favoring that in general, I would suggest that you should not adopt performance-oriented regulations without knowing whether or not they are implementable.

And in that regard, we have seen, I think, an example of this already in that in looking through the proposed EPA and NRC guidance or regulations that we find essentially a 15 millirem per year limit is not implementable for the sites that are the most affected by

the rule. Mainly these 30 or 40 sites are the sites that have large volumes, low activity thorium and radium-226 on them.

For these sites, for instance, to put it in some perspective, 15 millirem per year is about one-third of the background dose rate that occurs from the same radionuclide series typically in nature. That is, if we see typically 40 or 50 millirem a year from such -- from soil, so we begin to see the difficulty of having chosen a risk level translated to dose without really knowing whether it's implementable or not. And so I think there needs to be some deliberation in the choice of performance-based rules.

I think that from among these options there are ways to make progress for the agency to set near-term directions, goals, and intermediate and longer term ones to go ahead and make progress without putting all of the choice into one of these long-term options.

For example, early on some ways that you could evolve in a sensible fashion I think were mentioned -- allow the intruder dose to go up to 500 millirem per year. The 100 value we've seen is not a particularly useful increment over the unrestricted release level that has been proposed.

Allow more realistic dose assessment

scenarios. Allow for a probability of intrusion, and incorporate or allow for the probability of occurrence in some of the scenarios. Allow restrictive use scenarios without having to do an EIS every time one of these is proposed or approved.

Another item -- I would encourage you to work with EPA to select a dose limit above 15 millirem that allocates more than one-seventh of the 100 millirem to decommission sites, because when we look at the choices or the bases on which the 15 millirem was chosen, one was allocation, and for these -- many of these sites you could allocate much more than the one-seventh. And there have been others who have recommended a third, a fourth.

And the ALARA as a basis, we have submitted comments showing that ALARA analysis and the GEIS was basically without basis and principle. It should be reconsidered.

On a risk level, 100 millirem is closer to the zone between tolerable and unacceptable risk than certainly the 15. So I think there is room to work with EPA in a more aggressive fashion to try to get something that is realistic and implementable for those sites that need implementation the most.

I think in the near term, on a decisionmaking basis, you could focus more on performance end points than

on the process by which you achieve that. And I think we are seeing progress with respect to things, for example, in diminishing the importance of the characterization report and things of that kind.

And I think that some other points in that regard to consider -- in applying focus, where you can do that in the near term in a more performance-oriented basis, a licensee, for example, in this viewpoint really ought to be allowed if he is -- if he is technically capable to do so, to dismantle more of his facility, remove contaminated material more than he is able to now, and dispose of that at an authorized disposal site without having necessarily to have a full-fledged approval for his decommissioning plan.

The agency in the near term could focus on that licensee and the contractor's ability to perform this kind of interim work on his quality assurance, and particularly on the health and safety plans to protect the public while this is occurring, on residual criteria and on the final status survey.

So the focus then would be less on how things were done and more on how -- on the performance end point.

I think also that the -- in the intermediate term, the agency ought to and could make progress with respect to disposal by reviewing the safety of the

disposal of the uranium- and thorium-contaminated soil at mill tailings sites. And should those be found acceptable, go ahead and make a policy decision that it's acceptable to do so. If an EIS is needed, go ahead and get with that, so that the licensees can have some more assurance of economical and assured disposal.

In the intermediate term, I think that, again, reconsider whether an environmental impact statement is needed for each restricted release. This is the kind of thing that can really slow down a decommissioning project. If it is, go ahead, proceed to do a GEIS for sites requiring restricted releases, where you can, so that you don't have to go through this process every time there is a restricted release.

With respect to probabilistic type approach, I think in the near term on a decision basis the agency should consider accepting the use of, for example, DOE Argonne's probabilistic version of RESRAD for evaluating these types of sites, or Battelle Northwest equivalent pathway dose calculation, a program of this kind.

This would be an incremental step that would help the materials licensees in their evaluations to move toward some kind of probabilistic assessment in a more expeditious fashion than some long study. And then I think perhaps in the longer term, as I mentioned this

morning, giving greater attention to fundamental radiobiology studies to resolve the DNA repair threshold viewpoint versus the linear no threshold viewpoint.

And I think -- overall, I think that with respect to the choice of the option, some of which seem to suggest downsizing, that to make progress in the near term, and to consider these kinds of things, it appears to me not to suggest downsizing.

MR. CAMERON: Thank you very much, Henry, for that detailed list of suggestions. I heard some things in there that I don't think we covered in the paper, so that should be useful now or --

Tim, do you have any comments?

DEPUTY DIRECTOR KNAPP: Tim may have a comment. It's a broad and detailed list and things that -- as I look at my watch, I want to think about a number of those carefully as we provide the final comments to the Commission.

MR. CAMERON: Tony?

MR. THOMPSON: Yes. I had a couple of questions and some thoughts on behalf of the uranium producers.

The idea of not staying involved in getting approved site characterization, particularly where we're dealing with naturally-occurring radionuclides, seems to

me to be a very bad idea. As perhaps you suggested in your comment, Mal, that it may well lead to a problem later when you go for your final verification study, and it's bound to lead to reopeners at some sites.

So I think the idea of not staying involved at the site characterization -- at the beginning of the process, which I think is one of the most important parts of the whole process of decommissioning, it's a bad idea for the reasons that you suggest. So I think reopeners would be bound to happen if there aren't guidance, and if there isn't approval and agreement on site characterization right up front.

DEPUTY DIRECTOR KNAPP: Recognizing that that is contrary to the Commission's preliminary view, presuming that you folks will be providing us written comment, if you can elaborate on that in the written comments, the Commission would be quite interested.

MR. THOMPSON: Yes.

DEPUTY DIRECTOR KNAPP: Thanks.

MR. THOMPSON: Secondly, I'm not sure I understand -- I thought when you said "develop a strong litigation strategy" there was perhaps the suggestion of changing the regulatory basis on which NRC can take sort of what we might call affirmative action, say to issue an order. Was that the intent?

In other words, right now if we are dealing with a licensed site, unless there is some sort of imminent hazard, NRC does not -- its policy is not to go and -- is to rely on the licensee, to work with the licensee, then have the licensee propose, NRC dispose of the licensee's proposal. Was there a thought that you would change that and make -- change your regulatory approach so that you could be more aggressive in not waiting for proposals but ordering?

DEPUTY DIRECTOR KNAPP: No, it was not -- let me give you a possible example. We are concerned about remediation of a site. We have a licensee who we have reason to believe is rapidly funneling money into another company so that they can create a bankrupt company that is responsible for the site and all of the funds can go somewhere else.

What action we might take under those circumstances at this point could be very limited, because arguably that is not a serious and immediate threat to public health and safety. It's a financial threat. And I'm speaking here with great confidence because I have an attorney who is probably going to correct me to no end in a couple of minutes.

But the concern, at least in my mind, is: do we, in fact -- have we provided the right regulatory basis

to take some of the actions that we think we need when things are happening fast and the going gets rough? It's not clear to me that we do have that -- we do have things that our attorneys can work with.

Larry, would you care to add to that or clarify?

MR. CHANDLER: Just to observe that I don't think we are disagreeing with one another. I think we are fundamentally saying the same thing, and that is what basis we would have for taking immediately effective type of action. And that has been an issue that we have confronted on a number of occasions.

MR. THOMPSON: I can give you one example that makes me nervous, and that is that there are people that may want to have a site moved. And the NRC's position is: the option on the table right now is not to move the site but to reclaim it in place. And the reason that option is the option on the table is that's the licensee's proposal, and based on the fact that we don't have an imminent hazard here, we don't have any basis for going forward. I would hate to see that changed.

MR. CHANDLER: And completely understanding the context of this particular --

MR. CAMERON: I think you'd better use this.

MR. CHANDLER: The context for this option was

more along the lines of I think the way Mal was describing it. That is, that the agency has identified a need for it to act on a prompt basis, as opposed to the situation in which there is a proposal sitting before it, and it's a question of whether the staff would support or not support a particular option at that point.

MR. THOMPSON: Okay. That clarifies it.

I guess another question I have is: why on earth would you want to involve your licensees with what's going to be the most screwed up program that has ever been --

(Laughter.)

-- put on the books? So why would you want to set precedent for moving things to Superfund? I can't imagine why.

(Laughter.)

Because if you set that precedent up, who is to say that they are not going to come and be very aggressive. Right now there is a policy not to put NRC-regulated sites on the NPL. That's an EPA policy. But you start moving sites over to EPA, and the next thing you know you're going to find people that want to push reactor site closings over to EPA. And I think it's a bad idea. It's not a very good program, and I think our people would be very much opposed to that concept as a general approach

to things.

Finally, as sort of a placeholder, because we haven't had the time to do it, based on the sort of strategic look here, the uranium producers are going to present -- and they're going to make a note of this in their comments -- a series of issues that are interrelated that address the regulatory program for those facilities, including such things as the use of mill tailings for other types of disposal.

And there are a series of decisions that have been made by the agency over time which have led to some serious conflicts in the interpretation of authority, and what does it mean. And so just to tell you now that we intend to make a note that we're going to propose a sort of strategic look at some of these decisions that have been made, and it goes directly to the one question about using existing sites, for example, or for other kinds of disposal. So I just note that for the record, and we will put a placeholder in our comments.

And finally, I agree with Henry. On the 15 millirem standard, the issue of dividing up the dose is certainly in keeping with the recommendations of ICRP and other bodies. But at least in the proposed record there was no demonstration or there was no analysis by NRC of the likelihood of anybody being exposed to seven of these

disposal facilities, or even of some disposal facilities and other nuclear fuel cycle facilities such that there would be a likelihood of exceeding the 100 millirem dose to the public.

And if you're going to go forward with something like that, it seems to me you owe it to the public and to the licensees to do some sort of analysis on that particular issue.

MR. CAMERON: And did you make that point in the comments on the proposed rule?

MR. THOMPSON: We did.

MR. CAMERON: Okay. Good, because that's where it will be considered.

Tom Hill, did you have any further comments, brief comments, from --

MR. HILL: In the interest of time, suffice it to say that in general the Board of Directors agrees with the Commission's preliminary views.

MR. CAMERON: Okay.

MR. HILL: We will put the rest of them in writing in detail.

MR. CAMERON: Okay. Thank you.

Does anybody out there violently disagree with some of the options? What was it, 2, 3A, 16? What were they? You know, with any of the options that were in the

preliminary option?

I'm just trying to see if anybody has any comments on the preliminary options that would indicate that they may not -- that they might not be a feasible choice from the standpoint of effectively cleaning up decommissioned sites.

Lynnette?

MS. FAIROBENT: Uh-oh, I have to get violent. Oh, no.

I guess I like a lot of the options, and I like some of them a lot better than others. And I guess what I want to comment on is the Commission didn't seem to like some of the ones that would be my favorite. And one of those might be to address the standards and review standards that are placing some of these facilities in such distress in the first place, and that perhaps you could solve the problem if it wasn't -- not in all cases.

I realize some of these sites, your SDMP sites, are going to pose problems probably regardless. But it would occur to me that a lot of them wouldn't if the ante wasn't so high to carry out this function of dispositioning the site in a way that protects public health and safety.

So I guess my only comment would be to, you know, wonder why that particular option wasn't favored by

the Commission, and to suggest that certainly if it's not advantageous to go back and change the basic criteria that the review standards should be scrutinized very carefully, and many of the suggestions that Henry had made would help a lot of these facilities be able to implement the standards. And that could also be more in keeping with the processes that EPA uses, so it could even be an issue of better consistency with another federal agency.

Some of these issues about considering actual reuse of the site, I think some of those things are going to, you know, find favor and in the process you can find a standard that can be used more effectively to do what we really want to do here, which is disposition these sites and get on with it.

Thank you.

MR. CAMERON: Okay. Thanks, Lynnette.

Lynnette gave us some of her favorite options, I guess. And would anybody else like to express any opinions along those lines, or say anything else about any of the options?

I know it's the end of a long day, and I would just encourage everybody to send us their written comments either through the Internet or hard copy on these particular issues. We don't mean to try to give this particular issue short shrift in any way.

Does anybody have any further comments?

Okay. Well, why don't we switch gears and wrap up here. Personally, I think this was -- both days were very, very effective days, and I think we got a lot of -- NRC got a lot of really productive information out of these sessions.

Now, I guess one thing that I'd want to do, and I'm going to turn this over to Jim in a minute -- before I forget, we have four people from the NRC staff that are out working the desk outside and did an incredible job in terms of the administrative arrangements, not only for this meeting but the other meetings. And I just wanted to recognize them on the record, and perhaps when you go out and leave today you could give them a personal thank you. But Anna May Holcraft, Libby Crossland, Anne Hoyle, and Barbara Johnson, I'd just like to -- we'd all like to thank them.

Are there any last thoughts about our two days of interaction here? Does anybody have any thoughts on the process after we have, you know, been through the two days? Any last comments before Jim says some final words to us?

Okay. Jim, do you want to close out for us?

MR. MILHOAN: I'm usually very brief, so this will not take that long. That's one of my

characteristics.

But I would like to note that we had a very wide range of attendance from different organizations, both individuals and other groups, in attendance today. I know it has been two very long days, and we have discussed a wide variety of issues.

I would note that I think the quality of the comments has been outstanding. I think the participants have provided their comments in a very professional manner. I think it is a manner in which we have been here; we have listened to the comments. We have a very important job -- the Steering Committee and the writers have a very important job before us to take both the comments we have heard at this meeting and the written comments and to provide our stakeholder interaction report to the Commission so that we can summarize and characterize the comments that we have heard, so that the Commission can then make a well-reasoned decision, a final decision on the issue papers that will be before them, and which would then be reflected -- their final decisions would then be reflected into the agency's strategic plan.

I would like to ask your assistance in one matter, in addition to requesting your comments. We have two additional public meetings -- one in Colorado Springs next week and one in Chicago the following week. The

value of those meetings, and the value to the NRC, and really to you, is through participation at those meetings. So I would request that if you are not going to attend those meetings that you call your friends, let them know of the meetings, and encourage others to attend those meetings.

We have made wide announcements of those meetings, but I would also request you to contact others to encourage their participation at those additional meetings, because the value of those meetings is really up to you. And the importance of those meetings, and the value we get, and the comments, and the interactions that we have are really important to us.

One last thing in closing -- as you've noticed, we have requested Chip Cameron and Doug Brockman to facilitate our sessions. We wanted to do that to be able to provide the widest possible approach to interactions with you, and we thought a facilitated session would accomplish that function. I think it has to a very large extent, and I do want to express my gratitude to our two facilitators in facilitating the sessions to obtain the comments that we did receive.

Does anyone else have anything that they want to say before we end the session?

If not, thank you very much for your

attendance. I know it's late Friday afternoon. Congratulations to those who stayed throughout the end of it.

(Whereupon, at 4:25 p.m., the proceedings in the foregoing matter went off the record.)

C E R T I F I C A T E

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

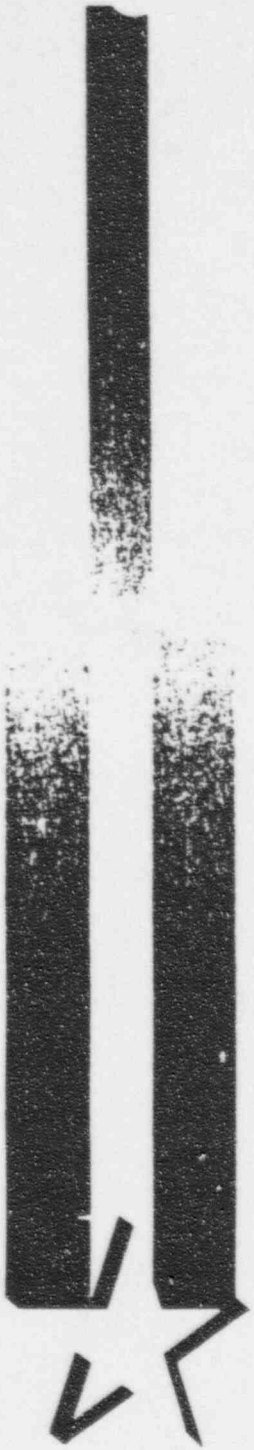
Name of Proceeding: STAKEHOLDERS PUBLIC MEETINGS
ASSURING SAFE MANAGEMENT OF NUCLEAR WASTE

Docket Number: N/A

Place of Proceeding: WASHINGTON, DC

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and, thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

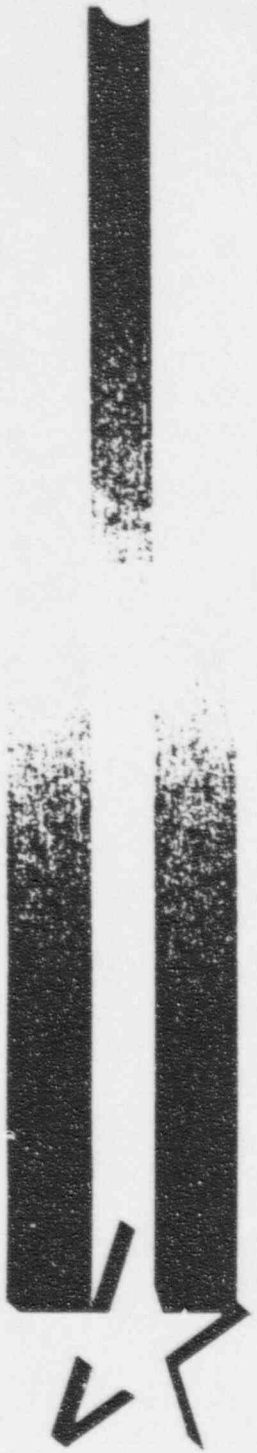
Corbett Riner
Official Reporter
Neal R. Gross and Co., Inc.



Direction Setting Issue No. 5
Low-Level Waste

October 24-25, 1996

Sponsor: Malcolm R. Knapp, NMSS
Writer: James E. Kennedy, NMSS



DSI 5

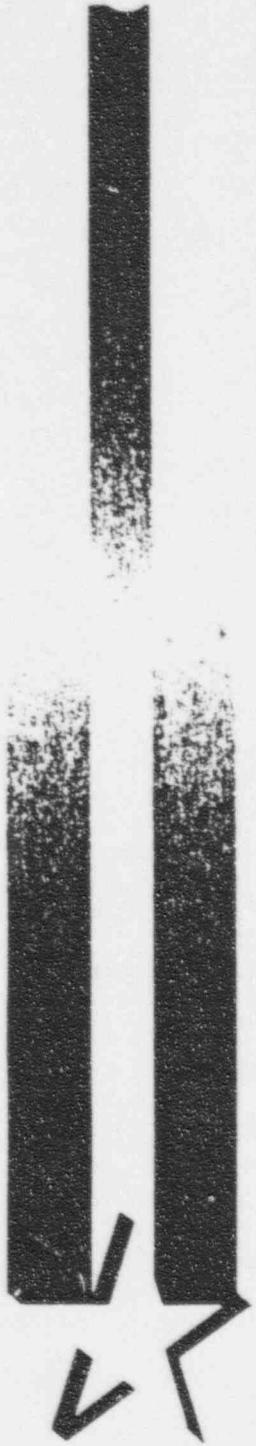
- ★ What Should be the Role and Scope of the NRC's Low-Level Radioactive Waste Program?

Key Factors

- ★ Most New LLW Disposal Facilities Are Expected to Be Located in Agreement States
- ★ NRC Does Not Expect to Receive an Application from a Non-Agreement State Within the Next Five Years
- ★ The Lack of Broadly Based Public Acceptance Has Significantly Affected the Development of New Sites
- ★ LLW Disposal and Management Options Are Available Today for Waste Generators
- ★ LLW Program Has Been Reduced in Response to Government-Wide Efforts to Streamline and Reduce Costs

Options

- ★ Assume a Greater Leadership Role in the National LLW Program
- ★ Assume a Strong Regulatory Role in the National LLW Program
- ★ Retain Current Program
- ★ Recognize Progress and Reduce Program
- ★ Transfer LLW Program to EPA
- ★ Accept Assured Long-Term Storage



Commission's Preliminary Views

- ★ Assume a Strong Regulatory Role in the National Program (Option 2). This Option Would Encompass All of the Activities That Were Performed Before the Recent Reductions in the Low-Level Waste Program.
- ★ The Commission Seeks Public Comment On:
  - Whether NRC Should Involve Itself to a Greater Degree in Implementing this Option in Such a Way as to Encourage an Integrated Approach to the Regulation of LLW Handling, Processing, Recycle, and Disposal.
  - How Should NRC Address Unauthorized Disposal?

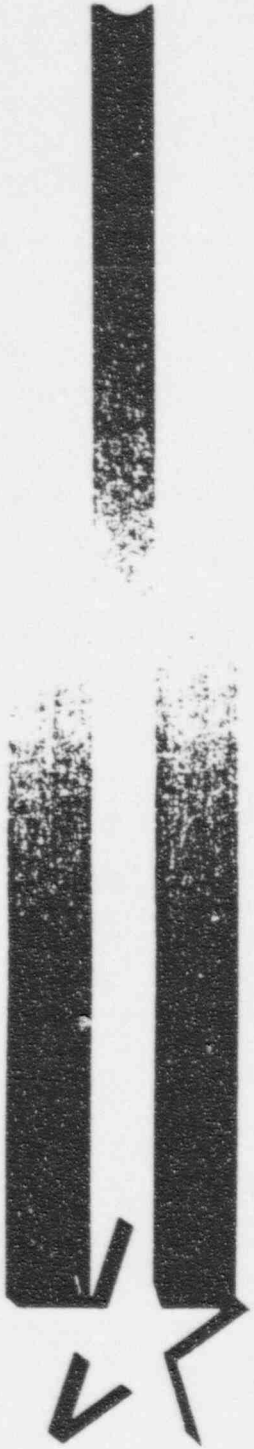
Direction Setting Issue No. 6 High-Level Waste and Spent Fuel

October 24-25, 1996

Sponsor: Malcolm R. Knapp, NMSS
Writer: John H. Austin, NMSS

DSI 6

★ In Recognition of Current Uncertainties, How Should NRC Approach the Present High-Level Waste Situation?

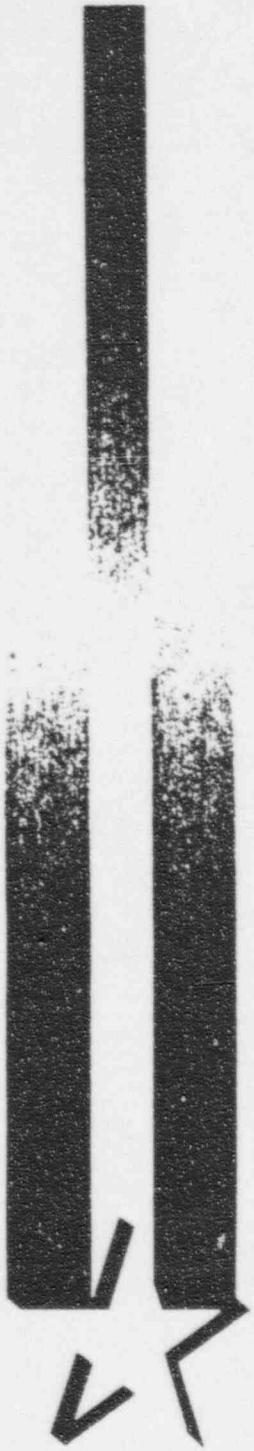


Key Factors (According to DOE)

- ★ The Lack of Consensus Among the Scientific and Technical Community and the Major Interested and Affected Parties on Fundamental Elements of the Program
- ★ The Unprecedented Nature of Geologic Disposal
- ★ The Linkages in the Law Between the Siting and Construction of a Monitored Retrievable Storage (MRS) Facility and the Licensing and Construction of the Repository
- ★ Strong Public Resistance to Waste Management and Other Undesirable Facilities
- ★ General Program and Budgetary Constraints

Options

- ★ Approach Congress and the Administration to Refocus the National Program
- ★ Reduce Uncertainty by Modifying NRC's Program
- ★ Maintain NRC's Existing HLW Repository Program
- ★ Take a Minimal Approach to NRC's HLW Repository Program
- ★ Take a Position on the Storage of Spent Fuel



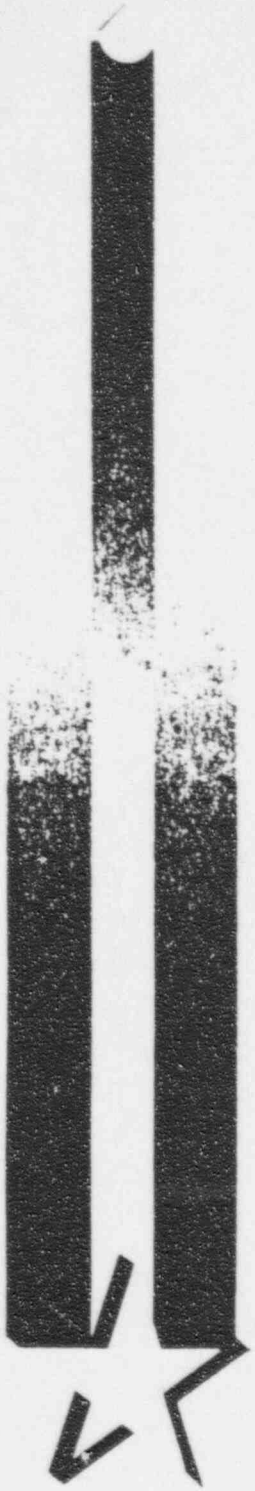
Commission's Preliminary Views

- ★ Maintain NRC's Existing HLW Program (Option 3).
- ★ The Commission Would like to Explore Taking a More Active Role in Resolving Issues in the National HLW Program, Consistent with NRC's Mission.
- ★ The Commission Particularly Seeks Public Comment on What Additional Activities the NRC Might Reasonably Undertake.

Direction Setting Issue No. 9 Decommissioning Non-Reactor Facilities

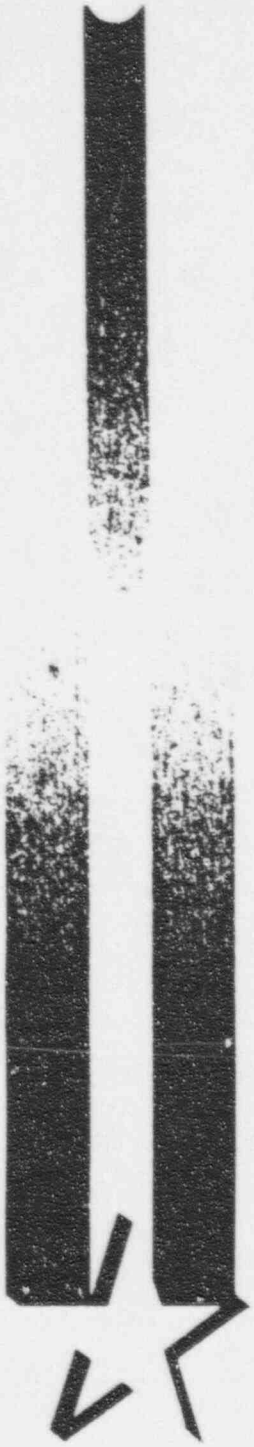
October 24-25, 1996

Sponsor: Malcolm R. Knapp, NMSS
Writer: Terry L. Johnson, NMSS



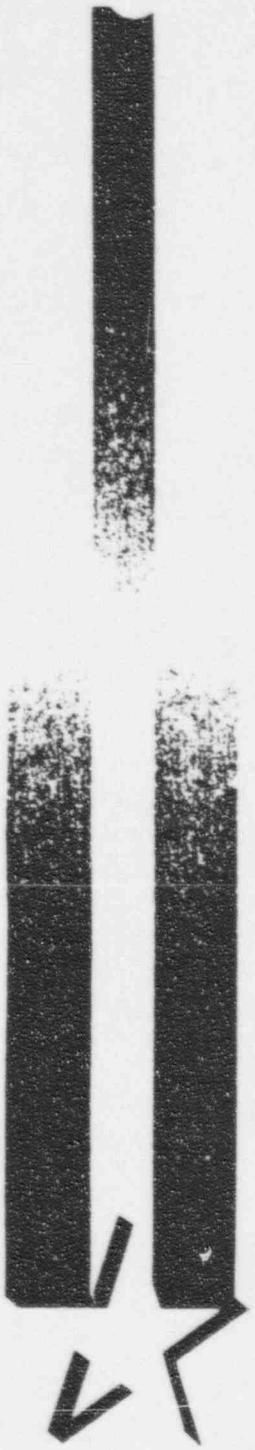
DSI 9

- What Should Be NRC's Strategy to Take Advantage of New and Different Approaches to Optimize Site Remediation of the Site Decommissioning Management Plan and Other Problem Sites?



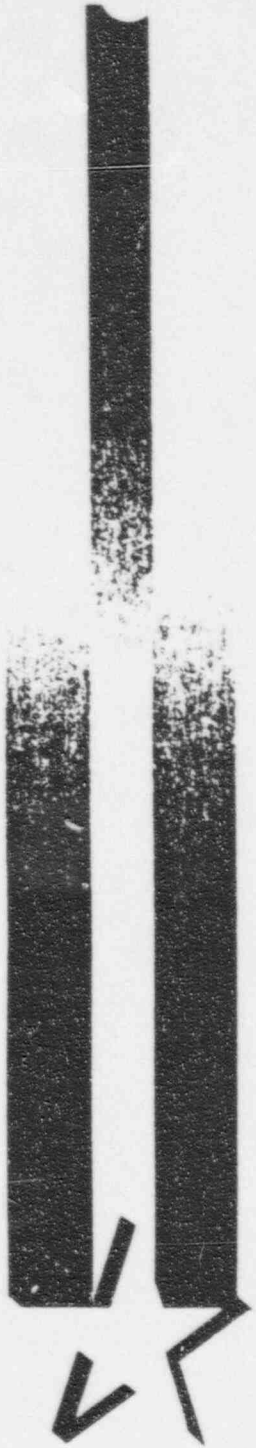
Key Factors

- ★ Some Licensees or Responsible Parties May Be Unable or Unwilling to Decommission
- ★ There Are Limited NRC Resources Available to Address All Sites Within the Timeframes Desired by Congress and the Public
- ★ Legal Authority is Limited for Most Decommissioning Cases Since Contamination Is at Relatively Low Levels.
- ★ EPA's Proposed Groundwater Requirements (4 mrem/year) May Be Difficult to Implement



Options

- ★ Continue Existing Program
- ★ Change the Decommissioning Review Process
- ★ Change Residual Contamination Criteria and Review Standards
- ★ Adopt the U.S. Environmental Protection Agency Superfund Approach
- ★ Regulate Source Material Consistently with Naturally Occurring and Accelerator-Produced Radioactive Materials

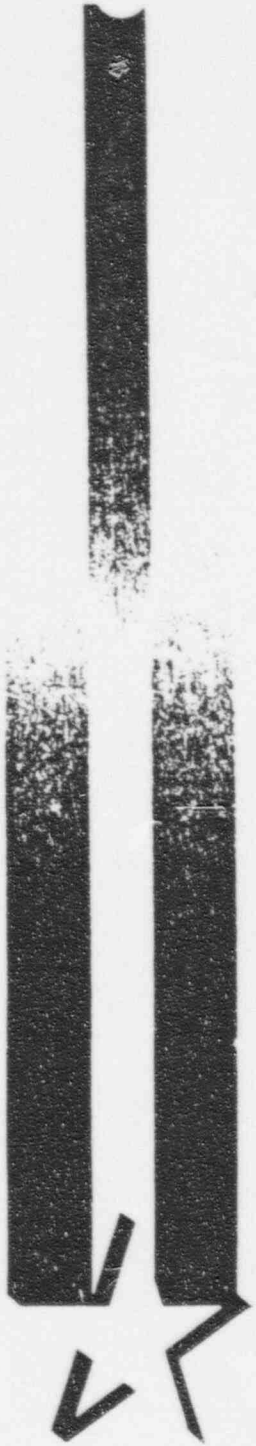


Options (cont)

- ★ Focus on Decommissioning Cases in Which Progress Can Be Made; Transfer Stalled Sites to the Environmental Protection Agency's Superfund Program
- ★ Take an Aggressive Position to Develop Regulatory Frameworks for Lower Cost Decommissioning Waste Disposal Options
- ★ Develop a Strong Litigative Strategy
- ★ Seek Superfund Authority

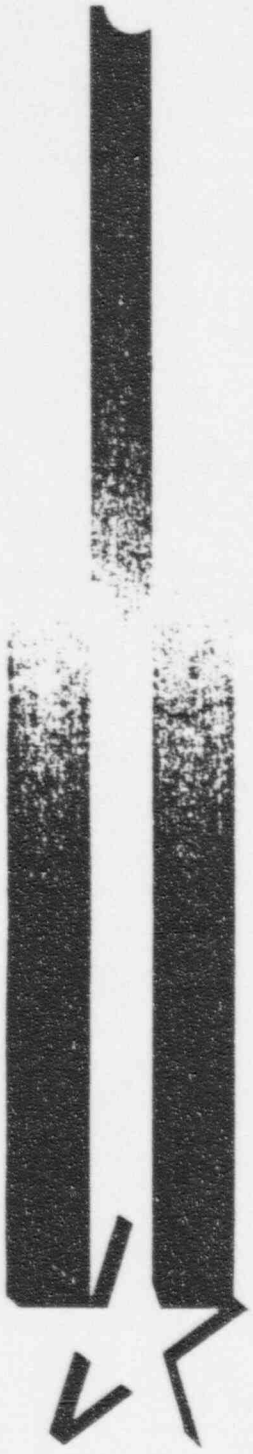
Commission's Preliminary Views

- ★ A Combination of Options Were Selected That Would Place Appropriate Responsibility on Licensees to Remediate Their Sites While Giving NRC Appropriate Tools to Deal with Problem Sites and Licensees.
  - Change the Decommissioning Review Process (Option 2);
  - Focus on Decommissioning Cases in Which Progress Can Be Made and Transfer Stalled Sites to EPA (Option 6);
  - Take an Aggressive Position to Develop Regulatory Frameworks for Lower Cost Decommissioning Waste Disposal (Option 7) And,
  - Develop a Strong Litigation Strategy (Option 8)



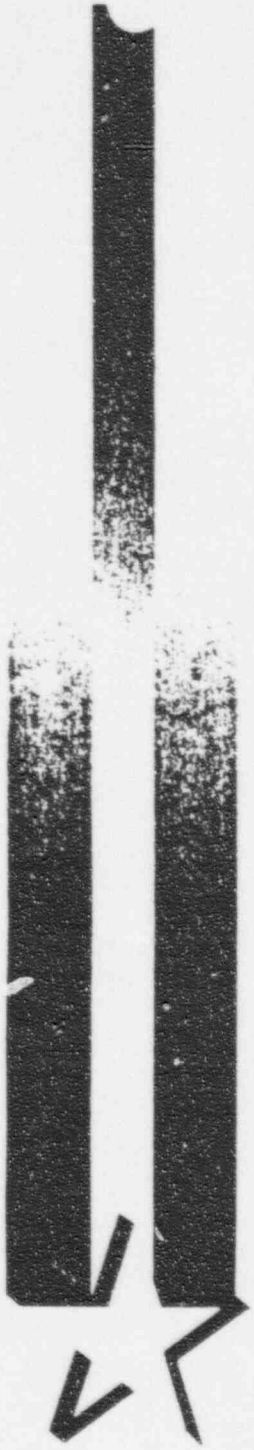
Commission's Preliminary Views (Cont)

- ★ Option 2 Should Be Tested on a Pilot Scale for a Few Selected Materials Licensees to Determine the Potential Success and Effectiveness of this Option if it Were to Be Adopted on a Broader Scale.
- ★ The Pilot Program Participants Should Be Volunteers That Are Found to Be Suitable for Participating in the Pilot Program by the NRC.
- ★ With Regard to Option 2, the NRC Specifically Seeks Comment on Whether NRC Should Hold Seminars or Workshops for Licensees to Make Sure That They Understand What NRC Expects of Them and What They, in Turn, Should Expect of Their Contractors.



Commission's Preliminary Views (Cont)

- ★ With Regard to Option 6, the Staff Should Also, Consistent with DSI 12, Examine the Level of Risk Associated with Each Site. Staff Should Consider the Feasibility of Transferring the Low Risk, Stalled Sites to the EPA's Superfund Program.
- ★ Determinations on Whether to Send to EPA's Superfund Program a Stalled, High-Risk Site or a Low-Risk Site Where Progress Is Being Made, Should Be Made on a Case-By-Case Basis.
- ★ The Implementation Process for Option 6 Should Not Preclude the Commission from Reviewing a Low-Risk, Stalled Site If Conditions Warrant, Nor Should the Process Automatically Send the Site to EPA's Superfund Program.



Commission's Preliminary Views (Cont)

- ★ With Regard to Option 6, the Staff Should Also, Consistent with DSI 12, Examine the Level of Risk Associated with Each Site. Staff Should Consider the Feasibility of Transferring the Low Risk, Stalled Sites to the EPA's Superfund Program.
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- ★ The Implementation Process for Option 6 Should Not Preclude the Commission from Reviewing a Low-Risk, Stalled Site If Conditions Warrant, Nor Should the Process Automatically Send the Site to EPA's Superfund Program.

Registered Attendees for the Washington, DC Meeting

25-Oct-96

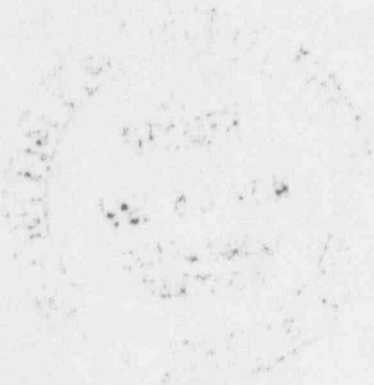
Meeting	Last Name	First Name	Affiliation	Title
Washington, DC				
	Alkema	Ken	Envirocare of Utah	Director of Government Affairs
	Anderson	Roger	Northern States Power Co	Director Licensing
	Ankrum	Al	Pacific Northwest National Laboratory	Sr Program Manager
	Bechtel	Dennis	Clark County, Nevada	Manager
	Beedle	Ralph	NEI	Sr VP
	Bell	Russ	Nuclear Energy Institute	Project Manager
	Borsum	Robert	Framatome Technologies, Inc	Manager, Rockville Office
	Boss	Gary	Government Accounting Office	
	Bradbury	Judith	Battelle Pacific N.W. Laboratory	Senior Researcher
	Branch	Kristi	Battelle Seattle Research Center	
	Brown	Roy	Council on Radionuclides & Radiopharmace	Chairman
	Bubbosh	Paul	EPA	
	Burnfield	Dan	USDNFSB	Sr Manager
	Burtschi	Mark	IBEX Engineering, Inc	Manager, Business Development
	Carter	Jon	Carter and Hinman	
	Chan	Elaine	Federal Emergency Management Agency	Attorney, OGC

Meeting	Last Name	First Name	Affiliation	Title
	Chapman	Nancy	Bechtel Power Corporation	Serch Manager
	Chapple	Alan	Nuclear Energy Institute	Sr. Writer
	Ciampoli	Paul	Dow Jones News Service/Daily Press	Editor
	Collins	Steven	OAS (IL)	Chief, Div. of Radioactive Materials
	Collins	Leslie	ABB Combustion Engineering	
	Cotton	Virgill	Washington Post	
	Crawford	Sidney	SAIC (DOE)	Waste Management Specialist
	Crites	Thomas	LLNL	
	Cross	William	STS	Consultant
	Czyscinski	Kenneth	Sanford Cohen & Associates	Associate
	Daniels	Raphael	Defense Nuclear Facilities Safety Board	Senior Staff
	Fairobent	Lynne	ATL International, Inc.	Senior Policy Analyst
	Farber	Darryl	Penn State University	Research Assistant
	Fitzgerald	Duane	Government Accounting Office	
	Fleming	Jane	NNSN D.N.A.C.	
	Floyd	Stephen	Nuclear Energy Institute	Director, Regulatory Reform
	Fontecilla	Herbert	Virginia Power	
	Frantz	Steven	Morgan, Lewis & Bockius, LLP	Attorney
	Fulton	Fay	American College of Cardiology	Assistant Director
	Gamble	Robert	Woodward-Clyde Federal Services, Inc.	Consultant

Meeting	Last Name	First Name	Affiliation	Title
	Genoa	Paul	Nuclear Energy Institute	Project Manager
	Gilbert	Michael	Government Accounting Office	Senior Evaluator
	Goff	Robert	IBEX Engineering, Inc	Manager, State Services
	Grace	Mark	Winston & Strawn	Attorney
	Grant	Jane	Yankee Atomic Electric Company	Manager, Regulatory & Industry Aff
	Green	Kimberly	Scientech, Inc	Engineer
	Gurican	Gregory	GPM Nuclear, Inc	Sr. II Nuc. Safety & Lic. Engineer
	Harris	Ann	We The People	Director
	Hendrichs	Lynette	Nuclear Energy Institute	Director
	Hill	Thomas	Georgia Natural Resources/OAS	Program Manager
	Hinnant	Clayton	Carolina Power & Light - Robinson Nuclear	Vice President
	Hosford	Anne	McDermott Incorporated, Babcock & Wilcox	Manager, Government Programs
	Hurt	Davis	Defense Nuclear Facilities Safety Board	Senior Systems Engineer
	Huston	Roger	Nuclear Energy Institute	Senior Project Manager
	Jacobson	Alan	State of Maryland	Lead Health Physicist
	Jarriel	Lisa	U.S. Enrichment Corporation	Sr. Regulatory Engineer
	Johnsrud	Judith	ECNP (PA)	Director
	Kimball	Karen	American College of Nuclear Physicians	Executive Director
	Kokolakis	Pete	New York Power Authority	Manager, General Licensing
	Krich	Rod	Carolina Power & Light - Robinson Nuclear	Manager, Regulatory Affairs

Meeting	Last Name	First Name	Affiliation	Title
	Leroy	Daniel	France	Counselor for Nuclear Energy
	Lochbaum	David	Union of Concerned Scientists	Nuclear Safety Engineer
	McBurney	Ruth	Texas Department of Health	Director, Division of Licensing
	McCartney	Shawna	Edlow International Company	International Affairs Specialist
	McDonough	Coleman	Comed Strategic Services	Financial & Planning Manager
	McDougall	Robert	SAIC (DOE/EM Contractor	Sr Policy Analyst
	McIndoe	Darrell	ACNP/SNM	M D FACNP
	McIntyre	Brian	Westinghouse Electric Corporation	Manager, Advanced Plant Safety and
	Murray	Peter	Westinghouse Electric Corporation	Sr Consultant, Nuclear Programs
	Nelson	Alan	Nuclear Energy Institute	Senior Project Manager
	Nichols	David	ACNP/SNM Government Relations Office	Associate Director
	O'Mara	Robert	Univ. of Rochester/ACNP/SNM	M D
	Olson	Phil	Government Accounting Office	
	Pauagos	Alex	Comed Strategic Services	Project Engineer
	Peterson	Scott	Nuclear Energy Institute	Director, External Communications
	Peveler	Kenneth	IES Utilities Inc	Manager, Nuc Lic and Emergency
	Pfeiffer	John	Energy and Science Division, OMB	Program Examiner
	Potter	Thomas		Consultant
	Quint	Matthew	Embassy of Australia	Assistant to the Counselor (Nuclear)
	Ratliff	Richard	Organization of Agreement States	Past Chair

Meeting	Last Name	First Name	Affiliation	Title
	Reed	Kathie	Oak Ridge Associated Universities	Sr. Technical Specialist
	Regnier	Edward	USDOE	Sr. Physical Scientist
	Riccio	James	Public Citizen's Critical Mass Energy Project	Staff Attorney
	Rogers	A. Carter	Arizona Public Service Company	
	Russell	John	CNWRA	Director, Washington Office
	Schlump	Wolfgang	Germany	
	Schoppman	Michael	Florida Power & Light Company	Manager, Bethesda Office
	Shields	William	Defense Nuclear Facilities Safety Board	Associate General Counsel
	Shriver	Bryce	Virginia Power	Assistant Station Manager, NS&L
	Smith	David		
	Stamos	John	Senator Faircloth	Staff
	Stevens	Janice		Technical Consultant
	Sweeney	Robert	IBEX Engineering, Inc.	Principal
	Sweeney	Katie	National Mining Association	Associate General Counsel
	Thomas-Cooper	Vanessa	USDOE	Env. Protection Specialist
	Thompson	Anthony	Shaw-Pittman	
	Tipton	Tom	Nuclear Energy Institute	Vice President, Operations
	Vine	Gary	Electric Power Research Institute	Senior Washington Representative
	Vogel	Wayne	Westinghouse Electric Corporation	Radiation Safety Officer
	Walker	Roger	Texas Utilities Electric Company	Regulatory Affairs Manager

Meeting	Last Name	First Name	Affiliation	Title
	Wascom	Ronald	Louisiana DEQ	Deputy Assistant Secretary
	Weigel	Dwayne	Government Accounting Office	
	Wiblin	Claude	ATL International Inc	
	Young	Melanie	American College of Radiology	Asst Director, Government Relation

Meeting Total: 100