

# Official Transcript of Proceedings

## NUCLEAR REGULATORY COMMISSION

Title: Yucca Mountain Review Plan  
Public Meeting

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Pages 1-164

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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PUBLIC INFORMATION MEETING

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YUCCA MOUNTAIN REVIEW PLAN

+ + + + +

WEDNESDAY

MAY 22, 2002

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LAS VEGAS, NEVADA

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The Public Meeting was called to order at the Conference Room of the Clark County Building Department, 4701 West Russell Road, Las Vegas, Nevada, at 2:03 p.m., by F.X. "Chip" Cameron, Facilitator, presiding.

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

(2:03 p.m.)

1  
2  
3 MR. CAMERON: All right. If we could get  
4 started. Good afternoon. My name is Chip Cameron,  
5 and I will be the Facilitator for today's public  
6 meeting, and I would like to welcome you to the NRC's  
7 public meeting on the draft Yucca Mountain Review  
8 Plan.

9 And it is my pleasure to serve here this  
10 afternoon as your Facilitator for today's meeting, and  
11 in that role I am going to help you to have a  
12 productive meeting today.

13 And I am going to go over three items  
14 before we get into the substantive discussion today.  
15 And the first thing that I would like to talk about  
16 are the objectives for the meeting.

17 And secondly to tell you what the format  
18 and the ground rules are going to be for the meeting,  
19 and last I just wanted to go over the agenda for you  
20 so that you know what to expect this afternoon.

21 In terms of objectives, the NRC wants to  
22 make sure that you have a clear idea of what the NRC's  
23 responsibilities are for licensing any potential  
24 repository at Yucca Mountain, and specifically, to  
25 talk about the draft Yucca Mountain Review Plan, and

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1       how that fits into the NRC's licensing  
2       responsibilities. I want to make sure that you have  
3       that information, and that we clearly express and  
4       communicate that to you.

5               A second objective, and the most important  
6       one, is to hear your comments and concerns about the  
7       draft Yucca Mountain Review Plan, as well as our  
8       licensing responsibilities in general.

9               The ultimate goal of the NRC is to take  
10       the comments that we hear today, and to use those  
11       comments to help us to finalize this Yucca Mountain  
12       Review Plan.

13              We are asking people for written comments  
14       also on the Yucca Mountain Review Plan, and we wanted  
15       to be here this afternoon to talk to you in person  
16       about the Yucca Mountain Review Plan, and you may hear  
17       information today from the NRC staff, or from other  
18       people in the audience that helps to prompt you to  
19       submit a written comment, or helps you to prepare a  
20       written comment.

21              But I wanted to emphasize that anything  
22       that you say today will carry the same weight as any  
23       other comment that you send in to us in writing. And  
24       I think the staff is going to go into some of the more  
25       -- into more of the details on how you can give us

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1 those written comments.

2 In terms of format and ground rules, we  
3 will have a series of NRC presentations that we are  
4 going to try to keep brief for you, and then we are  
5 going to go after each of those presentations to talk  
6 with you, and to answer your questions, and to hear  
7 your comments about that particular presentation, and  
8 we are trying to balance the need to give you  
9 information about the NRC and this review plan with  
10 being able to talk to you about it.

11 And we don't want to just spend our time  
12 talking at you. We want to try to talk with you. So  
13 we will try to keep that balance. I don't know that  
14 we will be able to, but I would just ask the NRC staff  
15 to try to be as concise as possible with their  
16 presentation.

17 In terms of ground rules, they are fairly  
18 simple. If you have a question or comment after each  
19 presentation, just signal me, and I will either bring  
20 you this talking stick, or there are some mikes in the  
21 aisles, and please feel free to use those.

22 But if you could then give us your name,  
23 and affiliation, if appropriate. We are taking a  
24 transcript tonight, and our stenographer, Paul, is  
25 back there, and it doesn't look like he is doing much,

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1 but he is getting it all down because he is a master  
2 at this.

3 But we will have a transcript, and it will  
4 be available on the NRC website, and we will be able  
5 to send you a hard copy of that transcript if you so  
6 desire.

7 But that will be our record of today's  
8 proceeding. The second ground rule is, please, only  
9 one person at a time speaking. Not only so we can get  
10 a clean transcript and so that Paul will recognize who  
11 is talking, but more importantly so that we can give  
12 our full attention to whomever has the floor at the  
13 time.

14 And I want to make sure that we give  
15 everybody a chance to talk tonight, and in keeping  
16 with that, I would just ask you to try to be as brief  
17 and concise as possible in your comments.

18 And I recognize that this is a complicated  
19 issue, and it is a controversial issue, and it is  
20 tough to keep things really brief sometimes. But if  
21 you could try to do that, then we will at least have  
22 a possibility of getting to everybody who wants to  
23 talk.

24 And in terms of agenda, I think you all  
25 have the blue agenda in your packet, and I am going to

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1 get to that in a minute. But first of all, I wanted  
2 to just mention that there may be a comment that comes  
3 up, or a question that you have, and it does not fit  
4 squarely under the agenda item that we are talking  
5 about.

6 We will defer discussion of that issue  
7 until we get to that part of the program. I will put  
8 it up here in the parking lot so that we don't forget  
9 it, and come back and discuss it.

10 And another point is that we know that  
11 there are a lot of concerns and there is a lot of  
12 issues in regard to Yucca Mountain, and the NRC is  
13 always interested in hearing from people on those  
14 issues, and in providing information to you on those  
15 if we can.

16 But our main focus tonight is going to be  
17 -- or today, is going to be on the review plan. So if  
18 we can get to that information and hear your comments  
19 as to that.

20 If you look at your agenda, we are going  
21 to start off with a broad overview presentation on the  
22 NRC's role for judging the safety of a proposed  
23 repository. We are going to go to Janet Schlueter  
24 from the NRC staff.

25 Janet is the new Chief of the High-Level

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1 Waste Branch at the NRC and is in our Office of  
2 Nuclear Materials Safety and Safeguards. And she is  
3 going to give us that overview presentation.

4 Next, we are going to get a little bit  
5 more specific and we are going to get an overview of  
6 the draft Yucca Mountain Review Plan, and how it is  
7 organized, and what the objective of that plan is. And  
8 we have the senior project manager, Jeff Ciocco right.  
9 He is on Janet's staff, and he is going to give us  
10 that presentation. By way of background, he is a  
11 geologist, and an environmental engineer, and he is  
12 shepherding this project through at the Nuclear  
13 Regulatory Commission.

14 And again after each of these, we will go  
15 out for public questions and comment. The next  
16 presentation is a description of safety in operations,  
17 and we have Pat Mackin right here from the  
18 Commission's Center for Nuclear Waste Regulatory  
19 Analyses, and that is a very special group.

20 They are our prime research contractor.  
21 They were created solely to give advice basically to  
22 the NRC on this project so there would no be any hint  
23 of any conflict of interest, in terms of their working  
24 for the license applicant here.

25 But Pat is a systems engineer and he is

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1 going to talk about that part of the review plan that  
2 deals with how the NRC would ensure safety in terms of  
3 construction of a repository, and bringing the fuel  
4 on-site, and let me just make a big caveat here.

5 We don't know that there will be any  
6 application for this repository, and if there is, it  
7 has to meet the NRC regulations. So there is no  
8 guarantee that that will happen. That will have to be  
9 done after an NRC evaluation.

10 So I don't want to give the impression  
11 that because we are talking about what the NRC will be  
12 doing to ensure safety during construction and  
13 bringing fuel on, that that is any predisposition or  
14 whatever about the licensing of a repository.

15 The next presentation is going to be on  
16 long term safety, and this is basically -- this is  
17 another part of this review plan, and basically this  
18 is how we will judge if the NRC regulations are being  
19 met after repository closure, and we have Tim McCartin  
20 right here with us.

21 Tim is a physicist by training, but I  
22 think not only for the NRC, but in terms of what is  
23 called performance assessment -- and he will be  
24 talking more about that, but in terms of performance  
25 assessment on geological repositories, he is not only

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1 the NRC's long time expert, but I think probably one  
2 of the world's experts in performance assessment.

3 We are then going to go back to Jeff  
4 Ciocco to talk about how is security factored in. In  
5 other words, sabotage of materials of the repository,  
6 and diversion of those materials, and how does the NRC  
7 handle those issues. Again, that is another part of  
8 this Yucca Mountain Review Plan.

9 And finally we will go back to Pat Mackin  
10 from the Center to talk about monitoring and  
11 performance confirmation, and how will the NRC keep  
12 checking to see if things are going right at the  
13 repository.

14 So as you can see, that is what I call a  
15 lot of moving parts, but if we will try to not keep  
16 you too much longer past the time for the meeting to  
17 adjourn here.

18 But I would like to thank all of you on  
19 behalf of the NRC for taking the time to be with us  
20 this afternoon. The NRC has some important decisions  
21 that it has to make, not only on repository generally,  
22 but also just in terms of finalizing this review plan,  
23 and we thank you for your assistance on that.

24 And this is one meeting, and we are having  
25 a series of meetings here this week. And just one

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1 point on the time spectrum. Please get to know the  
2 NRC staff.

3 They are very willing to be contacted by  
4 e-mail or phone, and so maintain some continuity with  
5 them. If you have questions or if you have concerns,  
6 please contact them. And just a couple of  
7 administrative items.

8 There is a sign-up sheet, and if you  
9 haven't signed up, please do that. It is right over  
10 here, and there is also something called -- or what I  
11 call an evaluation form, and this helps us to improve  
12 public meetings, in terms of notice, which we need to  
13 do a better job on all the time, and we always  
14 remember that.

15 But this helps us to improve on that, and  
16 so please one out if you get an opportunity to do  
17 that. And Janet, are you ready to start us off?

18 MS. SCHLUETER: Sure.

19 MR. HERESZ: Could I ask a question?

20 MR. CAMERON: Yes, sir. What is your  
21 name, please?

22 MR. HERESZ: My name is Andy Heresz, and  
23 I am a resident of the State of Nevada, and I live in  
24 Clark County, the City of Las Vegas, and a taxpayer,  
25 and I am a registered voter, and I am a very angry

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1 U.S. citizen about Yucca Mountain.

2 And I am wondering, and maybe I missed it,  
3 but is there a representative here from the Nuclear  
4 Waste Technical Review Board?

5 MR. CAMERON: The short answer is that I  
6 do not think there is a representative from the  
7 Nuclear Waste Technical Review Board.

8 MR. HERESZ: I think you are lacking by  
9 not having a representative from that part of the  
10 process.

11 MR. CAMERON: Okay. So we can put this  
12 issue to rest, we will go to Judy, and then we will go  
13 to Dennis. Judy.

14 MS. TREICHEL: Judy Treichel, and I think  
15 that one of the things that you should be aware of is  
16 that there was one notice that went out to the Nuclear  
17 Waste Technical Review Board on this meeting and what  
18 was going on.

19 There was absolutely no notice to any of  
20 the public interest groups, although 81 people are on  
21 the distribution list, and 19 from the Department of  
22 Energy's project office, and none of the public  
23 interest groups who have been with this thing from the  
24 beginning.

25 So I don't know why I would have to fill

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1 out one of those forms in order to get the document  
2 that came out or a notification from the NRC, and that  
3 this is more than an oversight.

4 MR. CAMERON: Well, that point is well  
5 taken, but I do want to say if you are saying by using  
6 the word oversight and that the indication is that it  
7 was an intentional, you know, Judy, that is not true.  
8 Dennis.

9 MR. BECHTEL: Dennis Bechtel, a citizen.  
10 I guess I wanted to submit this for the record, I  
11 guess, and it doesn't really fit into your format, I  
12 guess. So could I do that?

13 MR. CAMERON: Yes.

14 MR. BECHTEL: The other thing is that if  
15 you have process questions, how do you want to go with  
16 that?

17 MR. CAMERON: Well, we are going to go to  
18 Janet now, and she is going to talk about overview  
19 issues, and you may see an opportunity -- your  
20 questions may relate to that. So we will see if they  
21 do.

22 And if they come up later on, we will  
23 answer them then, okay?

24 MR. BECHTEL: All right.

25 MR. CAMERON: Okay. Janet.

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1 MS. SCHLUETER: Okay. Thanks, Chip. As  
2 Chip mentioned, my name is Janet Schlueter, and I am  
3 the Branch Chief for the High Level Waste Branch of  
4 the NRC.

5 We are the focal point for the High Level  
6 Waste Program at the NRC. I will try to be brief. We  
7 have some presenters who will be talking about the  
8 substantive items.

9 But we thought it would be helpful if we  
10 provided you with some context with regard to the  
11 NRC's overall goals in the current process and  
12 potentially with respect to Yucca Mountain.

13 Who is the NRC? We are an independent  
14 agency, and we are independent of the present  
15 administration and the other branches of the Federal  
16 Government, the judicial and legislative branches.

17 We are not part of the Energy Department.  
18 Our role is to ensure that as an independent regulator  
19 we make an independent safety decision with respect to  
20 any potential repository.

21 We are also an experienced regulator, and  
22 we have about 25 years of hearing and licensing a wide  
23 variety of facilities, that range from medical, to  
24 industrial, commercial fuel facilities, as well as  
25 commercial nuclear power reactors.

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1           Our sole mission is the protection of  
2 public health and safety and the environment, as well  
3 as for the protection of personnel working there.

4           The NRC has also been charged by the  
5 Congress with regulating any potential repository that  
6 the Energy Department might apply for.

7           What exactly is our role at Yucca  
8 Mountain? Well, by law, we have been required to set  
9 rules that would apply to Yucca Mountain that would  
10 protect public and worker safety, and the environment,  
11 and we have done that.

12           And we have also set rules that are  
13 consistent with those that have been issued by the  
14 Environmental Protection Agency. We also continue to  
15 conduct pre-licensing interaction with the Energy  
16 Department in order to exchange information about the  
17 site, and will conduct and make an independent  
18 decision with regard to whether or not there should be  
19 construction of the repository and then eventual  
20 operation of the repository.

21           As an independent regulator, just like the  
22 name of our facility, we are responsible for ensuring  
23 that the applicant or the licensee obeys regulations,  
24 and that is done through licensing, inspection, and an  
25 enforcement program.

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1           How will we carry out our role? Well, as  
2 an independent safety regulator, we will review all  
3 the information that we receive objectively, and  
4 thoroughly assess safety expectations at the site.

5           We will also make a decision in an open  
6 and transparent way, and maintain a public process in  
7 doing so. As part of this public licensing process  
8 and our internal safety evaluations, the Yucca  
9 Mountain Review Plan represents a significant  
10 milestone, and that's why we have here today to  
11 solicit your comments on the document.

12           How will we carry out our role? We will  
13 make our licensing decisions one step at a time based  
14 on the information that we have before us at that  
15 time.

16           That includes the initial decision with  
17 regard to construction, which would only occur if the  
18 Energy Department submits a license application to us,  
19 and a subsequent decision at the appropriate time with  
20 regard to whether a license should be granted and then  
21 to operate, and then also for the potential closure of  
22 the repository.

23           Our job is to decide whether or not the  
24 Energy Department should be allowed to construct a  
25 potential repository, and if the Energy Department

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1 does submit a license to us, we are required by law to  
2 conduct our licensing review within 3 years of having  
3 received the application.

4 Congress also requires that the NRC  
5 provide a full and fair public hearing as part of that  
6 process, but before any of this could occur there are  
7 several steps which need to be taken, some of which  
8 have already occurred.

9 And as you can see by this diagram and the  
10 preceding one, there was the environmental impact  
11 statement, and the recommendation by the Energy  
12 Department, the recommendation by the President, who  
13 made his recommendations to the Congress, and the  
14 Congress decision that is now occurring on time.

15 Congress will announce within 90  
16 consecutive days in session whether or not the site  
17 recommendation should take effect. At that point, it  
18 is up to the Energy Department to decide when and if  
19 to submit a license application to us.

20 And if that were to occur, the next thing  
21 would be that the NRC would make a decision as to  
22 whether or not the license application is what we  
23 refer to as docketable.

24 Which is whether there is enough  
25 information in the application for the NRC to begin

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1 its review. That review has to be made within 90 days  
2 of having the applicant fill out its application.

3 If we decide that the license application  
4 is docketable, we would then begin our safety review,  
5 and we would complete the safety review within the 3  
6 years of having received the license application.

7 Besides the licensing process as I  
8 mentioned, there is a hearing aspect, and the burden  
9 of proof is of course upon the applicant, and in this  
10 case, the Energy Department, and there are three  
11 possible outcomes to the licensing process, consistent  
12 with the licensing process that we use in other  
13 programs of the NRC.

14 First, we could deny the application, and  
15 in that case the applicant would not have provided  
16 enough information for the NRC to make a safety  
17 determination.

18 In other words, that the applicant has not  
19 demonstrated that the NRC safety requirements could be  
20 met, and we would deny it.

21 We could grant a license with certain  
22 conditions, where the applicant would need to provide  
23 additional information before the license could be  
24 issued, or we could grant the license as applied for.

25 How do we decide whether to accept the

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1 Energy Department's application We have to make  
2 decisions with regard to whether or not it does  
3 contain all the required information, and whether the  
4 safety claims that the Energy Department has made is  
5 backed by sufficient documentation.

6 Also, there are document access  
7 requirements, and that the information be easily  
8 accessed by the public in an electronic form and the  
9 information is timely, and we have to determine  
10 whether or not those requirements have been met.

11 If yes, then our detailed technical review  
12 of the license application begins, and the three year  
13 clock starts.

14 How would we address safety issues? We  
15 would rely on our independent experts, those at the  
16 NRC headquarters, which is my branch, as well as both  
17 the independent engineers and scientists that we have  
18 at the Center for Nuclear Waste Regulatory Analysis in  
19 San Antonio, Texas, which Chip mentioned previously.

20 We do have two representatives here from  
21 the Center. We have Pat Mackin, who has been  
22 introduced, and also Mike Smith. Mike is at the  
23 Center in Texas as well.

24 We would also require more information be  
25 submitted from the Energy Department as needed if we

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1 identify that there is information gaps in what they  
2 have provided to us.

3 We also do our own testing at the Center  
4 in Texas, and we would document our conclusions in a  
5 transparent manner. On what basis would we adopt the  
6 Energy Department's final environmental impact  
7 statement?

8 Well, the law requires that the NRC must  
9 adopt it unless one of two conditions exist. First,  
10 the action to be taken as a result of the licensing  
11 process differs from that described in the final  
12 environmental impact statement, and that difference  
13 may significantly affect the environment.

14 Or in the other case, there may be  
15 significant and substantial new information or  
16 considerations that make the final environmental  
17 impact statement inadequate that the NRC would not  
18 docket it.

19 I would like to assure you that if the  
20 Energy Department submits a license application to us,  
21 we will need to have a program in place, and that we  
22 are ready and prepared to judge the safety of any  
23 potential repository.

24 We do have protective standards and  
25 regulations in place, and we do continue to hold our

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1 public interactions with the Energy Department, and to  
2 request information that is important to understanding  
3 the potential operation of the repository.

4 And in addition we have drafted our draft  
5 Yucca Mountain Review Plan, which we are here today to  
6 discuss, which the staff reviews to conduct that  
7 safety review of the license application.

8 And a little more detail on our  
9 regulations. As part of the process of being ready to  
10 potentially judge the safety of a repository, we did  
11 issue our proposed regulations that would apply to  
12 Yucca Mount in February of 1999.

13 And we received public comment at that  
14 time to extend the public comment period, and we did  
15 so for a period of about two months. And the final  
16 Environmental Protection Standards were issued last  
17 June, and we subsequently issued our conforming  
18 standards last November.

19 In order to ensure that the citizens of  
20 the State had an opportunity to provide their comments  
21 to the NRC and we heard them, we have held  
22 six public meetings during that time period on our  
23 proposed regulations.

24 And overall we have received more than  
25 1,000 individual comments, including many that we

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1 heard at meetings such as the one we are having here  
2 today.

3 And that is the importance, as Chip  
4 mentioned, of the transcript that will be provided,  
5 and that will provide us a written record of those  
6 comments so that we can go back and review those, just  
7 as the ones that we have received and reviewed by  
8 letter.

9 After reflecting on those comments that we  
10 have received, we did make major changes to our rules,  
11 and I think you will find that the changes were  
12 responsive to the major concerns that we heard from  
13 citizens.

14 We did wait and issue our final paper  
15 after the Environmental Protection Agency had issued  
16 theirs, and we also adopted the Environmental  
17 Protection Agency's limits for individual protection,  
18 as well as their separate ground water limits.

19 We also retained our formal hearing  
20 process and that we currently use for licensing of  
21 other facilities and other programs at the NRC. For  
22 the time being the NRC has no role, or a very narrow  
23 row, in the whole site decision process.

24 It is not appropriate for the NRC to take  
25 a position on that, or whether or not a repository

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1 should actually be located at Yucca Mountain.

2 As an independent regulator, our view and  
3 our licensing decision would be based and shaped much  
4 later in the process, and based on information that  
5 the Energy Department would submit to us.

6 As provided for under the law, we would  
7 continue to have public interaction with the Energy  
8 Department to identify additional information with  
9 which to better understand the license application.

10 As a result of that, these interactions  
11 with the Energy Department have identified information  
12 gaps, which then translate into or relate back to, and  
13 links back to nine key technical issues which we use  
14 to categorize the technical areas which we have used  
15 to guide our review of the Energy Department's site  
16 characterization efforts to date.

17 And we have a handout on the table, and which  
18 some of you may have already picked up, and these  
19 include such technical areas as would water move above  
20 and below a potential repository; how would the waste  
21 heat affect when and how water reaches the waste.

22 And how long will these containers last,  
23 and what would happened to the waste when the  
24 containers are breached. These key technical issues  
25 are considered important for understanding if a

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1 repository would be safe, and because they are  
2 important, we have used them to be the framework for  
3 not only our rules, but also the draft Yucca Mountain  
4 Review Plan that we are here to talk about today.

5 How will we judge that we have enough  
6 information about the key technical issues from the  
7 Energy Department? Well, we have developed acceptance  
8 criteria which are based on issues significant to  
9 safety, and these criteria and their technical bases,  
10 have been documented in a series of publicly available  
11 reports.

12 The Yucca Mountain Review Plan  
13 consolidates those criteria into one document, and  
14 that is what we are here today to discuss. It is an  
15 important document to the program.

16 How will the NRC use the Yucca Mountain  
17 Review Plan? The Yucca Mountain Review Plan is a  
18 licensing guide that the staff will use as our basis  
19 for the NRC staff review of the potential license  
20 application.

21 It is our guidance to conduct an internal  
22 safety review of the license application, and it will  
23 also describe, and I hope you will look at the  
24 criteria that is contained in the document, to ensure  
25 that it is clear in describing how the NRC reviews

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1 this, and in making a decision.

2 We welcome your comments on the plan, and  
3 we did issue a Federal Register Notice in late March,  
4 March 29th, and we have also posted a copy of the plan  
5 on our website, and we have hard copies here as well.

6 And as Chip mentioned, we will be having  
7 our last Yucca Mountain Review Plan public meeting  
8 here tomorrow at 6:30.

9 The current comment period runs through  
10 June 27th, and we did receive a comment last night for  
11 an extension of that time period, which we will  
12 consider.

13 And we again appreciate your input and  
14 suggestions on the plan, and hope that you will find  
15 time to file your comments either tonight or at a  
16 subsequent time.

17 The NRC will be ready if Congress allows  
18 the current designation of Yucca Mountain to take  
19 effect, and as I mentioned we do have our standards  
20 and regulations in place, and the review plan will  
21 address the public comments and concerns.

22 We also will conduct a full and fair  
23 hearing as part of this process, and as the High-Level  
24 Waste Branch Chief, it is my job to ensure that the  
25 staff and the individuals at the Center fulfill our

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1 regulatory obligations to protect public health and  
2 safety and the environment as we potentially go  
3 through a license process that may be applicable to  
4 Yucca Mountain.

5 And I am here today to hear your concerns,  
6 and I assure you that we are here to consider your  
7 comments with the utmost sincerity, and that we  
8 consider them significant.

9 And before we go move on to the next  
10 presentation, I would be happy to answer any  
11 questions that you might have.

12 MR. CAMERON: Okay. Thank you, Janet.  
13 This is an overview presentation, and if you do have  
14 comments that relate to the NRC's overall  
15 responsibilities, this would be the most appropriate  
16 time to give us comments. We will first go over to --  
17 is it Andy?

18 MR. HERESZ: Correct.

19 MR. CAMERON: Andy, and then we will go to  
20 Dennis. Andy.

21 MR. HERESZ: I am curious. How many  
22 licenses has the NRC issued for high level nuclear  
23 gunshots like you are preparing to do here for Yucca  
24 Mountain? And if so, could you give us a status  
25 update, and the locations where they are at?

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1 MR. CAMERON: Janet.

2 MS. SCHLUETER: (Off microphone) Well,  
3 currently there are no facilities which are licensed  
4 to store spent nuclear fuel in a geologic (inaudible),  
5 but we have issued several licenses to utilities which  
6 store spent (inaudible) --

7 MR. CAMERON: Okay. And --

8 MR. HERESZ: Well, you really are learning  
9 how to fly here is the general issue that I see.

10 MR. CAMERON: Andy, we are not the -- we  
11 always need to get it on the transcript, and let get  
12 the other people and if you have another question, we  
13 can come back to you, okay? But I think people heard  
14 what you said. Dennis. Please tell us who you are.

15 MR. BECHTEL: (Off microphone) Dennis  
16 Bechtel. I have a couple of questions about -- well,  
17 during the licensing period (inaudible), and the  
18 second one is that (inaudible) -- rejecting this  
19 specific role, and that is as a surrogate for the  
20 (inaudible) --

21 MR. CAMERON: Okay. Janet, were you able  
22 to understand Dennis' question?

23 MS. SCHLUETER: I was having a little  
24 trouble hearing him.

25 STAFF: If you use the floor mikes, you can

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1 hear a lot better than you can if you use the hand  
2 mikes.

3 MR. CAMERON: I think Janet has the  
4 question, and we will keep working here and when you  
5 use this, just talk closer to it. But Janet, can you  
6 answer that?

7 MS. SCHLUETER: Yes, with regard to the  
8 licensing process and how we license other facilities,  
9 we would continue to have (inaudible) and the license  
10 application would be made publicly available, and that  
11 is one applicant would come to the Federal Government,  
12 and we would log that and make that information  
13 publicly available.

14 And you would have the ability to look at  
15 the application yourself. If there were a need to  
16 request additional information from the department, or  
17 to seek clarification on something in their package,  
18 we would typically review that by a publicly available  
19 letter, and there would be a forum of communication  
20 back to the Energy Department, and which would be  
21 publicly available.

22 And we would also require that the  
23 response would be made publicly available, and it is  
24 possible that we would continue to hold some public  
25 interaction to obtain or seek clarifying information

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1 in the application.

2 And for some hearings, public hearings,  
3 and those hearings would (inaudible). With regard to  
4 license support and the Nuclear Advisory Review Panel,  
5 I believe that they had last met here last summer, and  
6 (inaudible).

7 I believe the Advisory Review Panel did  
8 (inaudible) in the Las Vegas area, and the last time  
9 that we spoke to individuals connected with that  
10 activity, I believe in the July or August time frame.

11 MR. CAMERON: And those meetings are also  
12 open to the public, besides having the broad spectrum  
13 of affected interests represented on the Advisory  
14 Review Panel; is that right?

15 MS. SCHLUETER: Yes.

16 MR. CAMERON: Okay. We are going to go to  
17 this gentlemen, and we will get to all of you. We are  
18 just going to work northern.

19 MR. WARNER: Yes. My name is Tom Warner,  
20 a citizen of Nevada, and a veteran. Two questions I  
21 would like to ask. In regards to DOE, would you  
22 consider DOE's track record in attending such places  
23 hampered in this process, and deeming them responsible  
24 for getting the whole license.

25 And, secondly, the GAO report which had

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1 some question or recommendations in it, will DOE be  
2 required to address those issues with you in the  
3 licensing process? It seems that Congress is ignoring  
4 your report, but I was wondering will the NRC make DOE  
5 answer GAO's comments?

6 MS. SCHLUETER: Are there specific  
7 comments in the GAO report that you are referring to?

8 MR. WARNER: Specifically, that they are  
9 about six years away from coming up with an acceptable  
10 scientific approach to store this stuff, and it seems  
11 that they were marching off with this thing even  
12 functioning before it is even approved scientifically.

13 And Congress, who the GAO works for,  
14 doesn't seem -- they asked for a report and they  
15 didn't seem to do anything with it. I am wondering if  
16 the NRC is going to do anything with it.

17 But of more concern to me is DOE's track  
18 record in handling it. There are super fund sites of  
19 DOE all over this country.

20 MS. SCHLUETER: Right.

21 MR. WARNER: And this seems bigger than  
22 (inaudible).

23 MR. CAMERON: Okay.

24 MR. CAMERON: Janet, I think the question  
25 is how does -- how does the NRC -- and this would

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1 apply to any licensee, how does the NRC look at the  
2 track record at other facilities, and secondly, how  
3 should the NRC somehow factor into some of the issues  
4 that are in the GAO report?

5 MS. SCHLUETER: Well, with regard to  
6 (inaudible) of the energy part, it is self-regulated,  
7 and we cannot have regulatory oversight responsibility  
8 on any of the sites they mention, or any of the labs.

9 This case is different. We have been  
10 required by Congress to be the regulator of a  
11 potential site, and so we have a role to do that as an  
12 independent regulator, and we will apply the same type  
13 of rigor to that licensing section and focus process  
14 as we do at our other licensed facilities.

15 We again have had no role to this point,  
16 but when it comes to Yucca Mountain, obviously we will  
17 be looking at the information that the Energy  
18 Department submits to us.

19 And in making that determination, as I  
20 mentioned, the draft Yucca Mountain Review Plan will  
21 be our key document, and it contains the criteria that  
22 will be used to make our decision.

23 So the DOE application on the Yucca  
24 Mountain repository is an independent action by the  
25 Department and by us, which might be looked at at face

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1 value for --

2 MR. WARNER: So the history of the  
3 performance of the agency --

4 MR. CAMERON: We will have to get you to  
5 use the microphone, sir.

6 MR. WARNER: I guess my concern is that I  
7 have never heard of awarding anybody anything without  
8 going through the agency, the government, or whatever  
9 it is.

10 But yet what you are telling me is that  
11 DOE is starting this with a clean slate, as if they  
12 have had no problems in the handling of waste in the  
13 past.

14 But because you are going to be involved,  
15 that doesn't matter to you anymore what their track  
16 record is? I understand that you have not been  
17 involved in the past. You have not been involved in  
18 the past, but DOE has, and has been irresponsible  
19 before. But that doesn't seem to matter in your  
20 process.

21 AUDIENCE MEMBER: (Inaudible.)

22 MR. CAMERON: There are -- excuse me, but  
23 we need to get all of this on the transcript, and this  
24 is a legitimate issue that this gentleman raised.

25 And as you will be hearing later on from

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1 the NRC staff, we look at qualifications, training of  
2 licensed applicants, and in some cases the NRC has  
3 looked at with reactors at least management  
4 qualifications.

5 And in terms of the past history and if  
6 that is going to be considered in the application, I  
7 believe that it all has to be within the four corners  
8 of the regulations, and there may be some room for  
9 people to bring up that type of past history.

10 And let me get a clarification here from  
11 Chet. Chet, do you have something to offer on that?

12 MR. POSLUSNY: Let me just suggest this.  
13 That your comment was very valid, and that would be an  
14 excellent comment under the review plan, and maybe  
15 that something that we should take into account.

16 MR. CAMERON: And we will so consider it.  
17 Janet, if you would comment on the GAO point to finish  
18 out this gentleman's question?

19 MS. SCHLUETER: Well, I think the issues  
20 that the GAO raised with regard to whether or not the  
21 Energy Department would be ready, whether it is a year  
22 from now, or three years from now, certainly would be  
23 part of our decision. We are not going to license  
24 something --

25 AUDIENCE MEMBER: We can't hear you.

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1 MR. CAMERON: Janet, I think you are going  
2 to have to get closer to the mike.

3 MS. SCHLUETER: Sorry. What I was saying  
4 was that we certainly would not license the facility  
5 if the applicant had not submitted enough information  
6 to us to demonstrate that the safety requirements were  
7 going to be met, regardless of whether that license  
8 application came in 2 years from now, or 10 years from  
9 how.

10 MR. WARNER: So you do acknowledge --

11 MR. CAMERON: I am going to have to ask  
12 you again to -- I know that it is a natural tendency  
13 to just start talking, but we are taking a transcript,  
14 and also we have to make sure that other people get a  
15 chance to talk.

16 But if you want to make one final comment  
17 on the record, you may do so. Does that answer your  
18 question on the GAO?

19 MR. WARNER: Yes.

20 MR. CAMERON: Okay. Thank you. Let's get  
21 to Judy, and then we will go to Calvin, and then we  
22 will go over to the other side. Judy.

23 MS. TREICHEL: (Off microphone) Judy  
24 Treichel from the Nevada Nuclear Waste Task Force. I  
25 would like to tell you something very interesting,

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1 because you talk about our independence, and that  
2 comes up at every meeting, and someone sent me a  
3 newspaper article (inaudible) very well, and it said  
4 that in this particular township trustees have been  
5 asked (inaudible) to endorse the highly controversial  
6 proposal by U.S. DOE and inaudible.

7 So even reporters who work in those areas  
8 have a very difficult time understanding the  
9 independence, and I am just throwing that in, too, to  
10 let you know that (inaudible).

11 And I think you are being really deceptive  
12 if you try to give the impression that the public  
13 plays any sort of role at all in licensing. The  
14 things that you listed are stuff that if they tried  
15 real hard, they could find (inaudible), but as far as  
16 licensing is concerned, unless it is going to be very,  
17 very different than what is going on in Skull Valley.

18 There is absolutely no ability to be  
19 approached for any role. They have up there what they  
20 call limited access appearances, and the judges made  
21 it extremely clear to anybody who showed up there that  
22 they were not going to consider anything that the  
23 audience had to say.

24 I was there in the audience when they made  
25 their decision, and the only people that possibly

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1 could benefit from listening might be the attorneys or  
2 the staff of the NRC, which was a hammerheaded  
3 advocate for that, and I assume that would be the case  
4 for Yucca Mountain as well.

5 So the public was standing there talking  
6 into the wind.

7 MR. CAMERON: And when you say assumed  
8 that would be the case for Yucca Mountain, I am not  
9 sure about the hammerheaded advocate part of it, but  
10 I just wanted to point out to everybody that I think  
11 Judy's characterization of the adjudicatory part of  
12 the process was pretty right on.

13 In other words, the public can participate  
14 if they are given standing to be a party to that  
15 process. And Mitzi from our Office of General Counsel  
16 can -- well, I am getting into trouble here, but there  
17 is a opportunity for a limited appearance from the  
18 public.

19 Well, I am going to let Mitzi talk about  
20 this so that everybody is clear on this, okay?

21 MS. YOUNG: (Off microphone) Hi, I'm Mitzi  
22 Young, and I am an attorney in the Office of the  
23 General Counsel at the NRC in Washington. Judy, what  
24 you described is a limited appearance statement, and  
25 unfortunately that comes later in the process, and

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1 after the parties in the proceeding have been  
2 identified.

3 When the application comes in and the NRC  
4 desires to adopt that application because it makes a  
5 determination after that we anticipate it would be a  
6 90 day review, and the application has sufficient  
7 information for the technical staff to begin looking  
8 at whether it meets the NRC regulations.

9 And at that time we issue a notice in the  
10 Federal Register to the public, and we have attorneys  
11 who (inaudible), and that you have an opportunity to  
12 act. But unfortunately our hearings are not the type  
13 of hearings that you may be familiar with, in terms of  
14 DOE's proceedings.

15 A hearing is not a meeting where people  
16 get a chance (inaudible), and the Congressional  
17 process and the legislative process, where people come  
18 in and give testimony, and comments, and submit  
19 letters to us, where the tribunal makes the decision.

20 So those who participate in that  
21 proceeding have to reach certain qualifications for  
22 participation, and that is what Chip was referring to,  
23 to meet that standard. You would have to show that  
24 you might be harmed by the action that would be taken.

25 So there is the Federal Register notice

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1 coverage for a 30 day period, and where you have to  
2 (inaudible) on the application being considered. In  
3 this instance, it would be both contention on safety  
4 of the repository at Yucca Mountain, and also on the  
5 NRC's decision on whether to adopt the environmental  
6 impact statement.

7 And so you have both safety and  
8 environmental. So that is how the public (inaudible),  
9 and anyone who wants to come in after that and wants  
10 to observe what is going on, our hearings are totally  
11 open to the public, unless they are those rare  
12 circumstances where it might involve classified or  
13 safeguard of information and not open to the public.

14 And to a certain extent, you are  
15 absolutely correct, and (inaudible). And just like if  
16 you were to sue your neighbor in court, the Judge has  
17 to be clear that under the Constitution that you  
18 (inaudible), and that is the standard that (inaudible)  
19 and that this repository is going to be for the entire  
20 nation, and whether the entire nation should be in the  
21 hearing room.

22 And so there are qualifications, and  
23 issues that are to be considered by the 3-Judge panel  
24 at the NRC. I hope that clarification is helpful.

25 MS. TREICHEL: Well, I already knew

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1 everything that you said before you began, and we have  
2 been following this very, very closely. I think it is  
3 misleading and should not be (inaudible).

4 And as it shows on your one slide, the NRC  
5 will provide full and fair public hearings, and people  
6 misunderstand that, and that is not the case.

7 And unlike other court cases, this is --

8 MS. YOUNG: Well --

9 MR. CAMERON: I think that you might want  
10 to give a follow-up on how that statement might be  
11 misleading, okay?

12 MS. YOUNG: (Off microphone) Well, what  
13 we meant when we put the words, "the NRC will provide  
14 a full and fair opportunity for a hearing," it was  
15 that everyone in the nation has a chance to follow  
16 these (inaudible) -- and it is very difficult and a  
17 very complex issue that involves a lot of (inaudible)  
18 and for a repository of the first of its kind, there  
19 are a limited number of people who have familiarity in  
20 this area.

21 And so, yes, it can be difficult for  
22 lawyers sometimes, and the court (inaudible) and  
23 members of the tech team and members of the NRC staff  
24 (inaudible).

25 And so the full and fair adjudication or

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1 judgment by the judges, and where the evidence  
2 presented in the proceeding shows that DOE has the  
3 burden of proof in this proceeding, as their are the  
4 license applicant, that (inaudible).

5 MR. CAMERON: Okay. Thank you, and I want  
6 to get to other people who have questions on this  
7 general point, and then we really have to move on  
8 getting to the substance, but let's go to Calvin.

9 MR. MEYERS: Good afternoon. My name is  
10 Calvin Meyers, and I am a member of the Moapa Paiutes.  
11 I am not a citizen of the United States, and I am not  
12 a citizen of the State of Nevada, and I am not a  
13 citizen of Clark County. I am a citizen of my tribe,  
14 which is a different country altogether.

15 I have plenty of things to say, and I know  
16 you don't have the time for me to comment on all of  
17 them, but there is one really important issue that I  
18 would like to address, because this has been going on  
19 for at least 10 years that I know of, because I  
20 brought it up at one of your meetings in Washington,  
21 and that is the trust responsibility, and whether you  
22 are going to live up to that or not.

23 Some of the things that really bothered me  
24 about the whole process, even just the mountain  
25 itself, is that you just look at the site alone. How

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1 do you get there? Is there good Federal lands?  
2 Because if it doesn't, what is going to happen is that  
3 you are going to be coming over my lands, my ancestral  
4 lands.

5 And lands that we still use today for  
6 medicine, and to gather. We get together on a lot of  
7 things, and the only time we can get together is when  
8 somebody dies and at a funeral. This is a lot of  
9 times when we can only have social gatherings.

10 And people come not just from the  
11 surrounding area, but they come from other States.  
12 They come from Utah, Arizona, California, and some  
13 from Oregon, all over the country.

14 They have to travel to the reservation,  
15 and if something happens to the reservation, they  
16 can't come here anymore, and I myself would think that  
17 I was no longer needed because I can't practice my  
18 traditional ways of life.

19 And in practicing my traditional ways of  
20 life means that I should be able to pick the food that  
21 I eat, take the medicine that I need, and able to  
22 travel in safety.

23 And to know that that land that I am  
24 traveling on, or those foods, or those medicines are  
25 not contaminated with radiation. Those are some of

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1 the things that I feel are very important.

2 And I agree with the public hearings  
3 stuff. I can comment on the things that are being  
4 said right now, but I can't comment on your book  
5 because you never sent it to me.

6 The same thing with DOE. Every meeting,  
7 and every time I get up to speak, I say the same words  
8 because nobody listens. It is either going in one ear  
9 and out the other.

10 If you want me to put my finger in your  
11 ear and kind of keep it in there for a second, I will  
12 do that. And I will ask that since you don't send us  
13 these materials that we really cannot make a comment  
14 to the materials because we don't know what is  
15 contained in those.

16 So I would also ask for a 10 or 15 year  
17 extension on the hearings because we have sent our own  
18 people to college to learn about your science because  
19 you don't want to help us. You don't want to work  
20 with us, even though the law says you have trust  
21 responsibility to every tribe in the United States.  
22 Thank you.

23 (Applause.)

24 MR. CAMERON: Some of the comments later  
25 on are going to talk about the issue that you raised,

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1 about the protection of lands around Yucca Mountain  
2 from radiation.

3 And, Janet, do you have anything to say  
4 about trust responsibility, or Calvin's point is well  
5 taken, and what Calvin has told us about before? Do  
6 you have anything at all on that?

7 MS. SCHLUETER: Well, I would mention that  
8 our role requires that as part of the application the  
9 Energy Department showed clear title to the land, and  
10 that it must demonstrate clear and unencumbered access  
11 to the lands to ensure that -- while ensuring that the  
12 safety requirements under our rules are met.

13 And that is one portion of the license  
14 application that we would be looking at.

15 MR. CAMERON: And I believe that the  
16 Environmental Impact Statement adoption process we  
17 will get into, and some of the types of issues, tribal  
18 issues, that Calvin is concerned about?

19 MS. SCHLUETER: Yes.

20 MR. CAMERON: All right. Let's go to --  
21 we will go to you next.

22 MS. CARTER: My name is Victoria Carter  
23 and I am a resident, and I don't think you can answer  
24 my question, that you had nothing to do with what is  
25 stored now, the stuff. So I would just like to say

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1 God bless you and your staff for coming here.

2 MR. CAMERON: Thank you. And if you would  
3 please identify yourself for the record?

4 MR. PERNA: My name is Frank Perna, and I  
5 am a Clark County resident. I am going to bore you a  
6 little bit, as I am going to just go over some of the  
7 history.

8 Nevada has not had a fair and equitable  
9 chance since 1982, when the waste pact was  
10 established, and that waste pact said that whoever the  
11 majority leader would be, and the DOE would recommend  
12 and the President would accept the licensing process,  
13 he can't -- Senator Daschle today can't use procedural  
14 means or filibuster to prevent a vote in the Senate.

15 And so we were sold out in 1982. We were  
16 sold out in 1987 when they eliminated Texas and  
17 Washington because they had powerful people.  
18 Actually, it was an Indian bill to fight President  
19 Bush, number 41, and Speaker Wright made sure that  
20 Texas was eliminated.

21 And Tom Foley made sure that Washington  
22 was eliminated. So it started off with an  
23 unscientific process. How can you say, well, one  
24 place scientifically. When you hit a dead end, you  
25 can't go any further, but of course they didn't hit a

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1 dead end, because as everyone has said, they ignored  
2 science.

3 And this process should never have been  
4 started since there were 293 scientific data  
5 deficiencies. Why did the NRC question it in some  
6 way? Was the NRC biased, and did they see that there  
7 was 293 scientific deficiencies and they allowed the  
8 process to go on?

9 I was in the audience in Cashman  
10 Fieldman's, and the DOE Secretary Abraham came in, and  
11 he didn't make himself really available to us, and  
12 before I knew it, he was out the door with two of his  
13 fellows.

14 So he didn't study up, and he didn't know  
15 nothing about it, and he is a former Senator, and he  
16 drew the Republican party line, and so he approved it.  
17 He said send the process up.

18 Then it goes to our President, who gives  
19 it half-a-day's consideration. I mean, that is  
20 disgusting. He gave it a half-a-day's consideration,  
21 and then he left overseas, and he started this whole  
22 process.

23 Now, before, Janet, you said that the NRC  
24 has a mission to protect our health and safety. And  
25 they make licensing decisions one step at a time.

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1 Well, those 293 scientific deficiencies should stop  
2 you if you are using common sense instead of science,  
3 but that didn't happen.

4 As far as the DOE process, it would be  
5 funny if we weren't so angry about what the United  
6 States is doing to us. We have 49 States picking on  
7 the weakest State at the time, and trying to shove  
8 something down our throat.

9 Finally, the 10th and the 14th Amendments  
10 of the Constitution. The 10th Amendment is State's  
11 rights, and the 14th Amendment applies to guns, and  
12 legal protection under the law.

13 I hope that your 3-Judge panel will look  
14 into that, but I doubt it. I doubt it very much. We  
15 are not in the position where we have to listen to  
16 somebody, like our President, and Vice President  
17 Cheney who won't send anybody to the energy meetings.

18 And he won't give you any idea of what  
19 kind of conversations that he had with his friends in  
20 the energy industry, and talking about homeland  
21 defense, and anti-terrorist, and national security.  
22 And then to suggest that we should forget strategic  
23 planning, and forget that we are at war time for the  
24 next 10, 20, or 30 years, and we are going to  
25 transport nuclear waste across the country over rusty

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1 bridges, deteriorating tunnels, and waterways.

2 And this is going to take three decades.  
3 This is nuts. How can you mention homeland defense in  
4 the same terms with transporting nuclear waste? How  
5 many train wrecks have we had in the last three months  
6 or so? No transportation is safe.

7 So for us to have to be subject to our  
8 present -- and I am talking about our President, and  
9 Vice President Cheney, Secretary Abrahams, and they  
10 are talking about homeland defense, anti-terrorism,  
11 and national security.

12 Now, during the DOE meetings, I brought up  
13 a couple of --

14 MR. CAMERON: I am going to have to ask  
15 you to just wrap it up, okay?

16 MR. PERNA: I brought up a couple of  
17 things that said that Yucca Mountain isn't safe in any  
18 case. We had red flag exercises at Nellis Air Force  
19 Base, and we have the Nellis Bombing Range, which is  
20 two minutes flight time from a plane loaded with fuel,  
21 and loaded with munitions.

22 You know who we train there? In the '80s,  
23 we trained Iraqi pilots. Now we train Kuwaiti pilots,  
24 Saudi pilots, 14 of whom crashed into our buildings,  
25 United Emirates' pilots. Who are these people? They

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1 are our enemies and they are not our friends.

2 And yet they get trained there, and all  
3 they have to do is get the idea of veering a little  
4 bit and crashing into Yucca Mountain. That is the  
5 first thing that makes it no good.

6 The next thing that makes it no good is we  
7 are not taking into account the amount of suicides,  
8 and I would say that even with our own pilots that  
9 that might happen also.

10 An accident. When you are in training,  
11 more accidents happen than in combat. There is also  
12 tunnel blasts. Yucca Mountain is essentially a mining  
13 operation.

14 Every mining operation could have blasts,  
15 tunnel blasts. And at the National Academy of  
16 Sciences' meeting at Alexis, New York, they talked  
17 about 37-ton walls that were falling in.

18 Well, you can't have -- we have robotics,  
19 and we don't have human beings that could think, and  
20 you have to rely on robotics.

21 MR. CAMERON: I am going to have to stop  
22 you there.

23 MR. PERNA: Well, you see, the point is  
24 that I brought all of this up at the DOE meeting, and  
25 if you are not --

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1 MR. CAMERON: Well, what I wanted is to  
2 have Janet specifically address the points that you  
3 brought up right now, one of which is can you put in  
4 context the 293 stated deficiencies that Frank is  
5 talking about.

6 And some of the rest of Frank's points are  
7 going to be addressed by the NRC speakers, who we  
8 really need to get to in terms of the substance of  
9 this review plan. So can you just address the 293.  
10 And I think we really need to get to Jeff Ciocco.

11 MS. SCHLUETER: The number 293 warrants  
12 clarification. We see it in the press all the time,  
13 and I would like to take just a minute to explain what  
14 that is.

15 The NRC has had as I mentioned public  
16 interactions with the Energy Department to identify  
17 information that still needs to be gathered, and that  
18 we would expect to see in the license application.

19 As a result of that process, the NRC has  
20 been the one who has identified 293 areas where  
21 additional information needs to be gathered and  
22 obtained. The complexity of those items varies; from  
23 a modest effort, to a more extensive effort.

24 The Energy Department, during those public  
25 meetings, has agreed to provide the NRC with that

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1 information corresponding to the 293 areas, and those  
2 are all documented in publicly available summaries of  
3 those meetings which are on our website.

4 So that is an NRC created number, and as  
5 I said it is information that we would expect the  
6 applicant to have addressed in the license application  
7 by the time that they submit it to us.

8 MR. CAMERON: Okay. We have one final  
9 comment or question on process.

10 MS. TILGES: Kalynda Tilges, Citizen  
11 Alert. Unfortunately a couple of people that I wanted  
12 to speak to just left. A woman who was here had the  
13 false idea that the NRC had something to do with the  
14 waste on-site.

15 They oversee that waste on-site. They  
16 oversee it and they license the storage, and they  
17 oversee all those spent fuel from all those nuclear  
18 reactors, including 3-Mile Island.

19 The other point is that in hopes of  
20 expediting this whole thing today, I would like to see  
21 when you all get a question that you answer it  
22 completely and honestly, because we have already seen  
23 once today that we had to take a really long time to  
24 clarify to someone a dishonest answer that you gave  
25 them.

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1                   And at last night's meeting that I was at  
2                   in Pahrump, we spent a really long time clarifying at  
3                   least two dishonest and incomplete answers that you  
4                   gave the public.

5                   So if you really are unbiased, and you  
6                   really are a public agency, and you really want us to  
7                   feel like you care about us, first of all, you are  
8                   going to have to do an awful lot of work.

9                   But it would start with giving us honest  
10                  and complete answers. And if you are curious, I can  
11                  go into the dishonesty that was at last night's  
12                  meeting, and I certainly hope not to see any more of  
13                  it today.

14                 MR. CAMERON: We are trying to be as  
15                 complete as possible, and I would just have to say  
16                 from a Facilitator's point of view that I don't think  
17                 that anybody is trying to be dishonest with anybody.  
18                 Mike, did you have a question?

19                 MR. HARDT: Yes. My name is Mike Hardt,  
20                 and I hate to see an hour and 10 minutes go by without  
21                 a relevant comment to the content of the review plan.

22                 And I would ask if we could return to  
23                 Slide 14, or rather Slide 10. This concerns how the  
24                 DOE would accept -- how the NRC would accept the  
25                 application.

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1           It notes in there that you would determine  
2 whether it contains all the required information, and  
3 I know that on page 22 of the plan that it talks in  
4 there that you evaluate all of the different sections,  
5 and there is different categories of information they  
6 provide.

7           And you would determine kind of section by  
8 section whether it is complete or incomplete, and  
9 whether there is additional information required. It  
10 is not clear in the plan whether if you concluded that  
11 one of those sections was complete and adequate,  
12 whether you would then embark upon the technical  
13 review of that information.

14           And while you were waiting for, perhaps  
15 other information to be submitted on incomplete  
16 sections. And I guess the first part of the question  
17 is when do you begin the technical review  
18 of the completed portions of the application, and if  
19 you would begin the technical review of those  
20 completed portions, is the clock actually starting  
21 then, or is it when all of the information is finally  
22 determined to be complete? Thank you.

23           MR. CAMERON: Who wants to -- Jeff, do you  
24 want take that and then get into your presentation,  
25 because I think Mike is giving us some good advice

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1 here. It is time to move into specifics of the Yucca  
2 Mountain Review Plan. So, Jeff, if you could try to  
3 -- if you could incorporate the answer to that in your  
4 presentation.

5 MR. CIOCCO: I will get to that in Chapter  
6 3.

7 MR. CAMERON: Okay. Go ahead. And, Mike,  
8 if we don't answer the question, please let us know.

9 MR. CIOCCO: Okay. Good afternoon. My  
10 name is Jeff Ciocco, and I am with the Nuclear  
11 Regulatory Commission. I am going to give you an  
12 introduction into the Yucca Mountain Review Plan, and  
13 it is a draft report, and it would be our job, and the  
14 NRC's job, to assess the safety of the Yucca Mountain  
15 site.

16 This is what the document looks like, and  
17 it is an approximately 500 page document. We have hard  
18 copies over here, as well as CDs, and is available on  
19 our website.

20 To begin my presentation this afternoon,  
21 I am going to tell you about the purpose of this  
22 public meeting, and I am going to go through the  
23 purpose and content of the Yucca Mountain Review Plan,  
24 and I will tell you what is covered in it, and what  
25 isn't covered in the review plan.

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1           And I will explain to you how the Yucca  
2 Mountain Review Plan is risk-informed and performance-  
3 based. I will go through a general explanation of the  
4 five chapters of the review plan, and then I will  
5 explain the structure of the individual sections.

6           I will tell you how to comment on the  
7 review plan, as well as give you an introduction into  
8 the following presentations.

9           The purpose of this public meeting is to  
10 describe to you the purpose and content of the Yucca  
11 Mountain Review Plan. If you are not familiar with  
12 the plan, we hope you leave with an understanding of  
13 what is in the document.

14           If you are familiar with it, then you will  
15 get a better understanding and if we can answer any of  
16 your questions. We seek your views on how well this  
17 plan would assess the safety of the Yucca Mountain  
18 site.

19           One of our principles for good regulation  
20 is openness. Nuclear regulation is our business and  
21 we want to make it available to you as one of NRC's  
22 decision making tools in this project.

23           The purpose of the Yucca Mountain Review  
24 Plan is to instruct the NRC staff on how to conduct a  
25 thorough and complete safety assessment on the Yucca

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1 Mountain site.

2 The plan ensures a quality review, and it  
3 is tailored specifically to the regulation for the  
4 Yucca Mountain site. The plan ensures uniformity of  
5 reviews because it follows a very similar format for  
6 each individual subsection and section of the  
7 regulation in the plan.

8 And next we want to make our strategy  
9 publicly available to you, and finally, the Yucca  
10 Mountain Review Plan provides guidance to the  
11 applicant on what needs to be submitted in its license  
12 application.

13 And that it is really Chapters 3 and 4 of  
14 the Yucca Mountain Review Plan that are specified  
15 specifically in the regulations. Chapter 3 is the  
16 general information, and Chapter 4 is the safety  
17 analysis report.

18 However, this plan is not a substitute for  
19 compliance with the regulations. It is NRC's guidance  
20 document on how we would review a license application.

21 So in summary, the Yucca Mountain Review  
22 Plan lists the information that is required for a  
23 license application, and what is the acceptable  
24 criteria for a license application, and it provides a  
25 step-by-step review procedure for the NRC staff to

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1 determine compliance with the regulations.

2 Next, the scope of the review plan. The  
3 Yucca Mountain Review Plan would be used for all  
4 phases of the licensing process, and as Janet talked  
5 to you earlier about, there are three phases of  
6 licensing, and we would use this plan for all three  
7 phases.

8 The first is the construction  
9 authorization, or the building permit phase. The  
10 second is the license to receive and possess nuclear  
11 materials. We would use specific portions of the  
12 Yucca Mountain Review Plan in order to evaluate DOE's  
13 demonstration of how they would substantially complete  
14 a construction of the above-ground and below-ground  
15 facilities, and any update of that performance.

16 And the third phase is the amendment for  
17 permanent closure. So this plan is to intended to  
18 cover all phases of the licensing process.

19 What is not covered in the review plan?  
20 The site recommendation process. As you know, that is  
21 a process that is currently under way in Congress.  
22 This plan would be used if and when a license  
23 application would come to the NRC.

24 The environmental impact statement is not  
25 within the scope of the Yucca Mountain Review Plan.

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1 And Janet also talked about that the NRC has  
2 regulations and a process to review the environmental  
3 impact statement. This document assesses the safety  
4 of the site and not the environmental portion which  
5 must accompany a license application.

6 And the last area is the transportation  
7 issue. Transportation is jointly regulated by the NRC  
8 and several sister agencies of the U.S. Department of  
9 Transportation. This is separate from the Yucca  
10 Mountain Review Plan.

11 This plan would assess the safety of the  
12 site once the waste is received, and it would assess  
13 the safety during the operations, and the disposal of  
14 the waste.

15 Next, how is the Yucca Mountain Review  
16 Plan risk-informed and performance-based? We use  
17 these four words at the NRC in writing its regulations  
18 and in conducting compliance reviews.

19 First I want to say is that the plan  
20 provides for review guidance on site specific  
21 regulations. We say that the regulation is written  
22 for performance-based, and the regulations were  
23 written because of the risk of health effects to  
24 individuals, are the basis for the objective safety  
25 criteria in that regulation.

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1 For example, the EPA standards for the  
2 criteria in our regulations for individual protection,  
3 ground water protection, and for human intrusion.

4 Next, the review plan applies these safety  
5 criteria and applies EPA standards for acceptable  
6 compliance demonstration. So in that case we are  
7 saying that the review plan is performance-based.

8 And finally we say that a review plan is  
9 risk-informed because the staff focuses its reviews on  
10 areas that the staff feels are most important to  
11 safety.

12 For example, the staff may focus its  
13 review on the process of water dripping through the  
14 mountain, and dripping into the tunnel on to a waste  
15 package, or the staff may focus its review on the  
16 corrosion of the waste packages.

17 The NRC's reviews are comprehensive, but  
18 there are certain areas where the staff may focus its  
19 compliance review.

20 What are the main chapters of this plan?  
21 Well, there are five chapters. Chapter 1 is the  
22 introduction. It provides an overview of the NRC's  
23 licensing philosophy.

24 For example, the NRC did not select a site  
25 or designs. And also the NRC's reviews are

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1 comprehensive and focus on issues most important to  
2 safety.

3 It also says that the NRC will defend its  
4 licensing decision, while the applicant, the U.S.  
5 Department of Energy, must defend its safety case in  
6 its license application.

7 Chapter 1 also talks about the our general  
8 licensing review procedures, and how each section is  
9 risk-informed and performance-based.

10 Chapter 2 is the acceptance review. It is  
11 the first screening of the license application with an  
12 acceptance checklist based on the regulations in Part  
13 63.

14 It determines the completeness of the  
15 information for the engineering design, and in terms  
16 of if there is sufficient information available to  
17 conduct a detailed safety review.

18 The results of the acceptance review is  
19 that we would accept the license application for a  
20 detailed technical review, and we would accept the  
21 license application, but request additional  
22 information.

23 Or we would reject the license application  
24 because there was not adequate information for a  
25 detailed technical review, and in our letter back to

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1 the applicant, we would specifically describe  
2 corrective actions if the applicant would like to  
3 resubmit its application.

4 Now, the question that I heard was if we  
5 would accept a license application for a detailed  
6 review; however, we had a request for additional  
7 information, then when would the clock begin for the  
8 3 year review period. Did I capture that correctly?

9 MR. HARDT: I guess there were two parts.  
10 The first part as I understand it is there are several  
11 different categories of information.

12 MR. CIOCCO: In the chapters, correct.

13 MR. HARDT: And different criteria for  
14 reviewing those. It appears as though you could  
15 determine that one section of information wasn't  
16 complete, and then my question is would you then  
17 embark upon the second review of that section while  
18 perhaps you are waiting for additional information on  
19 another section?

20 MR. CIOCCO: Yes, we would.

21 MR. HARDT: And if that were true then,  
22 would the clock start at that point; and where you  
23 would start a detailed technical review of any section  
24 on the application, would you have to wait until you  
25 had all of the information for all of the sections

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1 before the clock starts?

2 MR. CIOCCO: Well, as to whether the clock  
3 would start on a request for additional information,  
4 and whether the clock would start before we get the  
5 information in from the RAI, request for additional  
6 information?

7 MR. CAMERON: And it is all related to  
8 when you decide to docket. And for people who may not  
9 know the background on this, when Mike refers -- and,  
10 Mike, correct me if I am wrong, but when Mike refers  
11 to when the clock starts ticking, what he is referring  
12 to is that the Commission has 3 years from a certain  
13 point to review and make a decision on the Department  
14 of Energy's license application.

15 So that is what he is talking about when  
16 he is talking about the clock ticking. Now he is  
17 asking when does the clock start ticking relative to  
18 the need for more information, or a request for  
19 additional information. Mitzi, if you could answer  
20 that.

21 MS. YOUNG: (Off microphone) I think I  
22 understand your question. In an NRC licensing phase,  
23 when an applicant submits an application the  
24 determination is made whether the application in  
25 general contains enough information for the NRC to

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1 begin its review.

2 And if there are some details or  
3 clarifications that are required, that could be done  
4 after the decision is made to docket it. So it really  
5 depends on what the information deficit is and the  
6 timing of it

7 So your question or example is that if you  
8 have one area where you have all the information, and  
9 there is another area where there is information gaps,  
10 I think with a repository, and a repository study  
11 (inaudible), that might be the type of information  
12 that could be open or pending at the time the decision  
13 is made to docket.

14 So it really depends on the nature of  
15 these information gaps, and whether the NRC makes a  
16 decision on whether they can docket the application.  
17 It is a hard question to answer the way that you have  
18 put it.

19 MR. HARDT: I would then just recommend  
20 that the plan might be more specific, or you might  
21 clarify what happens, or when does the clock start, I  
22 guess, and when is it docketed, because it really is  
23 unclear right now when that would actually occur.

24 MR. CIOCCO: That is a good comment.  
25 Thank you.

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1 MR. CAMERON: Thank you, Mike. We are on  
2 questions on the -- oh, okay.

3 MR. CIOCCO: We are now on Chapter 3.  
4 Chapter 3 is the general information. Chapters 1 and  
5 2 aren't required information for license application.  
6 Chapter 3 is the first part of the information that is  
7 required in the license application.

8 The purpose of Chapter 3 is two-fold. It  
9 is to provide an overview of the engineering design  
10 concept, and it is to allow DOE to demonstrate its  
11 understanding of the influence of the site  
12 characteristics on the engineering design and the  
13 performance of the repository.

14 And also it contains two sections, Section  
15 3.3 and 3.4, regarding the safety and security of the  
16 site, against theft or sabotage, and the material  
17 control and accounting programs. I will have a page  
18 later on that.

19 Chapter 4 is the main body of the Yucca  
20 Mountain Review Plan. It is a safety evaluation  
21 chapter, and it is this much of the document, and  
22 probably two-thirds or three-quarters of the document  
23 are for assessing the safety analysis report.

24 And the following presentations are going  
25 to provide you an understanding of what is in those

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1 sections, Sections 4.1 through 4.5. And finally there  
2 is a glossary, where you will find about 300 terms,  
3 technical terms, that are used in the document.

4 Next is the structure of each individual  
5 review section in the plan. Each section of this plan  
6 is very similarly structured to provide uniformity of  
7 reviews, and it includes the areas under review, which  
8 is the scope of that section.

9 Next is the review methods. And it is the  
10 step-by-step procedures which the staff would follow  
11 to assess compliance with the regulations. Next is  
12 the acceptance criteria, and it defines the acceptable  
13 demonstration of compliance by the applicant.

14 Then we have the evaluation of findings.  
15 It documents inclusions of the staff's evaluation of  
16 all of the information. It would contain a listing of  
17 all of the information reviewed from that section, and  
18 it would describe the basis of the NRC's conclusion,  
19 and it would include a findings statement or  
20 conclusion statement.

21 And lastly we have a reference section,  
22 which lists all of the references used for that  
23 particular section. And there we site other  
24 documents, other NRC or nationally recognized  
25 standards in the review plan.

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1                   And the next slide is how to comment on  
2 the Yucca Mountain Review Plan. That has already been  
3 commented on at this meeting, but we have comment  
4 forms, and you can do it electronically on our  
5 website; or you can submit comments in writing to  
6 Michael Lesar.

7                   And finally the comment period ends June  
8 27th, and we did receive a comment last night to  
9 extend the comment period. And in conclusion the NRC  
10 seeks your views on this plan.

11                   There are going to be four presentations  
12 following mine, and the are going to cover safety  
13 during operations, and also known as pre-closure  
14 period, and that would found in Section 4.1.

15                   And long-term safety, and that is found in  
16 Section 4.2, also known as post-closure. I will be  
17 giving a presentation on assessing security from theft  
18 and sabotage, and that is the physical protection  
19 program, and material control and accounting program.

20                   And then Pat Mackin is going to wrap it up  
21 with the adequacy of monitoring in the plan.

22                   MR. CAMERON: All right. Thank you, Jeff.  
23 This is sort of the bird's-eye view of the  
24 methodology, and the objectives of this review plan.

25                   We are going to go into the specific

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1 sections, but before we do that, is there a question  
2 on this methodology format? Judy.

3 MS. TREICHEL: (Off microphone) When you  
4 talk about the ticking clock, what happens if it runs  
5 out?

6 MR. CIOCCO: There is a 90 day period for  
7 an acceptance review, and there is a 3 year for us to  
8 write our safety evaluation report.

9 MS. TREICHEL: At the end of your 3 years  
10 and you are not done, you get an additional year, and  
11 what if you are still not done?

12 MR. CIOCCO: There is an option for an  
13 additional year.

14 MS. TREICHEL: And you get that year and  
15 then what? I mean, the clock starts ticking on DOE,  
16 and should Congress override the Governor, and they  
17 have 90 days to submit this license application, and  
18 you all know they are planning to be more than two  
19 years later, what if you decide to go five times over  
20 your 3 year limit?

21 MR. CIOCCO: My management has not given  
22 me that option, and maybe Mitzi from General Counsel  
23 has a response to that.

24 MR. CAMERON: Let's go to Mitzi. What  
25 happens after we use the one year extension, and we

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1 still have not reached a decision?

2 MS. YOUNG: (Off microphone) I honestly  
3 don't know, but we have right now a statute that gives  
4 us 2 years. You are initially given 3 years to make a  
5 license decision, and the Commission issues  
6 regulations, and our adjudicatory section of our  
7 agency; and 10 CFR Part 2, and those of you who are  
8 familiar with our regulations, which gives the  
9 schedule for the hearing, and it starts the clock when  
10 we notice the application (inaudible), and that is  
11 when our 3 year period runs.

12 Actually, the period that the Commission  
13 has this regulation (inaudible), and right now it is  
14 3 years and change, maybe 15 or 30 days. I can't  
15 remember right off the top of my head.

16 It is our responsibility to the Congress  
17 to give a report, and which can be extended for one  
18 year, which was already mentioned. But I would say  
19 that the Commission would -- if it took longer, that  
20 there would be another report to the Congress  
21 indicating what time period.

22 But the Commission's intention in issuing  
23 its regulations, and particularly in organizing the  
24 licensing support network, which takes all the  
25 documents related to the nuclear waste repository, and

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1 studies done on that, and in advance of even docketing  
2 the application, would be an attempt to do what is  
3 called discovery in litigation at the front end.

4 So the actual time it would take to  
5 litigate the application would be shorter than the  
6 hearings (inaudible.). So it is a whole-hearted  
7 attempt by the NRC, the Commissioners and the staff in  
8 writing the regulations, to try to make sure that that  
9 period is as close to the 3 years as possible, and to  
10 go before Congress to ask for additional time.

11 MR. CAMERON: The operable part we don't  
12 exactly know, and there would probably be another  
13 report by the Commission on it. Janet.

14 MS. SCHLUETER: Yes, that is entirely  
15 correct, everything that Mitzi discussed. However, it  
16 is very important to keep in mind that the NRC's  
17 licensing decision, which is our safety decision as  
18 the independent regulator, will not be determined by  
19 a clock.

20 In other words, if we are not ready to  
21 make that decision in a 3 or 4 year time period, it  
22 would require that we go back to Congress and ask for  
23 an extension and indicate time language we believe we  
24 could complete that activity.

25 But we will not make that decision until

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1 we are ready to do so. We won't be driven by a  
2 schedule. The safety of the facility is the primary  
3 objective.

4 MR. CAMERON: Okay. Thank you. Let's  
5 have one last question and then let's go to the first  
6 substantive presentation, which is on safety in  
7 Operations.

8 MR. BECHTEL: Dennis Bechtel, a Henderson  
9 resident. I had an opportunity to watch the hearings  
10 over the last couple of days about the review, and I  
11 guess how Congress perceives the process.

12 And I get the distinct impression, and  
13 this may be an understatement here, that some of the  
14 -- that now that they are almost to the point of  
15 licensing that the repository is pretty well on the  
16 road. It is going to happen.

17 And if you listen to certain Senators,  
18 that is the definite impression that you are going to  
19 get. So I feel personally that DOE and Congress has  
20 ducked the suitability decision, and so the NRC is the  
21 last line of defense as I see it.

22 And I think the concern -- and again going  
23 back to the process, but there are a number of  
24 statements in your document that I will try to comment  
25 on a little more rigorously by your statements.

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1           It says, "During the acceptance review,  
2 the NRC does not determine the accuracy of the  
3 information." So I guess the question is who does and  
4 when?

5           MR. CIOCCO: The NRC will, and it is  
6 detailed in the safety analysis report, and Part 2 of  
7 the regulations, there is an acceptance review to the  
8 acceptability before we begin our technical review.

9           MR. BECHTEL: And there is also other  
10 statements. It says that the NRC is not seeking  
11 scientific precision. That sort of bothers me, too.  
12 We are talking about a first of its kind facility, and  
13 we are talking about something that is going to affect  
14 many people over the years.

15           MR. CIOCCO: Right.

16           MR. BECHTEL: And I would think that again  
17 being the last line of defense as I see it, you know,  
18 that there seems to be more rigor in how it is  
19 described, or that there be some rethinking of the  
20 process to make sure that these things actually  
21 happen. And there are a couple of more --

22           MR. CAMERON: Dennis, he is on this  
23 particular issue, and I --

24           MR. BECHTEL: Well, again, I am not sure  
25 where these things fit in, you know.

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1 MR. CAMERON: Usually we have a little bit  
2 more flexibility, but we do need to get some of this  
3 on.

4 MR. BECHTEL: Okay.

5 MR. CAMERON: And we have your statement  
6 that we are attaching to the transcript already.  
7 Could you just give us one more, and then see --

8 MR. BECHTEL: Well, one more and I  
9 actually have a couple of recommendations, too.

10 MR. CAMERON: Good.

11 MR. BECHTEL: The NRC has no power to tell  
12 a licensee to come forward with their proposal, and  
13 again that is a concern. You know, getting into how  
14 you described things -- accept, reject, accept, and  
15 request additional information.

16 Well, in my mind, accept and request  
17 additional information is not accepted. It is not  
18 necessarily a rejection, but it is not normally an  
19 acceptance.

20 And I think statements like that are going  
21 to give the public, and definitely the Congress, are  
22 going to get the wrong impression, that okay, maybe it  
23 is just some minor thing.

24 Maybe it is some minor thing, but I think  
25 that chronology needs to be revised a little bit. And

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1 I guess the last thing is that it would have been  
2 helpful, or it will be helpful I think to me in  
3 reviewing the document further that if you have sort  
4 of process background.

5 I mean, you have things in the  
6 organization format that I understand, but how do you  
7 actually go through the process, and gee, you have a  
8 problem here, and how does it stop. I think that  
9 would be helpful in trying to condense a lot of words  
10 that are in the document.

11 The other thing is the final environmental  
12 impact statement. I know that we several years ago  
13 had an opportunity -- Clark County had an opportunity  
14 to submit testimony, as did the other affected  
15 governments.

16 And as I understand it, the NRC more or  
17 less agreed with some of the comments that we had on  
18 EIS, and I didn't see those resolved in the final EIS  
19 for Clark County or for you all.

20 And I am wondering that since the EIS is  
21 part of the licensing package that even if the license  
22 is fine, you have the environmental impact statement  
23 that is not fine, and where does that place the  
24 license?

25 I mean, the environmental part of it, and

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1 the context part of the community is very important,  
2 and the license could be totally hunky-dory, and if  
3 the rest of it is not adequate, in my mind that would  
4 still leave some question about the adequacy of the  
5 whole package.

6 MR. CAMERON: Dennis, I see where you are  
7 coming from. Those are great comments, in terms of  
8 the process diagram, and I am going to put the EIS  
9 issue that you raised in the parking lot right now.

10 And as Jeff mentioned the EIS issues are  
11 not covered by the review plan, and hopefully we will  
12 have a chance to come back and address that. And  
13 please give us the rest of your comments at the  
14 appropriate time when we get to these things. Thank  
15 you.

16 MR. BECHTEL: Okay.

17 MR. CAMERON: Let's go to Pat Mackin to  
18 talk about Safety in Operations.

19 MR. MACKIN: Good afternoon. My name is  
20 Pat Mackin, and as was mentioned earlier, I work for  
21 the Center for Nuclear Waste Regulatory Analyses, and  
22 I just want to clarify to you all that we were  
23 established specifically to assist the NRC in an  
24 independent safety review for any license application  
25 for a repository at Yucca Mountain, and that is what

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1 our job is.

2 The regulations relating to Yucca Mountain  
3 basically split the lifetime of a repository into two  
4 periods. One that would comprise construction and  
5 operation, and the other would be after it would be  
6 closed.

7 I am going to talk about that period  
8 during construction and operation, and then Tim  
9 McCartin of the NRC is going to talk about after we  
10 close.

11 Now, the purpose of what I am going to  
12 talk about today is to give you an idea of what the  
13 scope of the information is that the NRC will look at  
14 in its safety review, and the Department of Energy  
15 will have to have included in its license application.

16 But before I start that, many of the  
17 things that would go on at a repository are the same  
18 things that go on in many other nuclear facilities  
19 around the country and the world today; handling spent  
20 fuel; packaging spent fuel; protecting workers and the  
21 public from radiation exposure.

22 So there is a lot of experience and  
23 information on how to do these things, and we have  
24 incorporated that into the Yucca Mountain Review Plan.

25 I am going to talk about five aspects of

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1 safety during construction and operations that occur  
2 in the Yucca Mountain Review Plan. The first of these  
3 is pre-closure safety analysis, which is a set of  
4 techniques that are used not only by the NRC, for the  
5 safety of complex facilities.

6 Next I am going to talk about who would  
7 operate such a repository, and what their  
8 qualifications would be, how they would be trained.  
9 Then I am going to talk about how a repository would  
10 be operated.

11 Then I am going to talk about DOE  
12 requirements to demonstrate the capability to retrieve  
13 waste that would be put in a repository, and to store  
14 it in an alternative location.

15 And finally I am going to look in the long  
16 term to address the need for the Department of Energy  
17 to discuss in its license application how it would go  
18 about building a repository so that the surface  
19 facilities could be dismantled and be decontaminated  
20 in a way that would protect workers and the public.

21 Now, I will discuss each of these in more  
22 detail. First, the pre-closure safety analysis. This  
23 is the way that NRC regulations require the Department  
24 of Energy to demonstrate that it meets the public  
25 health and safety standards.

1           A pre-closure safety assessment addresses  
2 three questions, and DOE will have to answer these  
3 questions, and the NRC will evaluate whether they were  
4 answered properly.

5           The first is what could go wrong in a  
6 repository. The second is how likely are those things  
7 that could go wrong, and the third is that if those  
8 things go wrong, what are the results.

9           And by results we mean radiation doses to  
10 workers or the public. The techniques for doing a  
11 preclosure safety analysis are taken from other  
12 industries.

13           The chemical industry uses these  
14 techniques to assess chemical facilities, and the  
15 petroleum industry uses them, and the NRC uses them  
16 for other kinds of nuclear facilities.

17           The NRC staff has been trained in how to  
18 use these techniques, and the success records is why  
19 they were placed in the Yucca Mountain regulations.

20           Now, a safety analysis does several  
21 things. First of all, it looks at what can go wrong;  
22 what are the hazards, both man-made and natural, or  
23 the events and the sequence of events that could  
24 happen at a repository.

25           Examples might be a crane fails and a fuel

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1 rod drops. Another example might be a vehicle that is  
2 taking a waste canister down into the repository and  
3 has a brake failure.

4 Others might be fires, and explosions, and  
5 all of these things DOE must examine in its safety  
6 analysis.

7 The next thing a safety analysis does is  
8 that once you have identified the things that can go  
9 wrong, you look at how likely they are that they could  
10 happen.

11 The next step then is to look at what the  
12 results are if those things happen. What would be the  
13 impact, and the radiation doses to workers or the  
14 public.

15 Then from that information the Department  
16 of Energy has to identify what those pieces of  
17 equipment, machines, components, are that are  
18 necessary to be operating to protect people.

19 Those are defined as items important to  
20 safety and they play a major role in what goes on from  
21 here on. Once this part is done, the next step is to  
22 compare the consequences, the radiation doses to  
23 public health and safety standards.

24 The NRC would not license a repository to  
25 be constructed and operated if the Department of

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1 Energy did not demonstrate that the public health and  
2 safety standards would be met.

3 And finally for those items that have been  
4 defined as important to safety, safety reviews of the  
5 design would be conducted.

6 So that is what a pre-closure safety  
7 analysis does. The next thing that I want to talk  
8 about is who would operate a repository, and how they  
9 would be trained.

10 There are a number of things that the  
11 Department of Energy must show here, and that the NRC  
12 would evaluate. The first of those is the  
13 Department's own organizational structure, and who  
14 reports to who.

15 What is the chain of command, and what are  
16 the responsibilities and the delegations of authority?  
17 Next, I mentioned earlier that certain things at a  
18 repository would be identified as important to safety.

19 The Department of Energy has to show that  
20 all of those things that are under safety comes under  
21 somebody's control, and then it has to show that the  
22 people who are responsible for those items of safety  
23 has demonstrated what the job requirements are, the  
24 prerequisites to hold those positions, and what kind  
25 of qualifications they have to have.

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1           Next, we look at how the Department of  
2 Energy would select and train workers for working at  
3 a site. I mentioned earlier that many of the  
4 operations at a repository are similar to what goes on  
5 in other places around the country and the world  
6 already.

7           Well, a lot has been learned about how you  
8 need to train people to operate a nuclear facility.  
9 What has been learned as in fact been written into the  
10 review plan.

11           The Department of Energy would have to  
12 demonstrate how it would hire people, train them, re-  
13 qualify them, and document that they are properly  
14 trained.

15           They have to have a training program that  
16 is accepted by the NRC. Finally, any worker at any  
17 nuclear facility has to be trained in the hazards and  
18 the proper handling of radioactive materials.

19           The Department of Energy must demonstrate  
20 that it has a good program for doing that at the Yucca  
21 Mountain repository, and the NRC will examine that  
22 program.

23           Next. I want to talk about who would  
24 operate a repository, and how the Yucca Mountain  
25 Review Plan would examine how a repository would be

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1 operated.

2 First of all, as equipment starts to be  
3 installed if the NRC grants a construction  
4 authorization, that equipment has to be tested,  
5 operated, and procedures have to be checked before any  
6 radioactive waste could be brought to the site.

7 So one thing that the department must  
8 provide is a plan for start-up and testing of  
9 components. The NRC will evaluate that. Second, just  
10 like for our cars, you have to do periodic  
11 maintenance. It is not enough to just buy a car and  
12 drive it. You have to test periodically.

13 So those components important to safety  
14 have to have some periodic program of testing their  
15 operation to make sure that they operate in the right  
16 specs.

17 DOE has to present a program for how it is  
18 going to do that. That program has to show how often  
19 things will be tested, and how they will be tested,  
20 and what the qualifications of the people doing the  
21 tests are, and what the acceptable results are.

22 Next, anything important to safety of  
23 workers and the public at any nuclear facility have to  
24 be done using a formal procedure. There even has to  
25 be a procedure for how you write procedures.

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1           Those procedures have to have things like:  
2           what is the sequence of operations?   What are the  
3           tools that you need?   What are the calibration  
4           requirements?   What are the qualifications of the  
5           worker that is doing that test?

6           What are the results supposed to be?   What  
7           do you do if the results aren't satisfactory?   So the  
8           Department of Energy is going to have to demonstrate  
9           that it has an appropriate program for developing and  
10          using procedures that are important to safety, and how  
11          to do that is written into the Yucca Mountain Review  
12          Plan.

13          I mentioned earlier that the pre-closure  
14          safety analysis looks at what could go wrong at a  
15          repository.   Well, if something can go wrong, you have  
16          got to have a plan to do something about it.

17          So again all nuclear facilities have to  
18          have emergency plans.   There will have to be one for  
19          Yucca Mountain.   The NRC has staff whose expertise is  
20          specifically the examination of emergency plans, and  
21          those criteria have been written in the Yucca Mount  
22          Review Plan.

23          Calvin mentioned earlier about questions  
24          of access to Yucca Mountain, and land use.   DOE has  
25          not presented any of those plans yet, but they will

1 have to in their license application, and the NRC's  
2 view in reviewing those is that certain things have to  
3 be able to be done.

4 One is that the waste has to be protected  
5 from disturbance, and the second is that people would  
6 have to be protected from the waste. So those would  
7 be the considerations the NRC will use in evaluating  
8 any land access plans.

9 And finally in building a repository, we  
10 have complex evolution, and things will have to happen  
11 in certain sequences. The Department will have to  
12 demonstrate its schedules for building and  
13 constructing a repository, and the NRC will examine  
14 them to see if they make sense and if they will work.

15 The next thing that I want to talk about  
16 is a requirement in the regulations that DOE be able  
17 to show the capability to extract the waste from the  
18 repository and store it somewhere else if something  
19 goes wrong.

20 The Yucca Mountain Review Plan gives  
21 guidance to the staff on how to examine these plans,  
22 which the Department must present. And the staff will  
23 look at the process the DOE proposes to use, and look  
24 at the plans for alternate storage of the waste, and  
25 look at how those activities would protect workers and

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1 the public.

2 The last aspect of the pre-closure safety  
3 operations that I am going to talk about in this  
4 presentation is a look to the distant future. If the  
5 NRC grants a license to construct and then to operate  
6 a repository at some date it would have to be closed.

7 It might be a long time in the future, but  
8 right now the regulations require that the Department  
9 present its design features and plans for ensuring  
10 that when that time comes that the surface facilities  
11 could be dismantled and decontaminated in such a way  
12 that workers and the public would be protected.

13 So I have talked about four specific areas  
14 that are unrelated that would affect safety of  
15 operations at a repository. The Yucca Mountain Review  
16 Plan examines all these, and it makes use of what has  
17 already been learned around the world and around the  
18 country for these facilities as a way to intimately  
19 assess how DOE proposes to operate their repository.  
20 I would be glad to take your questions.

21 Yes, Ma'am?

22 MR. CAMERON: Mary.

23 MS. MANNING: (Off microphone) From what I  
24 have read and from what I have heard about the plans  
25 this afternoon, and my question is are you going to

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1 require the Department of Energy the worst case  
2 scenario on every part of the operation (inaudible),  
3 and second, how are you going to do your risk  
4 assessment; i.e., the amount of radiation, and heavy  
5 metals in the area water, and so forth.

6 MR. MACKIN: I may ask Janet to amplify  
7 what I say, but in general the NRC doesn't require a  
8 worst case assessment. It requires reasonably  
9 conservative assessments of what can go wrong, and the  
10 regulation provides guidelines on what the likelihood  
11 is of events that have to be considered.

12 So the reason that I think that the NRC  
13 stays away from worst case is because if you name a  
14 worst case, I can come up with something worst, and  
15 you can come up with something worst after that.

16 And so you don't get an effective way of  
17 looking at what can go wrong, or no facility or  
18 anything would be built. So they look for a  
19 reasonable conservatism considering the things that  
20 could happen.

21 I think that to my knowledge of the safety  
22 assessment process is the methods that are used to  
23 identify what could go wrong are comprehensive.

24 Somebody here earlier today mentioned the  
25 issue of the air range. Certainly DOE would have to

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1 examine the likelihood of an aircraft crash, and  
2 fires, and explosions, and failures of equipment,  
3 failures of shielding in the waste handling building.

4           Somebody else mentioned the underground  
5 structures collapsing, and that certainly has got to  
6 be considered in DOE's safety analysis.

7           Cumulative risk I would address in two  
8 ways. One, the regulation requires that the  
9 Department of Energy examine sequences of events that  
10 can happen, and the NRC regulations deal with  
11 radiation exposures.

12           Cumulative risk is dealt with in DOE's  
13 environmental impact statement, and what they consider  
14 are specific sections that deal with cumulative  
15 impacts.

16           But that is not heavy metal problems and  
17 industrial safety and so forth are not really  
18 addressed in the Yucca Mountain Review Plan.

19           MR. CAMERON: There may be parts of Tim  
20 McCartin's next presentation that may get into that  
21 possibly. Andy.

22           MR. HERESZ: Thank you. I may have missed  
23 this earlier, Mr. Mackin, but you don't work for the  
24 NRC; is that correct?

25           MR. MACKIN: We are contractors to the

1 NRC.

2 MR. HERESZ: And you are with the Center  
3 for Nuclear Waste Regulatory Analysis out of San  
4 Antonio, or someplace down there?

5 MR. MACKIN: Yes.

6 MR. HERESZ: And how long have you been  
7 working with the NRC?

8 MR. MACKIN: The Center for Nuclear Waste  
9 and Regulatory Analyses was established in 1987  
10 specifically to support the NRC's high level waste  
11 program. It is actually what is called a Federally-  
12 funded research and development center.  
13 We were established by the NRC.

14 MR. HERESZ: So your funding is contingent  
15 upon NRC, and you are not in this for profit?

16 MR. MACKIN: In fact, our parent  
17 organization, Southwest Research Institute, is a not-  
18 for-profit organization.

19 MR. HERESZ: Oh, really? I thought they  
20 were out there to make some money.

21 MR. MACKIN: We have to make enough money  
22 to pay our workers and buy state-of-the-art equipment,  
23 but we don't have public stock or anything of that  
24 nature.

25 MR. HERESZ: Okay. So by the nature of

1 your relationship do you have any political appointees  
2 with your organization?

3 MR. MACKIN: No, we do not.

4 MR. HERESZ: Okay. Thank you.

5 MR. CAMERON: Judy.

6 MS. TREICHEL: There is not a lot of  
7 information on how to retrieve waste, and the  
8 Department of Energy thinks that will improve public  
9 confidence. And you mentioned many times during your  
10 presentation, and it was mentioned in other  
11 presentations, is this more than a paper exercise, or  
12 will the NRC have to see this being done?

13 Because I know that at some of the dry  
14 cask facilities there has been a need or there should  
15 have been a way to remove waste from a dry cask and  
16 repackage it, and it has never been done.

17 And all the EIS that the Department of  
18 Energy did, and all that they say about retrieval is  
19 that it is the reverse of placement, and as a non-  
20 scientist, I think that is not correct.

21 MR. MACKIN: The Department of Energy is  
22 not required by regulation to provide a detailed  
23 design showing what it would use and so forth to  
24 retrieve a waste package.

25 One of the reasons is, I believe, is what

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1 would cause retrieval to take place is unknown at this  
2 time. So it must show and convince the NRC that it  
3 has the capability that the design will allow for the  
4 retrieval of the waste.

5 MS. TREICHEL: Well, nothing is going to  
6 convince the public, and I am one of them, unless --  
7 I mean, this is all remotely done, and unless you can  
8 somehow show that -- and I definitely think that has  
9 got to be a requirement.

10 People are clamoring for full-scale  
11 testing on transportation tests and so forth, but this  
12 retrieval idea, it is definitely not just the reverse  
13 of inplacement, and I don't think you make a  
14 convincing case that they can do it and you can't see  
15 it.

16 MR. CAMERON: Okay. Thanks, Judy. We are  
17 going to go to Commissioner Herrera.

18 COMMISSIONER HERRERA: Thank you, and I of  
19 course appreciate you all holding this public hearing.  
20 Let me first state my unequivocal opposition to the  
21 plan, which has been pretty well stated. I also have  
22 a question on the context of some of the historical  
23 context of the process.

24 In particular, I know that -- and I am  
25 going to refer to the environmental impact statement,

1 and I know that is not part of your perview.

2 But you mentioned that if the DOE submits  
3 a license application, and you all find a deficiency  
4 with a portion of their application, then they have  
5 the responsibility to address the deficiency, correct?

6 MR. MACKIN: That's correct.

7 COMMISSIONER HERRERA: Okay. And I asked  
8 that because when the environment impact statement  
9 process began, Clark County submitted comments to the  
10 EIS, and never received a response to our comments.

11 Instead, what we received was an  
12 acknowledgement of the comments, and were cataloged,  
13 but no response to the comments have been submitted.  
14 Now, what assurance can you provide the residents of  
15 this county that if in fact there is a deficiency,  
16 that the rules just won't be changed to no longer have  
17 deficiencies?

18 And it is a well-founded question, because  
19 when this began it was supposed to be a geological  
20 repository, and then we have seen that when the DOE  
21 has found some barriers to a geological repository,  
22 got the NRC to back off so to speak, and to allow them  
23 to engineer around the geologic barriers, and the NRC  
24 has complied.

25 So what kind of assurance can you give

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1 folks here and folks in Southern Nevada that the NRC  
2 just won't give a cursory treatment to the application  
3 issues that are identified throughout the process?

4 MR. MACKIN: I would be glad to answer  
5 that, but perhaps Tim McCartin or Janet Schlueter  
6 would like to. I would say that probably -- I'm sure  
7 that the people here would not agree with your  
8 statement that the NRC backed off regulations because  
9 DOE could not meet the previous regulations.

10 COMMISSIONER HERRERA: And in the original  
11 policy act, it was supposed to be a national  
12 geological repository, correct? Is that a correct  
13 statement?

14 MR. MACKIN: Yes.

15 COMMISSIONER HERRERA: And then when the  
16 DOE found it difficult to comply with the conditions  
17 of your original policy act, which required a geologic  
18 repository, they submitted an amendment to that plan  
19 for the NRC to allow them to engineer barriers, or  
20 issues that required them as a result of its  
21 requirements to have a geologic repository.

22 And rather than the NRC referring back to  
23 the policy act that mandated that this be a geologic  
24 repository, they basically allowed DOE, you know, to  
25 modify its request, and you all allowed them to

1 modify.

2 And I am not suggesting it is a relaxation  
3 standard. What I am saying is that it is a different  
4 standard than is now being applied. What would  
5 prohibit that from happening if future deficiencies  
6 are found, because in fact they will be found based on  
7 the track record of the Department of Energy?

8 MR. CAMERON: That is an excellent  
9 question from the Commissioner, and first of all, I  
10 think you may be useful for one of us to address the  
11 first issue of the multiple barriers, but then also  
12 for one of us, and perhaps Tim, to talk about the  
13 stability of the regulatory framework, because I think  
14 the Commissioner is asking about it.

15 And I am going to ask Tim to talk about  
16 the multiple barriers, and then ask Janet or whoever  
17 would like to address the stability of regulatory  
18 framework. Tim.

19 MR. MCCARTIN: Tim McCartin, NRC staff.  
20 And the current regulations do require that the  
21 repository be comprised of both natural and engineered  
22 barriers. Natural barriers are most associated with  
23 the site, and with the geology, and that is still in  
24 the regulation.

25 The regulations as you know don't have any

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1 specific numerical value for what the geology needs to  
2 provide. But it is in the regulation, and the  
3 regulation defines barriers as those that prevent or  
4 substantially delay movement of water or  
5 radionuclides.

6 So I would say that the regulations  
7 require that the geology has to provide a substantial  
8 capability to affect safety. And I would say that if  
9 we look back at why did they end up this way, the  
10 National Academy of Sciences, in their recommendation  
11 for Yucca Mountain standards, specifically spoke to  
12 the NRC, and they advised the NRC against putting in  
13 any particular numerical values for barriers.

14 Subsystem requirements is what they were  
15 called in the National Academy of Sciences' report.  
16 And the reason for that is that they felt that the  
17 Department of Energy should have the flexibility to  
18 provide the greatest amount of safety that they can  
19 through all the barriers.

20 And the best example is the previous  
21 regulation that the National Academy of Sciences was  
22 talking to was that the waste package had a 300 year  
23 requirement for the lifetime of the waste package.

24 And 300 years is relative to if we look  
25 now at what the Department of Energy is estimating, is

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1 many thousands of years, way beyond the requirement  
2 that we had in your previous regulation.

3 So I think that's where the National  
4 Academy of Sciences said don't give a particular  
5 value, because they will try to shoot for just that  
6 boundary, and you will get a greater safety product  
7 encouraging a more robust safety case, where they try  
8 to get as much safety out of all of their facilities.

9 COMMISSIONER HERRERA: So in essence is it  
10 is a subjective standard that may shift according to  
11 issues that are identified by the process?

12 MR. CAMERON: Why don't you clarify on  
13 that and then there is another piece on this that I  
14 think is important. Go ahead

15 MR. MACKIN: You are correct that there is  
16 not a specific numerical number, and that would be  
17 something that is determined through the licensing  
18 hearing.

19 COMMISSIONER HERRERA: Can I ask a follow-  
20 up question?

21 MR. MCCARTIN: Certainly. We have some  
22 more information about where the "shift" developed and  
23 we want to share with everybody, too. Why don't you  
24 go ahead and ask your question.

25 COMMISSIONER HERRERA: My follow-up

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1 question is if in fact as Secretary Abraham has held  
2 that Yucca Mountain is geologically suitable for the  
3 nation's nuclear waste repository, then how can the  
4 NRC, the DOE, and other agencies involved in the site  
5 assessment now not rely on the geologic position on  
6 the site itself?

7 MR. MCCARTIN: Well, the regulation  
8 requires that there has to be some natural barriers,  
9 and the capability for that at the site. So there  
10 will be a geologic component to our evaluation of the  
11 Yucca Mountain site, and the safety of the Yucca  
12 Mountain site.

13 COMMISSIONER HERRERA: But if engineering  
14 is a substantial portion of the process, then any site  
15 in America could be identified and engineered around  
16 those barriers to a certain degree of safety as well,  
17 correct?

18 MR. MCCARTIN: No, unless there is a  
19 substantial component that the geologic barrier has  
20 the capability to provide, the NRC could not license  
21 it based on not having multiple barriers.

22 And I guess I would like to draw an  
23 analogy to fire protection if you will. So I realize  
24 that some people have questions about if the waste  
25 package lasting beyond 10,000 years, it is not a

1 geologic repository. It is just a waste package.

2 And I would say that is not true, and I  
3 would point to an analogy with fire protection.  
4 Buildings are designed to let fires burn through;  
5 electrical lighting, et cetera.

6 However, if you look at this building,  
7 there is sprinklers, and there is smoke detectors.  
8 Smoke detectors and sprinklers provide a safety  
9 capability.

10 You don't have to have a fire for that  
11 capability to be there. Likewise, with a geological  
12 repository, when the NRC evaluates DOE's license  
13 application, there may be a 10,000 year package, and  
14 maybe it will last much longer.

15 There still has to be what will the  
16 geology provide in terms of safety if there are some  
17 releases from the waste package, and what the  
18 regulations require is there has to be a natural  
19 barrier, a geologic barrier, that provides a  
20 substantial capability to prevent or delay the  
21 movement of radionuclide.

22 COMMISSIONER HERRERA: And my final  
23 question is related to process, and I should have  
24 asked it earlier, but the gentleman spent a lot of  
25 time talking about the process, but I think this might

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1 be relevant.

2 And I again refer you to Clark County's  
3 experience with EIS, and we provided what we think are  
4 meaningful comments to the EIS, and never, never to  
5 this day have we received a response regarding our  
6 comments to the EIS.

7 Now, because the application by DOE, if it  
8 comes to that point, then what kind of public  
9 involvement process will be involved at that point?  
10 Because the DOE essentially will prepare an  
11 application, and submit it to the NRC, and then  
12 obviously you will provide an opportunity for public  
13 comment.

14 But now what kind of assurance would be in  
15 that process to address the concerns that are  
16 identified by the public and not just cataloged and  
17 acknowledged that they have been received?

18 MR. CAMERON: Okay. Let's answer that  
19 question. Let me just get a quick -- we have two  
20 questions that we need to answer for you,  
21 Commissioner, and maybe the stability of the  
22 regulatory framework has been addressed, but we need  
23 to answer this question about the environmental impact  
24 statement and the public comment process.

25 Before we do that, Janet, did you want to

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1 provide the Commissioner and everybody else with some  
2 background on the legislation?

3 DR. KOTRA: (Off microphone) My name is  
4 Janet Kotra, and I am on the staff of Waste  
5 Management, and am an author of the Nuclear  
6 Regulatory Commission Regulation for geologic  
7 disposal.

8 I wanted to correct some miscommunication.  
9 The Department of Energy never came to us and asked us  
10 to change the regulation. The Congress of the United  
11 States directed the Environmental Protection Agency to  
12 develop new regulations, and relying on the guidance  
13 of the National Academy of Sciences.

14 We were directed to form our regulations  
15 within a stated period of time to change what the  
16 Environmental Protection Agency initiated and went  
17 final on --

18 COMMISSIONER HERRERA: Well, was that  
19 because the DOE could not meet its initial standard  
20 that was established under the original policy act, or  
21 was it in response to just someone in Congress saying,  
22 oh, let's direct the EPA to work with the NRC and all  
23 the other regulatory bodies to amend?

24 If there wasn't a deficiency in the DOE's  
25 approach or their work, why would EPA have come before

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1 you for an amendment of the process?

2 DR. KOTRA: I am not really qualified to  
3 address Congress' motive for what they did or didn't  
4 do, other than to say that the science with regard to  
5 evaluating the ultimate safety of the repository, and  
6 which our agency has been involved in for many years,  
7 and it has evolved a great deal since the concept was  
8 originally made in the late '70s of deep geologic  
9 disposal.

10 Science understands that those analyses  
11 have changed a great deal and there was a recognition  
12 that it is extremely difficult arbitrarily to set  
13 values for period of time facilities.

14 And that the new criteria that the  
15 Environmental Protection Agency developed recognized  
16 the evolution of that science, and began trying to  
17 comply with the direction of Congress, and with regard  
18 to the National Academy of Sciences.

19 I just wanted to clear up the fact that is  
20 how those rules got changed. The motivation behind  
21 the direction is open to multiple interpretations and  
22 analyses.

23 MR. CAMERON: Commissioner, let me get an  
24 answer to your question, and it will also address  
25 Dennis Bechtel's question about the environmental

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1 impact statement, and I am going to go to Mitzi Young  
2 from our Office of General Counsel.

3 MS. YOUNG: (Off microphone) This may or  
4 may not answer your question. But one of the things  
5 that have come up in terms of the concern that I am  
6 able to understand from your commends is what  
7 guarantee or assurances is there as to the integrity  
8 of the process that the rules of the game aren't going  
9 to change, and I think that is how you phrased it.

10 COMMISSIONER HERRERA: Not exactly. My  
11 specific question is because the DOE, who prepared the  
12 application without the benefit of public input given  
13 historic context on this entire process, that the NRC  
14 would receive an application that is prepared by the  
15 Department of Energy.

16 Now, the NRC will have a public comment  
17 period during that time to review input. Now, when we  
18 provide our comments to EIS, there was a catalog of  
19 concerns, and an acknowledgement of concerns, but  
20 never a treatment of concerns, and that is a big  
21 difference.

22 Now, what in the process will ensure that  
23 the concerns of the public aren't just acknowledged  
24 and categorized, but actually addressed?

25 MS YOUNG: (Off microphone) The NRC does

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1 not have a public comment period on the application  
2 (inaudible). The opportunity for public comment only  
3 comes during a formal hearing, and the NRC licensing  
4 process then is totally distinct from the public  
5 hearing process (inaudible).

6 In other words, they must docket the  
7 application, review your comments, and give us an  
8 opportunity for people to raise issues and concerns.

9 COMMISSIONER HERRERA: And that is exactly  
10 the point.

11 MS. YOUNG: But I am just saying there is  
12 a little bit of difference in that process. Now, with  
13 respect to an application -- well, if we define a  
14 position in some respect, and we have that regulation  
15 that has been longstanding since the '60s, and if the  
16 NRC staff identifies a deficiency in an application,  
17 and the licensee does not provide that information in  
18 a reasonable amount of time, we have the ability and  
19 the authority to issue a notice of denial of the  
20 application.

21 And that is in the regulations, 10 CFR  
22 201.108. So that is one thing that we could do, is to  
23 deny the application because they did not provide the  
24 information requested in a reasonable amount of time  
25 for NRC review.

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1                   With respect to adoption in terms of the  
2 EIS, we have a very narrow role described by Congress  
3 that was on Slide 12, I think, and we have only  
4 addressed the adoption issues only in two limited  
5 issues. Whether there is a change that the NRC would  
6 take without significant environmental impact, or  
7 there is some change in the information about the  
8 product storage location, and somehow renders this EIS  
9 inadequate.

10                   That does not to questions about whether  
11 in preparing the EIS that DOE followed all of those  
12 regulations necessary for preparing it. So those  
13 things don't even come under the NRC process.

14                   COMMISSIONER HERRERA:     At no point  
15 throughout the process has the county's or the State's  
16 comments to the DOE's environmental impact statement  
17 been addressed?

18                   MS. YOUNG:     I understand what you are  
19 saying, and in terms of the original Nuclear Waste  
20 Policy Act, that within 180 days of DOE issuing their  
21 final environmental impact statement (inaudible) --  
22 are required to do.

23                   Now, DOE on the other hand, could raise  
24 defenses and try to defeat those plans. The NRC is  
25 going to take the litigation on the EIS, at whatever

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1 point it is that the DOE comes in for a license  
2 application, and right now that will happen in  
3 December of 2004.

4 COMMISSIONER HERRERA: Now, with respect  
5 to your comment about the lack of an opportunity for  
6 a public hearing as far as the application, is that a  
7 mandate from Congress or is that an NRC adopted  
8 regulation?

9 MS. YOUNG: There is not a lack of an  
10 opportunity for a public hearing on the application.

11 COMMISSIONER HERRERA: I thought I heard  
12 you say the public will have an opportunity to be part  
13 of the --

14 MS. YOUNG: No, what I tried to explain is  
15 that the NRC hearing is a formal adjudatory  
16 proceeding. When we notice the application and  
17 docket it -- and that is a horrible word to use, at  
18 that point the staff attorneys for the application  
19 have all the information on the Yucca Mountain Review  
20 Plan.

21 And that is only a guidance document. For  
22 example, DOE could ignore the document entirely and  
23 say we are going to meet the regulations another way.  
24 That would put us in a bind in terms of using our  
25 resources for a review of it, because we went along

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1 with the structure of the way that it was anticipated  
2 to be reviewed in the review plan.

3 But when we issue it in the Federal  
4 Register, and it is a notice to the world, that we  
5 have received an application there is an opportunity  
6 for any person in the United States, including Native  
7 American tribes, to file a petition to show status,  
8 and if they can show if they are affected by it, they  
9 automatically get to participate in the proceedings.

10 But those affected, such as the local  
11 governments, Clark County, Nye County (inaudible).  
12 Environmental organizations has a number of facilities  
13 that could be harmed by any activity associated with  
14 the reposed repository, would have an opportunity to  
15 come into an NRC hearing and if I have an interest  
16 that has been harmed, and I have an issue, and I want  
17 to litigate, and a 3-Judge panel would have to make  
18 that decision.

19 So it is a hearing, but it is not a  
20 meeting where people come and give comments and say it  
21 is a good idea or a bad idea.

22 COMMISSIONER HERRERA: Right, and I asked  
23 that because --

24 MS. YOUNG: And it is a hearing based on  
25 factual evidence, and based on people who have

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1 knowledge about the facts, and experts who have  
2 opinions as to how the repository will operate over  
3 the long term.

4 COMMISSIONER HERRERA: And I asked the  
5 question the way I did was because the County, and  
6 everyone else for that matter, had an opportunity to  
7 provide comments to the EIS.

8 Now, the opportunity was to provide  
9 comments, and not to get those comments addressed, or  
10 dealt with in any significant way, and there is a  
11 substantial difference in having an opportunity to  
12 participate and having results based on the concerns  
13 that you have raised during that period of  
14 participation, and that's why I asked the question in  
15 the context of the EIS process.

16 MR. CAMERON: And I think that really  
17 restating your question for us, Commissioner, is --  
18 and I don't know if there has been a decision made on  
19 this, but to the extent that the Department of Energy  
20 did not adequately address -- and let's not say  
21 accept, but did not adequately address the comments  
22 that Clark County or others gave on the draft EIS, is  
23 there some opportunity for Clark County to raise those  
24 issues again somehow with the Commission in connection  
25 with its process.

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1           And I think that is what you are trying to  
2 find out, and I don't know if we have a good answer to  
3 that yet, because I think there are still some things  
4 that the Commission is considering.

5           But, Janet, do you want to say anything  
6 more on that specific issue, because I think that is  
7 the key, and I think that we really need to hear from  
8 a couple of other people here and move on to the next  
9 presentation.

10           But I want to make sure that the  
11 Commissioner and -- and by the way, Commissioner  
12 Herrera, you are the Chairman of the Clark County  
13 Commission for people who don't know.

14           MS. SCHLUETER: (Off microphone) Well, I  
15 think the bottom line is that we are required by  
16 Congress to adopt the environmental impact statement  
17 to the extent practical, and as was stated earlier  
18 today, there are one or two conditions that might  
19 exist where we could not do that.

20           And as part of the licensing process, we  
21 would expect that the Energy Department would provide  
22 official information beyond that which was covered in  
23 the final environmental impact statement, particularly  
24 if there were significant changes for other program  
25 changes with the repository, and were not covered in

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1 the final environmental impact statement.

2 We are a commenting agency, and like you,  
3 we provided comments to the Energy Department. We did  
4 not receive, nor did we expect necessarily, a written  
5 response back from the Energy Department on those  
6 comments.

7 Despite that, as part of the licensing  
8 process, the Judge will have to determine the degree  
9 to which the final environmental impact statement  
10 adequately meets the (inaudible) consideration.

11 If it is determined that it does not, that  
12 will then (inaudible) for the Judge and the panel to  
13 render a decision on whether we should deny or grant  
14 the license.

15 MS. YOUNG: Unfortunately, that's not  
16 quite correct.

17 COMMISSIONER HERRERA: Okay. I will take  
18 your word for it, because I am not sure I understood  
19 what was said.

20 MS. YOUNG: Well, it is extremely  
21 complicated, and because the regulations have been  
22 very narrowly interpreted, it was Congress' intent  
23 that when one agency does an environmental impact  
24 statement, for the second agency that is relying on  
25 that statement to take an action, that it doesn't

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1 necessarily retread entirely all the ground that the  
2 first agency did.

3           So the issue is -- your comments on the  
4 EIS had to do with things under those two standards  
5 where we couldn't make the adoption decision,  
6 definitely that could be a basis of a contention that  
7 would come into a hearing.

8           If it is something else, and if it is not  
9 significant new information that would render the  
10 statement inadequate, it doesn't (inaudible). That is  
11 the way the rules are written to day.

12           COMMISSIONER HERRERA: Okay. So today in  
13 the rules, there is no assurance that Clark County's  
14 concern that the EIS will be addressed out of a legal  
15 framework?

16           MS. YOUNG: Based on the general way you  
17 say your question, on the general information, unless  
18 it somehow fell under those two standards where the  
19 NRC's based its decision not to adopt the EIS, or  
20 let's say the NRC adopted 80 percent, and then 20  
21 percent was left, and then your comments pertained to  
22 that 20 percent, that comment could be the basis of a  
23 contention regarding what the NRC is going to do with  
24 the 20 percent.

25           So if the NRC were to adopt the entire

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1 document, there is on EIS issue in the sequence. If  
2 we don't adopt the document, then the NRC looks at the  
3 DOE to redo its statement, and then a lot of issues  
4 would come in.

5 But right now the way it is structured, it  
6 is on very limited, and unless Clark County's comments  
7 pertained to those two standards for adoption, it is  
8 not litigated in the NRC.

9 MR. CAMERON: I think the answer is yes  
10 probably.

11 COMMISSIONER HERRERA: Let me close by  
12 saying thank you for your indulgence, and thank you  
13 for the indulgence of the folks who are in the  
14 audience, and the answer that we received underline  
15 why Clark County residents are so concerned about  
16 Yucca Mountain as a repository.

17 There is a lot of questions that remain  
18 unanswered, and there is a lot of uncertainty to the  
19 process that remain unanswered, and nowhere, nowhere  
20 did I hear in any of those answers that the residents  
21 of Clark County and their concerns will be adequately  
22 addressed at any point in the process. Thank you very  
23 much for your indulgence.

24 MR. CAMERON: Okay. Thank you,  
25 Commissioner, and let's go to -- we really need to get

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1 on to the next section, and so I am just going to ask  
2 for these questions to be real quick. Kalynda, go  
3 ahead.

4 MS. TILGES: I wanted to thank you for  
5 allowing our Commissioner, and giving him the time to  
6 make his questions and to answer them. I think that  
7 when you have called a public hearing and you ask for  
8 comments and questions that you should give everyone  
9 time to make them.

10 MR. CAMERON: Absolutely.

11 MS. TILGES: And it looks like DOE has  
12 you all over a barrel, too, huh? But I did want to  
13 say, and following up on what Judy's statement is,  
14 that with worst-case scenarios, we live here, and we  
15 want worst-case scenarios.

16 And 9/11 was a worst-case scenario, and if  
17 we had talked to you and the DOE about that on  
18 September 10th, we would have been discredited. But  
19 it happened. Worst-case scenarios do happen, and we  
20 want to know what they are.

21 Also, going over worst case scenarios may  
22 bring up other issues that you haven't thought of  
23 before. I don't normally like to quote television  
24 programs, but anyone who watched the West Wing, Martin  
25 Sheen's last comment is, is we spent all this money

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1 and we do all these studies, paraphrasing of course,  
2 and then we can't protect ourselves against the thing  
3 that we haven't thought of.

4 So the worst-case scenarios may bring up  
5 the things that we haven't thought of. Secondly, I  
6 would like to know if you plan on testing, full-scale  
7 testing, to destruction the transportation casks, and  
8 the waste storage casks that will be placed in the  
9 mountain?

10 MR. CAMERON: Okay. I think we heard your  
11 comment, Kalynda, on worst-case and the reason for  
12 doing that. Let's just briefly address that cask  
13 issue and move to Abbie and Dennis, and then we have  
14 to go to Tim McCartin, because this is an extremely  
15 important part of the repository protection process.  
16 So, Chet.

17 MR. POSLUSNY: Chet Poslusny, Spent Fuel  
18 Office. Our office is sponsoring a risk study, both  
19 package and performance study, started in '99 and  
20 expected to continue until 2005, and which includes  
21 testing of casks beyond current regulations.

22 We are considering doing a full scale  
23 test, not to destruction, but full-scale testing. We  
24 are planning to have a meeting for public input on  
25 that plan itself in August, probably around the middle

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1 of August, in Vegas. So we will look forward to  
2 consulting with you on that topic.

3 MR. CAMERON: Okay. Thank you. Thank  
4 you, Chet. Abbie Johnson.

5 MS. JOHNSON: My name is Abby Johnson, and  
6 I am the Nuclear Waste Advisor for Eureka County,  
7 Nevada, and I live in Carson City, and I have a 6:30  
8 plane, and given the new travel things between Las  
9 Vegas and Southwest, I have to leave pretty soon.

10 So I just want to say my peace, and try to  
11 make it more comments than questions to speed it up a  
12 little bit. First of all, it is a kind of confusing  
13 agenda where there is lots of times for questions, and  
14 no time for comments. So I am going to make some  
15 comments, and they might be out of order, but here I  
16 am.

17 The first one is I did find a copy of the  
18 Yucca Mountain Review Plan and looked in the glossary  
19 for the word safety, and I didn't find it. I heard  
20 safety about 250 times in the past two hours.

21 I remember when DOE's Carl Gertz came to  
22 Reno and said if it is not safe, we won't build it,  
23 and at first we actually believed him. And then over  
24 the years we came to realize that safety meant license  
25 ability, and so I think it is really important for the

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1 public to be able to read what the NRC considers to be  
2 the definition of safety.

3 It is almost as common as the word is or  
4 the, and yet I really can't tell you what is safe and  
5 what is not, but I can tell you that my version of  
6 safe is different than your version of safe, which  
7 leads me to my often-repeated joke of if an earthquake  
8 happened tomorrow, DOE would say, well, we got our  
9 10,000 year event out of the way, and let's move on,  
10 along with what Kalynda said.

11 Secondly, apparently DOE has something  
12 called a pre-closure safety analysis guide, which is  
13 kind of like this Yucca Mountain Review Plan, and if  
14 I am reading the minutes of the meeting that you guys  
15 had a few weeks ago correctly.

16 I don't want an answer now, but at some  
17 point I would like to understand the relationship  
18 between DOE's guide and this guide, and if DOE is  
19 changing its guide to reflect what is in your draft  
20 guide, or are you kind of trying to read their guide  
21 and figure out what should be in your guide.

22 The third thing is in the past week or so  
23 Secretary Abraham has made some sweeping statements  
24 that 77,000 metric tons is just the beginning, and  
25 that he feels that Yucca Mountain can probably

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1 contain, and as scientists say, that Yucca Mountain  
2 can contain 120,000 metric tons.

3 I see that you have a definition of  
4 repository footprints in the glossary, and I am  
5 wondering if that footprint is kind of like my 14 year  
6 old son's feet; it just keeps growing.

7 What I really want to know is how will the  
8 NRC deal with the ever-growing footprint through the  
9 licensing? You know, DOE has not told us if it is a  
10 hot repository or a cold repository. That makes a big  
11 difference in terms of the size of the footprint.

12 And then here they go again saying, oh, we  
13 can stuff more waste in there, and there is enough  
14 room for everything. Well, we are hearing that, and  
15 frankly, it is our land, and we want to know how you  
16 can handle an issue like that which seems  
17 concomitantly unfair, and putting unfairness on top of  
18 unfairness.

19 I am sure -- and I am not sure if there is  
20 time for an answer right now, but it is something that  
21 I would like to understand how the NRC is going to  
22 deal with the licensing, especially if in the middle  
23 of the license procedure DOE comes to you and says,  
24 well, guess what, we want more space. How does that  
25 work? Thank you.

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1 MR. CAMERON: Thank you, Abby. Can we  
2 address the -- do we have anything to say about the  
3 repository, the growing repository footprint issue?  
4 I think Janet Kotra had something on that. Janet.

5 DR. KOTRA: (Off microphone) Very  
6 briefly, the law currently limits the capacity to the  
7 70,000 metric tons. If DOE wanted to increase that,  
8 it would take an act of Congress as I understand the  
9 law right now.

10 But I think it is also important to  
11 realize that that limit set by Congress was not a  
12 technical or safety limit. The Nuclear Regulatory  
13 Commission in evaluating a license application could  
14 make a determination, for example, that only 40,000  
15 could safely be placed in the mountain.

16 And if that were the case, then that would  
17 determine it. So it is an upper limit right now that  
18 would have to be changed by Congress. If Congress  
19 changed the law with regard to that, then the NRC  
20 would have to certainly take that into consideration  
21 if an application came in for a larger quantity.

22 But there is no requirement that we would  
23 grant either the existing upper limit if it did not  
24 demonstrate to meet safety requirements.

25 MR. CAMERON: Okay. Thank you. And we

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1 are going to go Dennis, and then this gentleman, and  
2 then we have to move on. Abby.

3 MS. JOHNSON: Chip, I was just going to  
4 say that I look forward to the day that if we have to  
5 take this thing and the NRC says you can only fit  
6 40,000 metric tons in Yucca Mountain, and you guys  
7 could stand firm on that, and not be overridden by  
8 politics. But I am still pretty skeptical about that.

9 MR. CAMERON: We understand that, Abby.  
10 Dennis, and then this gentleman, and then we will ask  
11 Pat to sit down and then have Tim. Dennis.

12 MR. BECHTEL: Yes. I am not sure that you  
13 totally answered the question about regulatory  
14 stability, but I think part of the concern that the  
15 public has and Clark County is with the suitability  
16 guidelines that were modified well into the process,  
17 and as I understand it to look at more of a systems  
18 approach.

19 But nonetheless your concern is out there,  
20 and I think the Commissioner expressed it well, that  
21 shifting gears again could conceivably happen, and  
22 that is a concern of the public of Clark County.

23 MR. CAMERON: Thank you, Dennis. Yes,  
24 sir, and if you could just tell us who you are.

25 MR. LEVINE: Sure. Eric Levine, KLAS,

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1 Channel 8 television, Henderson, and I am a resident.  
2 My question is simply this. I am not a scientist, but  
3 I just wondered if you guys who work for the Nuclear  
4 Regulatory Commission, where do you all live? Just a  
5 quick question.

6 MR. CAMERON: All of us live in the  
7 Washington, D.C. area, except Bob Latta, who is right  
8 here, who is our on-site representative, and we can  
9 provide you more information about what they do.

10 MR. LEVINE: Can I ask my question?

11 MR. CAMERON: Go ahead.

12 MR. LEVINE: Thank you. Simply put, I was  
13 just wondering that if this stuff were to get out of  
14 a canister on your front lawn from any of these  
15 hundred-and-some-odd reactors, whether it is a fire,  
16 a terrorist attack, whether they forget to put a lid  
17 on it, what if an -- I don't know -- accident  
18 happened -- and there have been predicted accidents  
19 over 40 years -- could you walk up to it?

20 Could you touch it? Would it kill you?  
21 Would it get in your lungs? I mean, is it a risk to  
22 your health, your kids' health? With your house,  
23 would it ruin the resale value of the property?

24 What physical and financial, and  
25 detrimental, and psychological, and whatever risk it

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1 poses, whether it be here, or in your community of  
2 D.C., or wherever, what risks would it pose, if any?

3 I know that you have great safety  
4 procedures, but I am wondering about the risk of what  
5 you are transporting.

6 MR. CAMERON: That is a good bottom-line  
7 question. Who wants to address that?

8 MS. SCHLUETER: Well, I think there is  
9 actually two pieces at the end of the that with the  
10 transporting element, which we could speak to as far  
11 as the safety record of the transportation of spent  
12 nuclear fuel in this country to date, and I will let  
13 Chet do that from our transportation group.

14 First though with regard to the  
15 environmental standards that you mentioned. We have  
16 rules in place which are consistent with the  
17 Environmental Protection Agency's standards that  
18 require that the potential site that is licensed would  
19 have to adhere to, and that applies to the individual  
20 limit for a member of the public that you could  
21 receive a certain dose, and that dose is 15 millirems  
22 per year to an individual.

23 And there is also a separate standard that  
24 applies to ground water pathway, and that is 4  
25 millirems per year. These standards are extremely

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1 conservative. They are also a fraction of the public  
2 dose limit which is allowed for other operations in  
3 the United States from a variety of facilities.

4 They are also consistent with and even  
5 lower than some international recommendations by  
6 bodies, and organizations, and scientific groups. So  
7 we believe that they are conservative, and adequately  
8 conservative to protect the citizens and their ground  
9 water source as well, as well as the environment.

10 MR. LEVINE: I'm sorry, but my question is  
11 the materials. Would you touch it on your front lawn  
12 if it broke out of a canister, and would something  
13 happen to you? How deadly is this? I don't know and  
14 I am asking you. I really truly don't know.

15 MS. SCHLUETER: Well, certainly spent  
16 nuclear fuel needs to be adequately stored, and  
17 transported, and -- well, do you mean can I touch it?  
18 No, I would not touch spent nuclear fuel.

19 MR. LEVINE: Well, would you be evacuated  
20 if you touched it?

21 MR. CAMERON: Excuse me, Eric, but we have  
22 got to get this on the transcript, and I know that it  
23 is an important issue. What are the consequences in  
24 terms of the repository if anything happened to mis-  
25 fire, and I think that is the question, okay?

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1                   And obviously if it is on someone's front  
2 lawn, we don't want it to be on anybody's front lawn.  
3 But if you could give an answer with what the dose  
4 standard is, and maybe comparisons.

5                   I mean, if we could try to help Eric  
6 understand this better.

7                   MR. LEVINE: That is not the question. I  
8 am talking about --

9                   MR. CAMERON: Well, what I am asking if  
10 there is anything else that Janet, after hearing  
11 Eric's concerns, if there is anything else that Janet  
12 can provide on that that would give him an idea of  
13 what the hazards are.

14                   MS. SCHLUETER: Well, the dose limits that  
15 I mentioned, one comparison that I could give is that  
16 the 15 millirem per year could be compared to a  
17 transcontinental airline flight.

18                   MS. TREICHEL: What is that problem  
19 compared to spent fuel here?

20                   MR. CAMERON: Would you please let her try  
21 to answer the question.

22                   MS. SCHLUETER: For example, it has been  
23 measured that a typical transcontinental flight would  
24 result in 5 to 10 millirems to an individual in the  
25 air.

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1           The standard applicable to Yucca Mountain  
2           is 15 millirems, and so very comparable, a very  
3           comparable millirem exposure.

4           MR. CAMERON: And let me just see if Janet  
5           has anything to add to that.

6           DR. KOTRA: (Off microphone) She answered  
7           your question and that the stuff is very dangerous,  
8           and the reason that the NRC has regulatory  
9           responsibility and is so concerned about the  
10          appropriateness of the standard as Janet has mentioned  
11          is the fact that the public, and the workers who  
12          handle the material have to be protected.

13          This is a very serious job, and we take it  
14          very seriously. This is dangerous material, and that  
15          is why it needs to be handled properly and when it is  
16          stored on site, and when it is transported, and when  
17          it is disposed.

18          What Janet attempted to tell you is that  
19          we are very cognizant of the importance of setting and  
20          enforcing very stringent standards for protection from  
21          this material wherever it is.

22          MR. CAMERON: Okay. Eric, I think maybe  
23          that did it.

24          MR. POSLUSNY: If I may?

25          MR. CAMERON: All right. Chet. Go ahead.

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1 MR. POSLUSNY: Briefly, there have been  
2 about 1,300 shipments of spent nuclear fuel over the  
3 past 20 years, and in casts that have been approved by  
4 the NRC, and there have been more in casts that the  
5 DOE has shipped, and obviously more overseas. But  
6 there have been no serious accidents in any of those  
7 shipments.

8 We understand that there will be a large  
9 number of shipments if the repository is approved. We  
10 are concerned about security as well. We are looking  
11 at our regulations right now and we are doing  
12 vulnerability studies for both storage casks and  
13 transportation casks. One study will be done by  
14 December of this year and another one a year later.

15 And the results of those analyses may  
16 require new designs, or changes in the design  
17 requirements, as well as changes in the security  
18 requirements. In fact, we have approached additional  
19 security requirements at all sites with spent nuclear  
20 fuel in the U.S.

21 That is being done through an advisory,  
22 and also it is being worked on as an order as we  
23 speak. So these items are important, and obviously  
24 September 11th has been a lesson, and we are committed  
25 to safety.

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1 MR. CAMERON: Okay. I think we really.

2 MR. DANIELS: Can I ask a question?

3 MR. CAMERON: Yes.

4 MR. DANIELS: I am Dennis Daniels and I am  
5 speaking for myself. You said there has been no  
6 serious cast accidents. Have there been any?

7 MR. POSLUSNY: There have been --  
8 considering the casks, there have been less than a  
9 dozen accidents, or less than 10 actually, over the  
10 past 20 years.

11 One accident occurred in 1971, I believe.  
12 A cask was thrown about a hundred feet off of a truck.  
13 And it received only surface damage, and there was no  
14 radiation release.

15 MR. CAMERON: You know, we can't go on  
16 with the transportation thing, but Andy, I will let  
17 you go one quick question, and then we have to get on.

18 MR. HERESZ: Just a real quickly. If  
19 these casts are so safe, what do we need Yucca  
20 Mountain for?

21 MR. CAMERON: This is one piece that they  
22 have to hear, and this is an important piece, and Tim  
23 McCartin is going to talk about it, in terms of long  
24 term repository requirements.

25 I know that we are over time and maybe we

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1 are not over time yet, but I know we are late, and we  
2 have other presentations. This one we really want you  
3 to hear, and I think we are going to try to  
4 encapsulate the next two very quickly. Tim.

5 MR. MCCARTIN: Tim McCartin, and I am an  
6 employee at the Nuclear Regulatory Commission. As  
7 Chip indicated, I will be talking about the long term  
8 safety, and that is that period of time after waste is  
9 in place in a potential repository at Yucca Mountain.

10 My safety I mean that the future behavior  
11 of the potential repository would be within the safety  
12 standards and requirements of the Environmental  
13 Protection Agency and the Nuclear Regulatory  
14 Commission.

15 My talk today, I really want to focus on  
16 three particular topics. First, I would like to  
17 describe briefly the safety requirements that the  
18 repository must behave to.

19 Secondly, the requirements on how DOE is  
20 to evaluate the safety of a repository, and third how  
21 the NRC would review DOE's evaluation of safety. And  
22 with that, the requirements for long term safety,  
23 there is a requirement for individual protection, a  
24 ground water protection standard.

25 There also is a standard to judge the

1 safety of the repository if there was an accidental  
2 drilling through the repository. Someone could  
3 potentially drill through the repository inadvertently  
4 sometime in the future, and we call that the human  
5 intrusion standard.

6 All three of those have numerical values  
7 to them as we discussed a little bit earlier with  
8 respect to the multiple barrier requirement, which is  
9 the fourth requirement for the repository.

10 The repository, as I explained briefly  
11 before, must have both natural and engineered  
12 barriers, and I will explain that in a little more  
13 detail.

14 For multiple barriers, when I speak of an  
15 engineered barrier, we are talking about a safety  
16 function of the repository that is man-made. Examples  
17 of that would be the waste package, and the drip  
18 shield.

19 The drip shield is a metal tent that is  
20 over the waste package, and it prevents drips from  
21 falling directly on to the waste package. It shields  
22 the waste package from dripping water. That is why  
23 it is called a drip shield.

24 In terms of the site, the natural  
25 barriers, the site geology also has to provide some

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1 safety function. The waste is buried below a few  
2 hundred or hundreds of feet, or almost a thousand feet  
3 of rock that provides protection from individuals  
4 coming into direct contact with the waste, and sort of  
5 -- a brief example would be if it is on my front lawn.

6 Well, it is buried a thousand feet below  
7 the surface, and it is not going to get on someone's  
8 front lawn. Likewise, the potential eventually is that  
9 there could be some releases from the release package.  
10 Those releases would have to go through those rock  
11 layers.

12 There is thousands of feet of rock that  
13 the waste would have to travel through very slowly  
14 before it could get to a point where there could be a  
15 potential source of contact with human beings.

16 Those really are the requirements for the  
17 repository. The next question is how is DOE going to  
18 evaluate the repository. DOE is required to do a  
19 systematic and thorough analysis of the  
20 repository.

21 The regulations, both EPA's and NRC's  
22 regulations, refers to a performance assessment as  
23 that systematic analysis. And as Pat Mackin described  
24 earlier during operations, this kind of analysis also  
25 addresses the same three kinds of questions.

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1           And they are what can happen, and what  
2           could happen, and how likely is -- Janet, could you  
3           put up those slides. And what could go wrong, and how  
4           likely it is, and what are the consequences if it  
5           happens.

6           Those are the same three kinds of  
7           questions. I would like to describe the performance  
8           assessment, the requirements on the department in  
9           doing this evaluation with respect to these three  
10          questions.

11          In terms of what could go wrong, once  
12          again, we need the department -- Pat is required to do  
13          a very thorough analysis. You will see in the  
14          regulations and in the Yucca Mountain Review Plan that  
15          we have identified three categories to ensure that the  
16          department does a thorough analysis.

17          We speak of features, events, and  
18          processes. Features are the kinds of things that we  
19          could go out and see and measure, like a fall, or a  
20          large crack in the rock. How wide is that crack, and  
21          how long is that crack. It is a feature.

22          Events are the types of things --  
23          something that might happen at a particular time, such  
24          as earthquakes, volcanoes occurring, at particular  
25          times.

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1           Thirdly, in contrast to an event that  
2 happens at a particular time, we speak of processes,  
3 which are things that occur gradually over long time  
4 periods, such as the dripping of water into the  
5 repository, corrosion of the waste packages, or  
6 processes.

7           All of those -- the features, events, and  
8 processes -- will affect the performance of the safety  
9 functions of the repository, the barriers, and we  
10 would expect DOE, in terms of looking at what could go  
11 wrong, a comprehensive list of those kinds of things  
12 that will affect the safety performance of the  
13 repository or the barriers.

14           Secondly, having identified what can go  
15 wrong, the next question is, well, how likely is it to  
16 go wrong. And there is really three aspects to  
17 looking at how likely something is, and the  
18 probability that something might occur, and how often  
19 it might occur.

20           Next, related to the probability is the  
21 extent, and how big or how large that particular event  
22 you are looking at. For example, earthquakes. Very  
23 small earthquakes occur very frequently. Larger  
24 earthquakes occur less frequently.

25           And so when you are looking at that

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1 probability, you also have to consider how big the  
2 event is, and secondly, the location. Where something  
3 happens certainly will have an effect on the  
4 performance of the repository.

5 An example is the dripping. Are we  
6 getting dripping water on all the waste packages or a  
7 very few? There is a certain likelihood about how  
8 many packages might experience drip. Having  
9 identified what can go wrong, and how likely it is,  
10 the final question is, well, what are the consequences  
11 when these kinds of things happen.

12 The Department of Energy, in their  
13 performance assessment, this systematic analysis, is  
14 required to look at the safety during normal  
15 conditions. When the barriers are behaving as  
16 expected, and the safety features are functioning as  
17 expected.

18 Second, when we have all those features,  
19 events, and processes we have examined identified,  
20 what is the safety during what we at the NRC have  
21 sometimes referred to as disruptive conditions, such  
22 as the potential for a volcano, increases in rain  
23 fall, will and have the potential to affect once again  
24 those safety functions.

25 And in the analysis of the consequences

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1 the department would be looking also at the effect on  
2 the functions of each of the barriers. That is the  
3 analysis that the Department of Energy is required to  
4 do, this performance assessment.

5 This sets the context, and there are  
6 safety requirements, and the evaluation of safety for  
7 my third topic, which is, well, how will the NRC  
8 review DOE's safety evaluation.

9 And there are a number of things that we  
10 consider and that you will see in the review plan.  
11 First, the purpose of the barriers. We will look at  
12 what DOE -- what they are relying on for safety, and  
13 what are the safety functions that they have  
14 identified that ensure that the safety of the  
15 repository will occur for out into the future.

16 Next, we will look at their features,  
17 events, and processes. They have identified what can  
18 go wrong, and we will look at their identification to  
19 see that it is a complete list.

20 Next, the likelihood and certainly well  
21 beyond, we will look at the consequences, and how they  
22 evaluate the consequences of when these things go  
23 wrong.

24 We are estimating the future behavior. So  
25 evaluating those consequences relies on scientific

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1 models, computer models, to estimate what the future  
2 behavior of the repository, the functioning of the  
3 barriers, et cetera.

4 That has to do with what is the scientific  
5 information supporting that evaluation that the  
6 Department has presented, and you will see in a review  
7 plan that a large portion of that for this evaluation,  
8 there is 14 large topic areas related to the heat of  
9 the waste, volcanoes, earthquakes, corrosion of the  
10 waste package.

11 And there is a lot of information that the  
12 NRC needs to evaluate in terms of what, how, they have  
13 supported the performance assessment. And I guess I  
14 would like to respond very quickly to Dennis Bechtel's  
15 comment about scientific precision.

16 And it is a good comment that I will say  
17 that this document, the review plan, is written for  
18 the NRC staff. And there are times when we write  
19 things that we don't write for people on our floor and  
20 our ability, and we don't think of other  
21 interpretations of words.

22 And I will say that scientific precision  
23 is one of those terms that we know what we mean. We  
24 are talking to ourselves, and it is not very clear to  
25 other people, and I think that is a good comment. I

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1 think we need to go back to the document and look for  
2 certain terms and clarify those things.

3 What is meant by scientific precision?  
4 What we intended, and I don't know exactly what  
5 sentence, but I have in my mind where it might occur,  
6 but what we had intended by that, we are not  
7 interested to a very precise answer because it might  
8 be the answer to the wrong model.

9 You might, for example, say that the waste  
10 package is going to corrode after 25,000 years, 300  
11 days, 12 hours, 15 minutes, and 5 seconds. That is a  
12 very precise answer, and that is not what we were  
13 trying to get.

14 We don't want a precise answer. What the  
15 department needs to do, and what our review gets into,  
16 is that when you look at scientific information, this  
17 is a very complex subject. Estimating out to the  
18 future is very difficult.

19 There are going to be scientific  
20 differences between different scientists. The  
21 Department is required to evaluate these differences,  
22 and we will look into how they document these  
23 differences.

24 In our regulation, we use a word  
25 alternative box. That is part of looking at the

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1 differences, and rather than giving a very precise  
2 answer that could be wrong, as I indicated, we would  
3 rather see what requires the department to evaluate  
4 this scientific uncertainty, these differences of  
5 opinion, and the waste package we estimated to survive  
6 somewhere, let's say, somewhere between 5,000 years  
7 and 25,000 years.

8           It is not very precise, but the  
9 information is uncertain. The scientific information  
10 and that range of the lifetime of the waste package is  
11 supportable, and that is what we were trying to get at  
12 with the scientific precision. It's not that we don't  
13 want a defensible calculation, but we were trying to  
14 get to that point, and I realize that we need to be a  
15 little more careful.

16           And there are probably other terms in  
17 there that are not -- that people outside of our  
18 floor, people will get the wrong impression. With  
19 that, I would like to turn to a brief example. What  
20 are the kinds of things that we would look at when we  
21 are reviewing these things.

22           If you look at the review plan, you will  
23 see a lot of discussion of geology, of corrosion  
24 science, et cetera. But for one example, when we look  
25 at dripping water, there are a number of things that

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1 the department of energy will present in its license  
2 application.

3 First, they are currently doing testing  
4 and do measuring to estimate what that dripping is.  
5 We will certainly look at the experiments, and the  
6 measurements that they made, and how it relates to  
7 estimating what dripping could be.

8 Second, future climate changes. This gets  
9 into the features, events, and processes. Over time,  
10 rainfall could increase, and climate changes, and how  
11 will that affect dripping, and that is another aspect  
12 that you will see in the review plan.

13 The heat from the waste, and the waste  
14 going in is fairly hot. It will warm up the rock and  
15 the water. The properties of the rock will change,  
16 and the properties of the water, and obviously some of  
17 the water will boil away.

18 All of that will have some potential  
19 effect on dripping. That also needs to be evaluated.  
20 And lastly as someone brought up, the drifts, the  
21 tunnels. Right now if you go into the tunnel at Yucca  
22 Mountain, it is relatively smooth, and relatively  
23 uniform.

24 Maybe dripping will drip off to the side,  
25 et cetera, but with time that tunnel -- rocks will

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1 fall, and there could be some collapse. It would be  
2 this smooth tunnel. There will be holes, cragidy  
3 things, et cetera.

4 The long term changes in the tunnel, how  
5 will that affect the drip, and you will see those  
6 kinds of topics in our review plan. These are the  
7 kinds of things we need to look at, and how the DOE  
8 has addressed them.

9 With that, I would like to just close with  
10 a brief summary, in terms of that long term safety  
11 depends on both the site and the man-made barriers,  
12 and it also requires a thorough performance  
13 assessment, and this performance assessment needs to  
14 be supported by sound scientific information.

15 And those are the kinds of things we will  
16 review. Thank you.

17 MR. CAMERON: Thank you, Tim, and also for  
18 some real world examples. Yes, sir?

19 MR. JACKSON: Hi, my name is Hugh Jackson,  
20 and I work for Public Citizen, a public interest  
21 organization out of Washington, although I have been  
22 in Henderson, and sitting patiently and listening, and  
23 you finally got to performance assessments.

24 And so I thought that this would be a good  
25 time as any to get up and say that I share the

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1 comments made earlier about the awkwardness of the  
2 format here, requiring questions, as opposed to  
3 comments, and so I hope that you will allow me to  
4 provide some preparatory remarks before I get to  
5 performance assessments specifically.

6 And I have been crossing things out, and  
7 so I will try to be short. Energy Secretary Spencer  
8 Abraham has argued, and a lot of people in Congress  
9 were arguing as well on the floor of the House when it  
10 was debated there, is that all we need to do is move  
11 this long to the next stage of the process.

12 That a vote for Yucca Mountain, or a veto  
13 rather, isn't a vote to start shipping this stuff  
14 tomorrow. It is merely a vote to let the NRC take up  
15 licensing and go to -- I believe Abraham's words were  
16 the neutral and objective NRC.

17 That you is an abrogation of responsible  
18 leadership, and it is founded on false premise. The  
19 NRC justifies some of its most important programs from  
20 reactor licensing, which is going on at a break neck  
21 pace, even after September 11th, to power plant  
22 uprates, which is letting power plants run hotter and  
23 longer between scheduled shutdowns, and even to  
24 reactor design certifications for new reactors by  
25 entrusting the NRC's regulation-encoded belief that

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1 waste will be shipped to Yucca Mountain, and I am  
2 referring, of course, to the waste confidence rule.

3 The NRC has a massive and insurmountable  
4 conflict of interest that precludes an objective  
5 assessment of the license application. The commission  
6 is bias in favor of the project, and is found in the  
7 Yucca Mountain licensing rule itself, and under which  
8 it has been noted, and site suitability can be  
9 considered, and safety and feasibility of transporting  
10 waste is not considered.

11 In the NRC's conflict of interest,  
12 predisposition of the Yucca Mountain license  
13 application being approved favorably is certainly on  
14 display in this plan.

15 Specifically with regards to the  
16 performance assessment, where the spirit of complicity  
17 is certainly on display. The NRC advisory committee  
18 on nuclear waste, which I know you have addressed, has  
19 repeatedly criticized the DOE's methods of assessing  
20 performance.

21 Specifically, the committee has expressed  
22 a lack of confidence in the DOE's modeling process,  
23 and the DOE's liberal use of "conservative"  
24 assumptions, and this was also a phrase that Mr.  
25 Mackin brought up earlier.

1           And using those assumptions in lieu of  
2 realistic evidence. In a September 28th comment to  
3 NRC Chairman Richard Meserve, the advisory committee  
4 warned that "the inconsistent use of conservatism"  
5 throughout the DOE's models "makes it difficult to  
6 identify the issues that are important to risk and  
7 precludes a risk-informed analysis of the proposed  
8 repository on the basis of evidence."

9           I will move along here. In a subsequent  
10 letter to, George Hornberger, who is the chairman of  
11 the advisory committee on nuclear waste wrote in a  
12 subsequent letter to Meserve that absent a realistic  
13 evidence and science-based analysis, and inferring  
14 that is not what the DOE has done, the question of how  
15 safe is the repository is unanswerable.

16           In the DOE's performance assessment, "the  
17 spirit of calculating the real risk was not evident."

18           Now, conveniently for the DOE, it doesn't  
19 have to calculate the real risk. Realistic risk  
20 analysis isn't a priority in this review plan either.

21           The plan instead allows DOE to base its  
22 license application on the same heavily criticized  
23 conservative assumption-based performance assessment  
24 that the DOE relied on in the site recommendation.

25           Particularly in Section 4, the plan itself

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1 says that in many regulatory applications, a  
2 conservative approach can be used to decrease the need  
3 to collect additional information, or to justify a  
4 simplified modeling approach.

5 Conservative estimates for the dose to  
6 reasonably and maximally expose an individual may be  
7 used to demonstrate that the proposed repository needs  
8 NRC's regs, et cetera, blah, blah, blah.

9 The NRC appears to have either missed the  
10 point of the advisory committee, or is willfully  
11 ignoring it. Just because the NRC says estimates "may  
12 be used to demonstrate the dump safety does not mean  
13 that those estimates realistically demonstrate  
14 anything of the sort."

15 And the NRC gall is unmitigated. The  
16 agency openly declares that it hopes to "decrease the  
17 need to collect additional information." Now,  
18 somebody earlier brought up the General Accounting  
19 Office, and the report that showed that it had 293  
20 unanswered questions.

21 And if anybody knows that the DOE is years  
22 away from having the information that would be ready  
23 to approve an acceptable license application is the  
24 NRC.

25 Instead, the NRC has allowed the DOE to

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1 hide real risk behind these models and these  
2 abstractions, while at the same time putting its own  
3 bias on full display. The skids are greased, and no  
4 matter how incomplete or riddled with inconsistencies,  
5 make no mistake, the NRC will absolutely, positively,  
6 accept DOE's license application, and I hope that  
7 everyone here understands that.

8 And if that same lack of objectivity  
9 continues to hold sway within the NRC, that no matter  
10 what the real risk to the public posed by the Yucca  
11 Mountain Nuclear Waste Repository, the NRC will  
12 ultimately approve DOE's license.

13 Citizens place trust in public  
14 institutions such as the NRC to protect public health  
15 and safety. The NRC's complicity with DOE is an  
16 affront to that trust, and an affront that is doubly  
17 primacies, because as I mentioned earlier, politicians  
18 are using the myth of NRC objectivity to rationale  
19 their support for the Yucca Mountain project.

20 I mentioned earlier the waste competence  
21 decision of the NRC's conflict of interest regarding  
22 this plan and this project, and this whole nuclear  
23 waste fiasco.

24 In that waste confidence decision, the NRC  
25 states that it believes that Yucca Mountain will be

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1 built, and accordingly, no discussion of nuclear waste  
2 is required in connection with issuing a new reactor  
3 license or amending an existing one.

4 So as they go along relicensing all of  
5 these old reactors all across the country, or to use  
6 this in terms of power uprates as well, and letting  
7 reactors run longer and hotter, the first question a  
8 reasonable person asks is, well, what are you going to  
9 do with this waste.

10 And the NRC's answer is, oh, well, you  
11 can't ask that question because we have a waste  
12 confidence decision that says we are pretty sure that  
13 Yucca Mountain will be built.

14 The NRC has even extended that logic to  
15 proceedings on certifying the designs of new reactors  
16 as part of the Bush administration's obsession with  
17 creating new nuclear power plants.

18 Many of the most significant decisions  
19 made by the NRC effectively result in a creation of  
20 more high level nuclear wastes, and each and every one  
21 of those decisions refers to the NRC's belief that  
22 waste will be shipped to Yucca Mountain.

23 The NRC is incapable of analyzing the DOE  
24 license application objectively, because the NRC has  
25 too much riding on Yucca Mountain. When the NRC

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1 ultimately decides that nuclear waste should be  
2 shipped to Yucca mountain, it already has. Thank you.

3 MR. CAMERON: Thank you for those comments  
4 and opinions, including the specific ones on  
5 performance assessment, and I guess I just wanted to  
6 clarify one thing in case there was any  
7 misunderstanding, is that we really do want to hear  
8 comments such as that.

9 This is not just a question session, but  
10 we just have the format so that we can try and have  
11 comments and questions on these topics after they are  
12 done. But thank you for your comments.

13 I guess I would ask -- I was going to say  
14 that pretty soon we will be ready to start tomorrow  
15 night's meeting, but I do want to have the security  
16 and the performance, and the monitoring, to have that  
17 information for you.

18 We are going to try to encapsulate it and  
19 make it quick, but does anybody have a question for  
20 Tim on -- well, any further questions or comments for  
21 Tim on the performance assessment issue?

22 MR. MCCARTIN: Well, Chip, if I could just  
23 respond to just one quick item.

24 MR. CAMERON: Sure, go ahead.

25 MR. MCCARTIN: We heard what our advisory

1 committee said. They are worried about the use of  
2 conservatism that may be masking certain things, and  
3 they would like to see a more realistic calculation.

4 You will see in the review plan that if  
5 the Department uses conservatism that there is a  
6 justification, and that indeed by conservatism they  
7 are saying that we will use this assumption because we  
8 have strong evidence that if we use it, we will not be  
9 under-estimating what the dose could be.

10 And an example that I would give you is  
11 maybe they assume that all the waste packages are  
12 dripped on, rather than trying to develop a model for  
13 where things drip.

14 Well, if I have all of them getting wet,  
15 that is conservative. So I am not under-estimating  
16 the dose. So whatever calculation they are doing is  
17 larger than we would expect.

18 The actual performance would be better,  
19 and that is what the advisory committee was getting  
20 at. They felt that the DOE analyses -- actually the  
21 performance of the repository was much better than  
22 they were presenting, and they want to see them doing  
23 a more realistic analysis.

24 But the NRC regulations, we have the  
25 standards for safety, and if you can meet those

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1 standards with a conservative analysis, then the  
2 actual performance will be even better than that.  
3 So in terms of granting a license that would be okay.

4 MR. CAMERON: Well, just a little bit of  
5 an explanation on that. Thank you. Dennis.

6 MR. BECHTEL: Dennis Bechtel again. And  
7 this goes to Tim or others, but in your review will  
8 you -- is this just an internal review, or will you be  
9 using outside people as well? It is just curiosity  
10 how you -- well, I mean, right now.

11 MR. MCCARTIN: We have the Center for  
12 Nuclear Waste Regulatory Analyses, and the NRC staff,  
13 and combined, I will say -- well, if I throw in the  
14 Division of Waste Management in the NRC staff, that is  
15 approximately a hundred individuals.

16 However, the Commission has many other  
17 experts, and there could be material experts in the  
18 Office of Research, hydrologists, geologists, that the  
19 Commission could call on if needed, and additionally  
20 the Commission certainly can hire consultants.

21 But the one caveat for us and why we have  
22 the Center is that we would not hire any consultant  
23 that had done previous work for the Department of  
24 Energy, a conceived conflict of interest. But we hire  
25 consultants from around the world, et cetera.

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1 MR. BECHTEL: Okay. Well, your statement  
2 mentions (inaudible).

3 MR. MCCARTIN: And we certainly follow not  
4 only what the Department does, but we follow what the  
5 State of Nevada's comments are, and the TRB's  
6 comments. We are aware of the other issues being  
7 raised, and so we follow those.

8 MR. BECHTEL: The other part is just this  
9 expert elicitation issue. If given the fact that you  
10 are probably are not going to have all the data that  
11 in the best of all possible worlds that you would  
12 actually like to have, and there has been some expert  
13 elicitation annals and things, where does that fit in  
14 the review, or is that --

15 MR. MCCARTIN: Well, there is very  
16 specific guidance on how to conduct an expert  
17 elicitation for people. It is areas where possibly  
18 there is no easily measurable data, and you need to do  
19 an elicitation, a questioning of experts.

20 And you get a panel of experts together to  
21 try to come up with what seems to be a reasonable  
22 representation.

23 MR. BECHTEL: Well, would you do that, or  
24 --

25 MR. MCCARTIN: Well, the Department of

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1 Energy would or could conduct an expert elicitation.  
2 They would need to do it according to our guidance.  
3 We would certainly review how the elicitation was  
4 done, et cetera.

5 MR. CAMERON: Okay. Thank you. And thank  
6 you, Tim. Calvin, you had one question? Maybe the  
7 expert elicitation struck something in Calvin's mind.

8 MR. MEYERS: Calvin Meyers. I have been  
9 sitting here listening to you when you talk about the  
10 engineered barriers, and I have been to a lot of DOE  
11 meetings, and people see me a lot of places, and I am  
12 not the brightest person in the world, and I am not  
13 the stupidest.

14 But when I ask people about what happens  
15 if -- and we are talking about barriers, but what  
16 happens if the mountain itself cannot do what it is  
17 supposed to? The comment that I have always received  
18 was, well, we will engineer around it, which makes no  
19 sense to me.

20 And to sit here listening -- and like I  
21 said, I am not the brightest person, but it sounds  
22 like this is not science, but this is guesstimation.

23 MR. CAMERON: Well, I think you can see  
24 both parts of Calvin's question there, and if you  
25 could address those?

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1 MR. MCCARTIN: Certainly. I believe the  
2 regulations do not allow you to engineer around the  
3 bad side. The requirement is for natural and  
4 engineered barriers, and there has to be a capability  
5 for the natural barriers, the geology of the site, to  
6 assist in ensuring safety.

7 I realize that DOE has a design that has  
8 pushed the releases from the waste package currently  
9 beyond 10,000 years. That does not reduce or diminish  
10 the requirement that there has to be a capability for  
11 the natural system.

12 MR. MEYERS: I know what it says. I am  
13 just telling you what DOE's comments to me are. I  
14 know that the mountain is supposed to hold -- well,  
15 what the requirement there is, and though it is not a  
16 complete barrier, but they seem to think that they can  
17 engineer around anything, around whatever happens, and  
18 they can engineer around it.

19 And I know that's wrong, and so when I  
20 come here to listen to you guys say that it is not  
21 supposed to be the complete answer, because every time  
22 they tell me that they will engineer around it, then  
23 why not go somewhere else, and they don't need to come  
24 out here to the west. Put it where it is at.

25 If it is that safe, and they can engineer

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1 around that much, they can leave it where it is at,  
2 and that is my comment. And I just wanted to make a  
3 comment that I self-taught myself about what this  
4 Yucca Mountain stuff is, and when you guys talk, in  
5 all the game-playing that you guys do, I see right  
6 through you guys, and I think everybody else here  
7 does, too.

8 So you are not fooling anybody. You may  
9 think you are, and you don't answer questions, or you  
10 bounce around or dance around an answer, why get up  
11 and say anything? Just sit down and say nothing, and  
12 that would take less of our time, and we would still  
13 get the point. That's all I just wanted to say.

14 MR. CAMERON: Okay, Calvin. Thank you,  
15 Tim. We are going to have Jeff talk about security  
16 real quickly, and then I am going to ask Pat Mackin to  
17 come up and talk about the repository monitoring, and  
18 we will open it up for questions on that.

19 And I also want to introduce Bob Latta  
20 again before we stop for the afternoon.

21 MR. CIOCCO: Okay. Thanks. I am going to  
22 give you an overview about security from theft and  
23 sabotage that is located in Chapter 3. The two  
24 programs are in Section 3.3, the physical protection  
25 program, and Section 3.4, the material control and

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1 accounting program.

2 Both of these programs must be described  
3 in detail to the NRC to give us a high level of  
4 confidence that the site would be safe. The physical  
5 protection plan -- I am going to tell you that the  
6 review plan sets up a protection goal which DOE must  
7 establish and maintain a physical protection system to  
8 assure that the waste operations are not harmful to  
9 our national defense and security, and that it does  
10 not pose an unacceptable risk to public health.

11 That said, there are certain capabilities  
12 in the regulations, and in the Yucca Mountain Review  
13 Plan, and the elements of the physical protection  
14 system include the security organization, physical  
15 barriers, entry controls, recording events to the  
16 event, and a response plan.

17 The response plan, very specifically,  
18 identifies regulations, and they are called safeguard  
19 contingency plans, and that is to identify all of the  
20 what-if's. What are some of the perceived dangers at  
21 the sites, and how would they be recognized, and what  
22 kind of response would they have.

23 The second element is that since 9-11, as  
24 was mentioned earlier I think by Chip, the NRC has  
25 done a top to bottom review of all the physical

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1 protection at our licensees, including the potential  
2 Yucca Mountain site.

3 Once all the data is examined, and any  
4 final decisions are made, we will go back and revise  
5 the Yucca Mountain Review plan to comply with any  
6 physical protection requirements.

7 The other program in Chapter 3 is the  
8 material control and accounting program, and the  
9 purpose of that is to protect against an attack, and  
10 to respond to the theft or loss of nuclear material on  
11 site.

12 The elements of the program include  
13 material balance which must account for nuclear  
14 materials that the DOE would be authorized to possess  
15 by the NRC.

16 There must be physical inventories, and  
17 there is record keeping, and there is controls on the  
18 transfer of nuclear materials at the site. Both of  
19 these plans are for the on-site operations of Yucca  
20 Mountain and not regarding the transportation.

21 Now, these are two programs that must be  
22 included in the license application, and they must be  
23 well-written, and they must be approved by the NRC  
24 before they are implemented, and will be very detailed  
25 inspection programs for both the physical protection

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1 and the materials control and accounting programs.  
2 That is an overview of Security from Theft or  
3 Sabotage.

4 MR. CAMERON: And I don't have -- we are  
5 going to have Ted Mackin come up, and I am not trying  
6 to cut off any discussion, but we will try to have one  
7 package here, and then go to you for questions. Pat.

8 MR. MACKIN: The Department of Energy has  
9 to demonstrate that it has ways in place to guarantee  
10 what it said was going to be safe continues to be safe  
11 throughout the lifetime of a repository.

12 And there are basically three programs  
13 involved in that, and the first of those is a  
14 requirement for a performance confirmation program  
15 that is required by the regulations, and it is the set  
16 of continuous or periodic monitoring, measuring, of  
17 the properties of the geology and the waste packages,  
18 and the other design components, to give confidence  
19 that things are operating as DOE said they would  
20 operate.

21 So that is a program of performance  
22 confirmation that is required. The second one  
23 acknowledges that although will not grant a license  
24 for Yucca Mountain unless convinced that it is safe,  
25 it acknowledges that in a complex system unexpected

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1 questions can come up during the lifetime of a  
2 repository.

3 So the regulations require that DOE have  
4 in place a program that identifies these questions,  
5 and sets up programs to resolve them and answer them,  
6 and that the NRC examines those are necessary, and  
7 curtails or stops operations at the repository while  
8 they are being resolved.

9 And lastly accuracy and reliability of  
10 information really talks about a quality assurance  
11 program in some way so that we all can have confidence  
12 that the information that the DOE is gathering, and  
13 the way it is operating, and the qualifications of its  
14 personnel, the accuracy of its analyses, can be relied  
15 upon.

16 So these three aspects of a continuous  
17 monitoring program are required to be demonstrated by  
18 the DOE in its license application, and the Yucca  
19 Mountain Review Plan provides guidance to the staff on  
20 how to evaluate them.

21 MR. CAMERON: All right. Thank you, Pat,  
22 for doing a good job of condensing that, and I would  
23 just ask if there are questions or comments?

24 MR. KELMAN: First of all, i would like to  
25 comment and say that everybody here seemed to believe

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1 that this is a unique project, and that the NRC must  
2 now look at this process as they have said it is  
3 unique, and look at their own processes, and are those  
4 processes adequate.

5 The NRC must have a new, open, general  
6 public involvement process. The process that you have  
7 described is unacceptable. This is a unique program,  
8 and this is like saying we are going from a generating  
9 plant that generates power through coal, and we are  
10 going to use the same review process with nuclear  
11 materials.

12 The process that you now have in place is  
13 not an adequate process for the general public. As a  
14 unique process, the NRC should not be myopic in its  
15 viewpoints. It has a safety plan, or it has many  
16 safety plans for on-site storage, and generators, and  
17 for on-site storage at a proposed repository, and the  
18 casks are within the system.

19 But it does not address the broad spectrum  
20 of transportation. It is presently shifting those  
21 responsibilities to other Federal agencies.

22 The NRC needs to address the  
23 transportation issue. The NRC will also be reviewing  
24 the license that none of the public has an opportunity  
25 to review either at the same time or prior to NRC

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1 receiving that.

2 At this point in time, we have received  
3 documents from the Department of Energy that is  
4 labeled a final environmental impact statement. To  
5 the best of our knowledge, three agencies, including  
6 in the Department of Energy, has told us that this is  
7 not the real final environmental impact statement.

8 Therefore, they have lost their  
9 credibility to this organization, and to this  
10 community. Finally, the NRC must really review the  
11 background, the experience, and management ability,  
12 and track records of the licensee in this case.

13 It is like Al Capone applying for a liquor  
14 license in Chicago. I think that Chicago at that one  
15 time would have turned him down. If Enron employees  
16 went and applied for a license from you, I think you  
17 would have looked at the management capabilities of  
18 the Enron Corporation.

19 I think what we are asking you here is to  
20 look at the past practices of the Department of  
21 Energy, its contractors, and include that as part of  
22 your review process. Thank you.

23 MR. CAMERON: And thanks, Harry. And  
24 could you tell us your full name, Harry?

25 MR. KELMAN: I am Harry Kelman,

1 K-E-L-M-A-N, and I am with Clark County, the Nuclear  
2 Waste Division.

3 MR. CAMERON: And Harry, thank you for  
4 those comments, and the last one on management  
5 capabilities was brought up originally today, and I  
6 think that is something for the NRC to think about as  
7 well. Thank you. Yes?

8 MR. HERESZ: I guess this is the  
9 appropriate time for me to give my closing comments.  
10 And quite obviously I am utterly opposed to the  
11 insanity of using Yucca Mountain as a nuclear garbage  
12 dump.

13 When the DOE was here a few months ago, I  
14 sat and waited for eight hours to give five minutes of  
15 testimony, and Secretary Abraham promptly just flushed  
16 it down the toilet, because the people that had packed  
17 the room that night made no impact on his decision at  
18 all.

19 And I am beginning to get the same sense  
20 from the NRC. Las Vegas is my home, and Nevada is my  
21 home, and I live here. I don't go back to Washington,  
22 D.C. after a couple of -- three days, and just start  
23 working on another job like you folks do, and take  
24 this as just another job.

25 This is a life or death issue for those of

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1 us here in Nevada. I want you to know that we are  
2 going to do everything that we can to put the stops to  
3 what you are trying to do to Nevada, and it doesn't  
4 appear that you are going to help us, and so our only  
5 resort is going to have to be through the courts.

6 MR. CAMERON: Okay. Thank you for that  
7 comment. Are there further questions or comments on  
8 security or performance monitoring?

9 MR. BECHTEL: I really appreciate you  
10 holding the hearing in Nevada for one thing, and what  
11 I think is definitely needed is more hearings in the  
12 future on a very complex issue that as you can tell is  
13 very important to Nevadians.

14 And in my former life, and in my  
15 interactions with the NRC, I appreciated the  
16 opportunity to sit down with you all and talk about  
17 the environmental impact statement. I know that we  
18 had a lot of access and a lot of concern, and our  
19 comments deeply reflected one of your comments.

20 But I am hoping that -- you guys are the  
21 last line of defense, and having just a lot of the  
22 -- having heard a lot of the Congressional hearings,  
23 they are down the track.

24 And I think that it is going to be  
25 incumbent upon the NRC to be -- well, there is the old

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1 saying about Caesar's wife, but just making sure that  
2 you actually do follow through, and I realize that the  
3 Commission is an appointed group, too.

4 But that this is a very serious issue to  
5 all of us, and it requires a lot of vigor in your  
6 review.

7 MR. CAMERON: Okay. Thank you, Dennis.  
8 I wanted to just introduce Bob Latta, our on-site  
9 representative again, who is right here. But Bob is  
10 one of our on-site representatives here, and they  
11 fulfill a very key position, and it will become more  
12 and more important in the future.

13 And I think that one of the things that  
14 they do is that they are available to people in the  
15 community, and they are here on-site to be called and  
16 asked questions, and get information from them, and  
17 about your concerns.

18 And I think that Bob has an example of  
19 something from one of the citizens that he deals with,  
20 and something to read into the record, but Bob, if you  
21 want to say anything about the on-site rep position  
22 and responsibilities, feel free to do that.

23 MR. LATTA: Thank you very much. I am one  
24 of three full-time NRC employees stationed here in Las  
25 Vegas, and I am a resident here and have my family

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1 here.

2 We serve as the extra point of contact  
3 between the NRC and DOE, and the NRC has had a  
4 presence associated with the Yucca Mountain project  
5 for a number of years, and I believe they will  
6 continue with that activity.

7 I am very grateful to Chip for allowing me  
8 the opportunity, and before he left Frank Perna asked  
9 me if I would read a comment for him into the record,  
10 and I told him that I would do that. And these  
11 comments from Frank Perna, a resident of Clark County,  
12 Nevada.

13 He states, "I suggest that the audience  
14 request a full hearing record of the joint meeting of  
15 the U.S. Senate Energy and Appropriations Committee  
16 held on May 3rd of 2001, and that request can be made  
17 through the Committee on Energy and Natural Resources,  
18 and the address is 364 Dirksen Building, Washington,  
19 D.C. 20510."

20 Also, that the Energy Chairman, Richard  
21 Meserve, showed his bias by promoting a lifting of the  
22 ban on foreign ownership of nuclear power plants and  
23 the promotion of Price-Anderson legislation, and  
24 eliminating paperwork related to license renewal of  
25 nuclear power plants.

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1 He believes that these things are risky  
2 and those comments again were provided by Frank Perna.

3 MR. CAMERON: Okay. Thank you, Bob.  
4 Calvin, do you have another remark for us, please?

5 MR. MEYERS: (Off microphone) A closing  
6 comment. My name is Calvin Myers, and I was born and  
7 raised here, and not going anywhere, and I am  
8 different from everyone of you guys. You guys say you  
9 are residents, but I am not a resident. I am part of  
10 the land, which is more important.

11 Because I can move to Washington, D.C.,  
12 but my heart will bring me back to the reservation,  
13 and that is where I grew up and that is where I will  
14 be buried, and I am proud of that, because I am the  
15 only one in this room that can say that I was born and  
16 raised here, and I am going back, no matter what.

17 No matter where I die, I am coming back to  
18 the reservation because I am still part of that land,  
19 even when I am gone, which brings up the fact that  
20 when you talk about that transportation has to be part  
21 of the licensing application, which has never been  
22 talked about, and you guys keep dancing around it, it  
23 is the most important parts of my tribe, my people,  
24 and for people all over the United States that are  
25 indigenous to the land.

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1           They hold the land more valuable than the  
2     dollar, and we hold the land as part of us, and the  
3     land grows for us, and the land has helped us for  
4     many, many years, and it will help us for many, many  
5     years in the future.

6           I see the land, and I am going to talk  
7     about some spiritualities , and social things, and  
8     even the financial well-being of the tribe. But I see  
9     the land take me and my father, and my two aunts to  
10    Arizona when we were told not to leave because the  
11    weather was too bad, and when we came to Las Vegas, we  
12    stopped out at Henderson and got something to eat, and  
13    my dad gave food to the land, because that is what we  
14    were taught to do, and he prayed to the land and the  
15    mountains over here for a safe journey.

16          And my ex-car was an old Pinto wagon, and  
17    it took a quarter of oil to go from here to over to  
18    Vegas and another quart to go home. Well, we took  
19    that car down to Arizona to identify my brother's  
20    body, and we went down there and the roads were dry,  
21    and there was nothing wrong, and we came home and the  
22    car had used a quart of oil, and that is our  
23    spirituality.

24          And that is what we hold dear to us, which  
25    you can't buy, and which you can't pay for. You can't

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1 buy something like that. If with transportation, and  
2 anything happens and if and when those things come  
3 down the railway or down the interstate, when it comes  
4 down by my reservation and it impacts my store, which  
5 is the biggest financial money making venture that we  
6 have, and it is our only one, and we are trying to be  
7 people like anybody else, and we are striving as hard  
8 as we can to make those goals, and to take that step  
9 into the future, because we can't just look at  
10 ourselves today. We have to look at who is coming  
11 down the road, and if it is going to be there for  
12 them.

13 So if that is the impact, then it impacts  
14 many, many generations. And also when the  
15 transportation of the waste comes down the freeway,  
16 our children go to the county school off the  
17 reservation, and they go as far as 25 miles away from  
18 their home to go to school every day.

19 So if those kids can't go to school, their  
20 education is going to be impacted, and their future of  
21 being able to live the same way that you guys enjoy,  
22 will be impacted greatly, and not just a little bit.

23 Not that they just can't go to school  
24 regularly, but they could be impacted for their entire  
25 lives. And I am talking about the spirituality of

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1 when I did, and when I come home to the reservation,  
2 we have songs.

3 And we have a trail that I am supposed to  
4 go on, and this transportation is going to affect and  
5 be on that trail. Is that trail going to work for me  
6 when I die. Will it be impacted, and is that going to  
7 work, and is it going to help me to go where I need to  
8 go after I am gone.

9 That is something that you can't buy, and  
10 something that the DOE nor the NRC will want to step  
11 in, because they don't have it in their heart, and  
12 they don't have it in their knowledge. They think it  
13 is a hoax.

14 And that's why I see the DOE and everybody  
15 else in the government, and what they think of our  
16 traditions. We are not savages. We are some of the  
17 kindest people in the world, because we have seen what  
18 people can do to other people, and which is being done  
19 to us today.

20 And not just by this project, but by other  
21 people and the U.S. Government, and taking funding  
22 away from us, and we can't go to the doctor unless we  
23 really, really have to go. We can't get glasses and  
24 those things are being taken away from us.

25 These things that you talk about today,

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1 the radioactivity, and the transportation, it is going  
2 to take away more than that. It is going to take away  
3 the medicines that we use today.

4 It is going to take away some of the  
5 things that we use to make baskets, which is part of  
6 our culture, and it is going to take that away from  
7 us, and they can't use those things anymore.

8 And you can't put something in your mouth  
9 that is radiated, because we know -- and we are not  
10 stupid -- that that will kill you, if not right then,  
11 but in the near future.

12 And not only that, but it will impact your  
13 kids, your grandkids, and everybody else in the  
14 country, and it impacts those people. We know that.  
15 We are not stupid.

16 We can't use the land the way we want to,  
17 and we can't even travel the way that we want to  
18 anymore, because those things will impact it too much.

19 And I am not just talking about how it  
20 impacts us today, but our future as a tribe, our  
21 future as a government. And I have stated this many  
22 times before, that when our government -- we have six  
23 people in our government, and one truck could wipe out  
24 our government, and I know our Constitution, and it  
25 does not have a way of restarting our government.

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1                   And the impacts that you talk about today,  
2 that is how it impacts my tribe, and I would assume  
3 there are other tribes who will be affected down the  
4 road. So you need to get out of your box, and I mean  
5 completely out, and think what is really happening  
6 here.

7                   And what is really happening here is not  
8 just the destruction and the contamination of my  
9 lands, but of all of the United States, because when  
10 you ship a lot of those things, it is going to  
11 accumulate, and it is going to destroy people. Thank  
12 you.

13                   MR. CAMERON: Okay. Thank you, Calvin.  
14 Let me close with -- and before I forget, I wanted to  
15 thank Dennis Daniels and Clark County. Dennis helped  
16 us with the room and has stayed on beyond closing I  
17 think, but thank you.

18                   And I want to thank all of you who  
19 attended today for coming today, and for expressing  
20 your concerns, and your skepticism, your suggestions  
21 with us. This is an extremely serious issue, and you  
22 live here, and we recognize that this is really  
23 serious.

24                   It is a conclave, and we may have had  
25 difficulty -- and to use Calvin's phrase, dancing

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1 around, and questions may have been difficult, and  
2 frankly they are difficult questions, and we want to  
3 try to give the best answer, and the right answer to  
4 you.

5 And sometimes that is hard to formulate,  
6 and some of the questions we don't know, and it is a  
7 valuable question to have to ask and to identify that  
8 particular question.

9 But the NRC has been given a job to do by  
10 Congress, and we do take it extremely seriously. All  
11 the people take their jobs seriously, and we have a  
12 mission to protect health and safety, and we are  
13 trying our best to do that.

14 But basically I would just like to thank  
15 all of you for being here, and Janet, did you want to  
16 say anything in closing?

17 MS. SCHLUETER: I agree with everything  
18 that Chip said. It is a difficult job, and a serious  
19 one, and one that we worked very diligently in, and we  
20 appreciate you taking your time to come today, and  
21 thank you for all your comments.

22 MR. CAMERON: All right. Thank you very  
23 much, and we are adjourned.

24 (Whereupon, the meeting was concluded at  
25 5:45 p.m.)

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