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**NUCLEAR REGULATORY COMMISSION**

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING ON THE NRC STAFF'S DRAFT SUPPLEMENT  
TO THE ENVIRONMENTAL IMPACT STATEMENT FOR THE  
PROPOSED GEOLOGIC REPOSITORY AT YUCCA MOUNTAIN,  
NEVADA

+ + + + +

THURSDAY

NOVEMBER 12, 2015

+ + + + +

The meeting convened via  
teleconference at 2:00 p.m. Eastern Time, Chip  
Cameron, Facilitator, presiding.

PRESENT

CHIP CAMERON, Facilitator

ADAM GENDELMAN, Office of the General Counsel

CHRISTINE PINEDA, Office of Nuclear Material  
Safety and Safeguards

JAMES RUBENSTONE, Office of Nuclear Material  
Safety and Safeguards

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A-G-E-N-D-A

Meeting Opens

    Chip Cameron.....3

Introduction

    James Rubenstone.....7

Overview of Supplement

    Christine Pineda.....8

Opportunity for Clarifying Questions.....18

Opportunity to Provide Oral Comments.....19

Meeting Closes.....75

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

2:04 p.m.

1 MR. CAMERON: Good afternoon,  
2 everyone. My name is Chip Cameron, and I want to  
3 welcome you to today's meeting, and the topic for  
4 the meeting is the draft supplemental  
5 environmental impact statement on groundwater  
6 issues at a Yucca Mountain repository for high  
7 level waste. The draft EIS - that stands for  
8 environmental impact statement - was prepared by  
9 the United States Nuclear Regulatory Commission  
10 which we will refer to as the NRC, and the NRC would  
11 have licensing authority over any repository that  
12 might be proposed for Yucca Mountain in the future.

13 It's my pleasure to serve as your  
14 facilitator for today's meeting, and we are  
15 conducting this meeting by phone. We do not have  
16 a live audience here in Rockville, Maryland.

17 As you probably know, the NRC has held  
18 three previous public meetings on this subject in  
19 front of live audiences in Rockville, Maryland, in  
20 Las Vegas, Nevada, and in Amargosa Valley, Nevada.  
21 So today is the final opportunity for members of  
22 the public to orally comment on the draft  
23 environmental impact statement, and that's the  
24  
25

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1 primary objective of the public meeting today is  
2 to listen to your comments.

3 Other important objectives are to give  
4 the NRC staff an opportunity to clearly explain not  
5 only the EIS process to you, but also to tell you  
6 about some of the information and findings in the  
7 draft EIS, and I always like to emphasize that term,  
8 "draft."

9 This EIS will not be finalized until the  
10 NRC has considered all of the comments from this  
11 meeting today, as well as the meetings from the  
12 three other live audience public meetings, and the  
13 meeting by phone that we did on October 15 of this  
14 year.

15 The NRC is also taking written  
16 comments, and the NRC staff will tell you about how  
17 to submit those comments and when later on in the  
18 phone call.

19 In terms of the format for today's  
20 meeting, we're going to have some brief NRC  
21 presentations, then we're going to go out to you  
22 to see if there's any clarifying questions on the  
23 EIS process. So we're going to start with  
24 questions on the EIS process, then we're going to  
25 go to comments from whomever wants to make them.

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1           And during that comment portion of the  
2 meeting, the NRC staff is not going to be engaging  
3 in any back and forth, any dialogue with you on your  
4 comments, but they will be listening carefully to  
5 your comments, and they'll consider those in  
6 preparing the final EIS.

7           However, if you reference a document in  
8 your comments today, or a map, the NRC staff may  
9 ask you to make sure that you submit a comment, or  
10 a copy of that document or map to them with your  
11 comments.

12           Ground rules are very, very, simple.  
13 After the staff presentation, we'll go out to you  
14 for your clarifying questions and comments, and as  
15 Jennifer explained and I'm sure she'll explain  
16 again, if you want to speak, you press star one on  
17 your phone and you'll be placed in the queue to make  
18 your comment or ask your, ask your question.

19           And as always, I would just ask you to  
20 be crisp in your comments to make sure that we do  
21 get to everybody who wants to comment today, and  
22 we usually have a five-minute guideline for your  
23 oral comments. And fortunately, you'll have an  
24 opportunity to expand on comments in writing.

25           So the focus of the call today is the

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1 draft EIS on groundwater issues at Yucca Mountain,  
2 and we know that you may have broader concerns about  
3 Yucca Mountain. It's been a long and complicated  
4 process with many issues, and the NRC staff is here  
5 to listen to all of your comments and concerns, but  
6 any comments related to groundwater issues would  
7 be the most helpful for the staff.

8 We are transcribing this phone call,  
9 and that transcription will be available to you as  
10 a record of this meeting. It will be the NRC's  
11 record also.

12 In terms of who will be speaking to you  
13 today, we have first of all, Jim Rubenstone. Jim  
14 is the Acting Director of the Yucca Mountain  
15 project directorate here at the NRC in the Office  
16 of Nuclear Material Safety and Safeguards, and  
17 he'll give some welcoming remarks to you.

18 And then we're going to hear from  
19 Christine Pineda. Christine is the Senior Project  
20 Manager for this draft EIS, and she is in the Yucca  
21 Mountain project directorate also.

22 And finally, we have Adam Gendelman  
23 from our Office of General Counsel. He's not going  
24 to be speaking unless we need him to answer a  
25 question about a legal issue, but he is the Counsel

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1 to the NRC staff on this particular EIS. He's from  
2 the NRC Office of General Counsel.

3 And with that, I'm going to have Jim  
4 Rubenstone to lead it off for us.

5 MR. RUBENSTONE: Thank you very much,  
6 Chip, and let me extend my welcome as well to  
7 everyone on the line for this, our fifth and final  
8 public meeting on our draft supplement. As Chip  
9 said, I'm the Acting Director of the Yucca Mountain  
10 effort here in NMSS.

11 I think, as all of you know, the NRC  
12 released this draft supplement for public comment  
13 in August on the 21st. The comment period was  
14 originally for 60 days, but we have extended it for  
15 an additional month, so the comment period now  
16 closes a week from tomorrow on November 20. This  
17 is to allow time for folks to review our relatively  
18 limited document, but also keep us on schedule to  
19 wrap this up in a timely manner.

20 We scheduled today's teleconference to  
21 receive additional comments during this extended  
22 period. And as I've said many times, public  
23 comments are important to the NRC, and one of our  
24 purposes is to accept your comments. And as Chip  
25 said, we are recording this call and will be

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1 transcribing it to make sure that we accurately  
2 capture all of the comments.

3 I could also remind you that in addition  
4 to providing comments today on this call, or  
5 comments that have come in through other public  
6 meetings, you can submit comments to the NRC by mail  
7 or through the regulations.gov website.

8 More details on how to submit these  
9 comments are available on NRC's public website  
10 under the heading, "radioactive waste, high-level  
11 waste disposal, key documents," and our previous  
12 meeting summaries, transcripts, and the handouts  
13 we used at the public meetings are also available  
14 at the same location on the NRC website. The  
15 transcript for this meeting and a meeting summary  
16 will be posted on the same page as soon as they're  
17 available.

18 So I'll now turn it over to Christine  
19 Pineda. As Chip said, she's our Senior Project  
20 Manager in the Yucca Mountain directorate, and  
21 she'll introduce the draft supplement and discuss  
22 the opportunities for providing comment.

23 MS. PINEDA: Thanks, Jim. Hi,  
24 everyone, and thanks for your interest in the NRC's  
25 supplement to the Department of Energy's

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1 environmental impact statement for the proposed  
2 Yucca Mountain repository.

3 The agenda for this call is similar to  
4 the agendas for our public meetings in September  
5 and our call on October 15. First, I'll provide  
6 some background about the NRC's environmental  
7 review process for the Yucca Mountain repository  
8 and describe the areas that are covered by the draft  
9 supplement.

10 And I will be following the order of the  
11 slides that we used for the September meeting, and  
12 you can access those slides by going to the NRC's  
13 web page as Jim just described. You go to  
14 radioactive waste, and then high level radioactive  
15 waste disposal, and then key documents. And on the  
16 key documents page, you'll see the list of the  
17 public meetings that we have had and the meeting  
18 materials from those meetings.

19 After my overview of the supplement,  
20 we'll have an opportunity for you to ask clarifying  
21 questions, and then we'll go to the public comment  
22 portion of the call. And as Chip mentioned, try  
23 to keep your comments to about five minutes.

24 So how did we get to this point in the  
25 NRC's environmental review process for the

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1 repository? The framework for the NRC's  
2 environmental review process is defined by the  
3 National Environmental Policy Act, and that Act  
4 requires that federal agencies consider the  
5 environmental consequences of their proposed  
6 actions.

7 The NRC's proposed actions are  
8 licensing actions or rulemakings, and the NRC  
9 develops environmental impact statements or  
10 environmental assessments for these kinds of  
11 actions.

12 The Nuclear Waste Policy Act requires  
13 that the Department of Energy prepare the  
14 environmental impact statement for the proposed  
15 repository, and it requires that the NRC adopt the  
16 Department of Energy's environmental impact  
17 statement to the extent practicable.

18 A number of events or activities have  
19 occurred over the last several years that relate  
20 to the NRC's environmental review process. The  
21 Department of Energy published its final EIS in  
22 2002, and it submitted that EIS along with its site  
23 recommendations to the President in 2002.

24 In 2008, the Department of Energy  
25 published a final supplemental environmental

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1 impact statement which supplemented the entire  
2 2002 repository EIS. And in 2008, the Department  
3 of Energy submitted that EIS, along with its  
4 original EIS and its license application to the NRC  
5 for review.

6 The NRC staff reviewed the Department  
7 of Energy's EISs and issued what we refer to as our  
8 adoption determination report, and issued that in  
9 September of 2008. What did the staff find in the  
10 adoption determination report? We determined  
11 that the Department of Energy EISs could be  
12 adopted, but that supplementation was needed.

13 The adoption determination report  
14 describes the scope of the need of analysis stating  
15 that further characterization was needed of how the  
16 groundwater moves through the aquifer, especially  
17 beyond the post-closure regulatory compliance  
18 point.

19 The staff also determined in the  
20 adoption determination report that an assessment  
21 was needed of the potential impacts from the  
22 repository that could occur beyond the regulatory  
23 compliance point.

24 So these would be the potential impacts  
25 on the aquifer from contaminants coming from the

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1 repository, as well as the impact at locations  
2 where groundwater discharges to the surface.

3 Staff also concluded in that report  
4 that this further characterization of the aquifer  
5 and the potential impacts should account for both  
6 radiological and non-radiological contaminants.  
7 You may be wondering why the NRC staff is  
8 supplementing the Department of Energy EISs, and  
9 it is a complicated chain of events that lead to  
10 this point.

11 In 2008, when we issued our adoption  
12 determination report, the NRC requested that the  
13 Department of Energy produce the needed  
14 supplement, but at that time the Department of  
15 Energy deferred to the NRC.

16 In 2011, the Commission directed the  
17 NRC staff and the NRC's Atomic Safety and Licensing  
18 Board to seek its license review and hearing  
19 activities related to the repository in response  
20 to a lack of continued funding for the project.

21 In 2013, the Court of Appeals for the  
22 District of Columbia Circuit ordered the NRC to  
23 continue its licensing activities as long as it  
24 still had funds available from appropriations that  
25 were made in previous years. In response to the

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1 court decision, the Commission directed the staff  
2 to complete its safety evaluation report, which it  
3 finished in January of this year.

4 The Commission also requested that the  
5 Department of Energy complete the needed  
6 supplementation for the environmental impact  
7 statement, but again the Department of Energy  
8 deferred to the NRC, so the Commission directed the  
9 staff to develop this supplement, which we began  
10 to work on after completing the safety evaluation  
11 report in January.

12 The scope of the supplement, as I  
13 mentioned earlier, is described in our adoption  
14 determination report, and the scope is limited  
15 because the staff determined in that report that  
16 the EISs were otherwise acceptable to be adopted  
17 by the NRC.

18 A potentially affected area that we  
19 cover in the supplement is the area of the  
20 groundwater flow path that could include  
21 contaminant releases from the repository. The  
22 focus is on the area beyond the post-closure  
23 regulatory compliance point.

24 From that point onward, the groundwater  
25 flows through the Amargosa desert and ultimately

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1 to the Furnace Creek and Middle Basin areas of Death  
2 Valley. The groundwater reaches the surface both  
3 at irrigation areas and natural discharge areas.  
4 For example, in the Amargosa Valley area,  
5 groundwater is pumped for the irrigation of crops.

6 As its primary model of the regional  
7 groundwater flow system, the NRC staff used the  
8 Death Valley regional groundwater flow system  
9 model developed by the United States Geological  
10 Survey.

11 You can see the area encompassed by the  
12 model if you click on the poster titled "Regional  
13 Groundwater Flow System" that's on our "Key  
14 Documents" page, or it's also on slide eight of the  
15 presentation from the September meeting.

16 The resources that we determined could  
17 be affected by potential contaminants from the  
18 repository entering the groundwater include the  
19 groundwater itself which we refer to in the  
20 supplement as the aquifer environment, and we refer  
21 to it that way because we consider the rock that  
22 the groundwater is flowing through, whether it's  
23 bedrock or sediment, because some contaminants can  
24 become attached to rock particles while others may  
25 flow along with the groundwater.

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1           We also looked at impacts on soil at  
2 locations where the groundwater discharges to the  
3 ground surface, and impacts on public health if  
4 members of the public were exposed to contaminated  
5 soil or groundwater, and impacts on vegetation and  
6 wildlife.

7           We looked at the potential for  
8 disproportionate impacts on minority or low-income  
9 populations that may be located in areas of  
10 groundwater pumping or natural surface discharge.

11           The framework for the analysis, or the  
12 key elements of the analysis, are the consideration  
13 of radiological and non-radiological  
14 contaminants, and consideration of the potential  
15 impacts from those contaminants for a period of one  
16 million years after the repository would be closed.

17           The NRC staff analysis builds on the  
18 Department of Energy's model of repository  
19 performance that the NRC staff assessed in its  
20 safety evaluation report. In our supplement  
21 analysis, we considered different groundwater  
22 pumping and climate cases so that we could identify  
23 a reasonable range of potential impacts.

24           For groundwater pumping, we assumed in one  
25 case that groundwater would be pumped as is

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1 currently occurring at Amargosa farms for  
2 irrigation. And for that case, we conservatively  
3 assumed that all of the contaminants that enter the  
4 groundwater from the repository and flow to that  
5 point would be drawn up through the pumping.

6 In another case, we assumed that no  
7 groundwater pumping occurs. And in that  
8 situation, all of the groundwater would be left to  
9 flow to natural surface discharge locations. And  
10 for each discharge location, we assumed that all  
11 of the contaminants would reach the ground surface.

12 We also looked at two different climate  
13 cases. In one case, we assume a hot and dry climate  
14 similar to today's climate, and this case also  
15 encompasses the conditions of a hotter climate that  
16 we might see in the near future.

17 In other case, we assume a cooler and  
18 wetter climate, and this would experience more  
19 precipitation and result in more water entering the  
20 groundwater system, and this could affect the  
21 concentrations of the contaminants flowing through  
22 that system.

23 Both the amount of groundwater pumping  
24 and the climate could also affect where groundwater  
25 would reach the surface. For example, in the case

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1 of a wetter future climate, ancient springs that  
2 are now dry areas could become active again. If  
3 you happen to be looking at the slides from the  
4 previous meetings, you can see how these former  
5 springs look on slide 12.

6 What conclusions does the staff make in  
7 the supplement? The supplement concludes that the  
8 potential direct and indirect impacts from  
9 contaminants entering the groundwater from the  
10 repository would be small, and the NRC defines  
11 small as the environmental effects would not be  
12 detectable, or would be so minor that they would  
13 not noticeably alter important attributes of the  
14 resources that we assessed the impacts for.

15 Likewise, we conclude that the  
16 potential cumulative impacts would be small, and  
17 these are impacts from the repository alone when  
18 combined with the potential impacts from other  
19 activities in the region, such as activities on the  
20 Nevada test site.

21 The staff also has determined that our  
22 impact conclusions are consistent with the staff's  
23 understanding of how the potential contaminants  
24 would move through the aquifer. That summarizes  
25 our draft supplement.

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1           The next steps are that the - as Jim  
2 mentioned, the comment period closes on November  
3 20, and that's next Friday. We will then take all  
4 of the public comments we have received, read them,  
5 and summarize them, and provide responses to the  
6 comment summaries. The responses will be in an  
7 appendix to the final supplement, and we will  
8 publish that in the first half of next year. And  
9 now we can take some clarifying questions about the  
10 NRC's process.

11           MR. CAMERON: Okay, thank you, Jim, and  
12 thank you, Christine. I know that all of you are  
13 eager to make your comments today, but we want to  
14 see if there are any clarifying questions on the  
15 EIS process that we should address before we move  
16 to comments.

17           And Jennifer, can you see if anybody out  
18 there has a clarifying question for us?

19           THE OPERATOR: If you would like to ask  
20 a clarifying question, please press star and the  
21 number one. Again, that is star and the number  
22 one.

23           MR. CAMERON: Okay Jennifer, it  
24 doesn't sound like we have any clarifying  
25 questions. Maybe we'll move to commenting.

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1 THE OPERATOR: Okay, would you like to  
2 take the first one that we have in queue here?

3 MR. CAMERON: Yeah, who is the first  
4 one in queue, John LaForge?

5 THE OPERATOR: Yes, your line is open.

6 MR. LaFORGE: This is John. I  
7 understand that in June of 1997, the Department of  
8 Energy research announced that rainwater had  
9 seeped from the top of the Yucca Mountain 800 feet  
10 into the repository in a mere 40 years. That was  
11 as dated by chlorine-36.

12 Government scientists had earlier  
13 claimed that rainwater would take hundreds or  
14 thousands of years to reach the waste caverns.  
15 Now, federal guidelines have long required that the  
16 existence of fast flowing water would disqualify  
17 the Yucca Mountain site. I understand that these  
18 regulations have been weakened as challenges have  
19 come up to them. I would suggest that those  
20 guidelines be adhered to.

21 In August of 1999, evidence that the  
22 inside of the mountain is periodically flooded with  
23 water came in the form of zircon crystals that were  
24 found deep inside. The crystals did not form  
25 without complete immersion in water according to

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1 Jerry Szymanski, formerly the Energy Department's  
2 top geologist at Yucca Mountain. That would mean  
3 that hot underground water has invaded the mountain  
4 and might again do so in the time when the  
5 radioactive waste would still be extremely  
6 dangerous. The results could be catastrophic.

7 At the time of Szymanski's findings  
8 that deep water rises and falls inside Yucca  
9 Mountain, the finding was disregarded by  
10 Department of Energy. I guess that I'd take these  
11 warnings more seriously this time around.

12 Also in August of 1999, the Energy  
13 Department reported that leaving the waste in  
14 storage at reactor sites where it is, is just as  
15 safe as moving it to Yucca Mountain as long as the  
16 waste is repackaged every 100 years. I suggest  
17 that the Department of Energy reconsider this as  
18 an alternative to moving it all over the country  
19 on roads, rails, and barges. Thank you very much.

20 MR. CAMERON: Thank you, John, for  
21 those pertinent comments, and we're next going to  
22 go to Marvin Lewis.

23 THE OPERATOR: Your line is open.

24 MR. LEWIS: This is a personal issue,  
25 and I hope I'm not interrupting with some personal

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1 issue. But I used to get a little disc that you  
2 put in the computer. It was read on the screen  
3 without writing for it or requesting it. Have you  
4 thrown out that list of Yucca Mountain commenters?

5 I've commented on this many, many times  
6 over the decades and I thought I was on that list,  
7 and this time I think I've not gotten that draft  
8 you're talking about, but that doesn't matter. I  
9 pulled it up somehow anyway.

10 Let's go onto some of my comments which  
11 I will not go over all of my comments, I'm going  
12 to put them in writing, but I think a few of them  
13 are appropriate. We seem to have forgotten there  
14 is a place called Fukushima, fair beach, or fair  
15 cart, whatever you want to call it in English, but  
16 Fukushima. Fair fields might be another way of  
17 saying it.

18 Anyway, there is apparently three or  
19 four reactors that have melted down over there, and  
20 we're getting a lot of new data as to how dangerous  
21 and how pyrophoric, spontaneously combustive,  
22 this, the cladding is on this spent fuel. And I  
23 do not see any recalculation from - on the - I've  
24 been also following the near term stuff in the key  
25 FF - I forget. I've skipped all these

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1 abbreviations.

2 Yes, I've been following the other  
3 things on Fukushima, but I do not see the data  
4 that's coming out of Fukushima used to recalculate  
5 the information we're getting out of Yucca  
6 Mountain.

7 Now, it might be that I'm not following  
8 it correctly. I listened to two or three public  
9 meetings on it though from the NRC daily and I have  
10 followed every piece of literature, at least their  
11 titles, and I do not see this. I do not see any  
12 recalculation using the data that is obviously  
13 coming out of Fukushima. Is there some ban on  
14 recalculating using new data?

15 In fact, I do not see any new data going  
16 into it. I mean, in the last 20 years we've learned  
17 about epigenetics and we have not done any - and  
18 I have not seen any studies of how radiation affects  
19 the epigenetics cloud.

20 So I mean, your whole idea of how much  
21 radiation causes death is based only on maybe  
22 perhaps one or two generations, not the 2,500 or  
23 so generations that can be damaged by epigenetics  
24 damage due to radiation.

25 These are only a few things. I will be

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1 putting them into my comments. I hope that they  
2 are looked into. Thank you.

3 MR. CAMERON: Thank you again, Marvin,  
4 for being so steadfast and joining us at all of  
5 these teleconferences. And Jennifer, we're going  
6 to go next to Mr. Kenneth Freelain.

7 THE OPERATOR: Your line is open.

8 MR. FREELAIN: Hello, can you hear me?

9 MR. CAMERON: Yeah.

10 MR. FREELAIN: Hi, how are you doing?

11 MR. CAMERON: We're doing fine. How  
12 are you doing?

13 MR. FREELAIN: Fine, thanks.

14 MR. CAMERON: Good.

15 MR. FREELAIN: Nice talking with you  
16 again. As you pointed out earlier, my name is  
17 Kenneth Freelain, P.E., and I became involved with  
18 the Yucca Mountain nuclear controversy as a result  
19 of the fact that I am licensed as a registered  
20 professional engineer.

21 I can be reached by telephone at area  
22 code 301-891-0496, and my email address is  
23 [engineering.tribute@gmail.com](mailto:engineering.tribute@gmail.com). Later on towards  
24 the end of my comments, I will repeat that telephone  
25 number as well as that email address.

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1 I'm now delivering an open invitation for  
2 individual technical experts, private  
3 corporations, and for governmental agencies to  
4 appear on television and play an active role in the  
5 engineering tribute to the presidential  
6 inauguration of January 2017.

7 Although my undergraduate or  
8 bachelor's degree is in mechanical engineering, my  
9 professional experience includes a combination of,  
10 in alphabetical order: civil engineering,  
11 electrical engineering, and mechanical  
12 engineering.

13 Because of my age, I am now regarded as  
14 a senior citizen. However, I can remember the fact  
15 that when I was growing up as a very young engineer,  
16 there were some people who predicted that one day  
17 nuclear power would make electricity so cheap that  
18 it would not be worth metering.

19 Perhaps some of the people who will read this  
20 document one day, as well as some of those who are  
21 listening to today's teleconference might also  
22 realize that there was such a time. Nuclear  
23 technology has certainly changed over the years.

24 Today, the disposal of nuclear waste  
25 material has become one of the major constraints

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1 which hinder the expansion of nuclear power.  
2 Approximately one year from today, a presidential  
3 election will take place in this country.

4 Now, let us fast forward through the  
5 time when I was a young engineer, and through the  
6 presidential election of November 2016, to the  
7 presidential inauguration of January 2017. The  
8 new president will have to consider a wide range  
9 of issues which are related to nuclear power, as  
10 well as to energy and power in general.

11 Fossil fuels are associated with global  
12 warming and the carbon footprint of the United  
13 States. Many of the dams which produce  
14 hydroelectric power are associated with barriers  
15 which obstruct the natural migration routes which  
16 fish attempt to follow. Various problems are  
17 associated with different forms of energy and  
18 power.

19 The engineering tribute to the  
20 presidential inauguration of January 2017 will  
21 represent an excellent opportunity to address this  
22 complicated combination of problems which will  
23 await the next president who takes office.

24 There are so many complicated issues and  
25 problems associated with the Yucca Mountain

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1 nuclear controversy that I can only begin to  
2 scratch the surfaces of those problems if I try to  
3 address them here in this short presentation which  
4 we're discussing here today.

5 What I do have time to emphasize is the  
6 fact that the engineering tribute to the  
7 presidential inauguration of January 2017 offers  
8 this country an excellent opportunity to summarize  
9 the issues during a series of television  
10 broadcasts. During the videotaping of that  
11 series, we will not face the difficult limitations  
12 on time which we must be concerned with today.

13 So once again, my telephone number is  
14 area code 301-891-0496, and my email address is  
15 [engineering.tribute@gmail.com](mailto:engineering.tribute@gmail.com). So thank you for  
16 your time and attention, as well as for this  
17 opportunity to address the Yucca Mountain nuclear  
18 controversy, and thank you for your interest in the  
19 engineering tribute to the presidential  
20 inauguration of January 2017. Thanks again.

21 MR. CAMERON: Okay, thank you again,  
22 Mr. Freelain. And if you want to make a comment,  
23 I'll just remind you to hit star one and Jennifer,  
24 the operator, will put you through to the meeting  
25 room here in Rockville, Maryland.

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1                   Hi, everybody, Chip Cameron here, and  
2 I'm just reminding people if you want to make a  
3 comment, just hit star one on your phone, and  
4 Jennifer will place you into the call. Thank you.  
5 Hi, Jan, are you on the phone?

6                   MS. BOUDART: I am.

7                   MR. CAMERON: Okay, go ahead with your  
8 comment, please?

9                   MS. BOUDART: Actually I have a  
10 question about Yucca Mountain. My understanding  
11 was that Yucca Mountain was permanently closed and  
12 that, and that it was determined that there was too  
13 much water flow in the interior of the mountain to  
14 even consider using it as a repository.

15                   And I also heard that once it was found  
16 that there was so much water flow inside the  
17 mountain and dripping that they were considering  
18 putting a titanium shield around the potential  
19 nuclear dump. Now, if the - if there was a flood,  
20 the titanium shield would not help.

21                   And I also thought that the knowledge of  
22 contamination of the aquifer and surrounding  
23 rivers had vetoed the idea that Yucca Mountain was  
24 going to work. And then I also heard something  
25 that I cannot confirm, and I would love to get a

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1 confirmation, that the Native Americans there in  
2 Nevada actually had a nickname for Yucca Mountain  
3 and it was creeping mountain. I haven't been able  
4 to confirm that, and I haven't - and I'm wondering  
5 if any of these questions could be answered.

6 Plus, it seems that rather than have a  
7 Fukushima freeway all over the country bringing in  
8 high-level nuclear waste to Yucca Mountain by  
9 barge, road, and rail, it would be better to have  
10 the waste stored in dry casks at the source of the  
11 waste of which I think there are nearly 200 now in  
12 the United States.

13 And - okay, so I keep - my mind keeps  
14 going. I'm looking at Big Rock which is a plant  
15 that was closed and decommissioned, and the waste  
16 is being stored at Big Rock, and there is only one  
17 storage method there, which is dry casks, and that  
18 is something that is very dangerous because if the  
19 dry casks fail, there has to be an alternative.

20 In particular, if the dry casks are  
21 going to be replaced in 100 years, what - a pool  
22 is needed to put the fuel into while the new dry  
23 casks are prepared, and then this would have to be  
24 done every 100 years for 10,000 years? It just  
25 sounds, well, I'm sorry to use a slang term, but

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1 it just sounds nuts. So these are my comments, and  
2 I have zillions of questions which I think are  
3 incorporated in the comments I have made.

4 MR. CAMERON: Okay, Jan, thank you for  
5 those comments and questions, and I'm going to ask  
6 Jim Rubenstone to address the questions - the issue  
7 of the status of Yucca Mountain. I don't think  
8 we'll be able to help you out with the Native  
9 American question, but Jim will tell you what the  
10 status is of Yucca Mountain. Go ahead, Jim.

11 MR. RUBENSTONE: Yes, thank you for  
12 your comment, and I just wanted to clarify the  
13 questions you had at the beginning. The  
14 Department of Energy did submit, as Christine  
15 noted, an application for a construction  
16 authorization in 2008, and the review of that  
17 began, and then was halted, and then began again.

18 And the NRC staff did issue a safety  
19 evaluation report on the DOE's application. There  
20 are five volumes to that, and the final volumes came  
21 out in January of this year. Now, the review will  
22 probably not be proceeding beyond the next year or  
23 so of activity because of the lack of funding, but  
24 the application is still pending before the NRC.

25 And we'll treat the rest of your

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1 comments as a comment, and address those as part  
2 of our finalization of the environmental impact  
3 statement supplement.

4 MR. CAMERON: Great, thank you. Thank  
5 you, Jim, and for others who want to comment, please  
6 press star one. Okay, we have Bette Pierman on the  
7 line from Michigan State Energy Future, and is that  
8 the correct way to pronounce your first name, Bette?

9 MS. PIERMAN: That's fine. It'll  
10 work.

11 MR. CAMERON: It'll work? Okay, good.

12 MS. PIERMAN: It'll work.

13 MR. CAMERON: Go ahead.

14 MS. PIERMAN: Thank you for the  
15 opportunity for the public to respond to these  
16 issues. My comments and response is going to be  
17 in a much more detailed communication to you before  
18 the deadline. I am - I have several serious  
19 concerns about decisions that the NRC is making  
20 regarding nuclear waste.

21 I don't understand how you think that  
22 you have a working crystal ball that can determine  
23 what things are going to be like on this planet in  
24 100 years, let alone a million years, and the fact  
25 that you think that you can safely store highly

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1 toxic radioactive nuclear waste for any amount of  
2 time just boggles my mind.

3 And then if you get into the situation  
4 of you were talking about doing this on, and near,  
5 and around sacred Native American lands which is  
6 a complete disrespect to their water source, and  
7 I compare that to if we were to take sanitation  
8 waste and dump it on the front yards of any church,  
9 synagogue, or mosque across this country.

10 It's the same kind of disrespect, and  
11 I don't understand why you think that this is some  
12 sacrificial land that you can now take this highly  
13 toxic waste and dump it and store it. That may have  
14 serious consequences for the people on that land,  
15 and the neighboring lands, and to our planet.

16 This is the only planet we have, and we  
17 need to start respecting our environments, and  
18 respecting the land, and stop producing toxic  
19 garbage that cannot be taken care of, cannot be  
20 eliminated, and is going to have devastating  
21 effects for many years to come.

22 My concern is future generations. My  
23 concern is what legacy you are leaving those future  
24 generations. And the simple and easy way to  
25 eliminate any further production would be to stop

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1 producing it. So we've got some dilemmas ahead of  
2 us.

3 I've listened to your rail experts talk  
4 about how safe it would be to transport this waste  
5 across the country on rails even though we watched  
6 two rail trains derail in Wisconsin this past  
7 weekend, and some dumped stuff in the Mississippi  
8 River again.

9 We've watched them explode and burn  
10 down cities, and I can't even fathom what kind of  
11 problems you would cause all of us if a train  
12 carrying highly toxic radioactive waste across  
13 this country were to derail.

14 So you just - I just - I shake my head.  
15 I shake my head every time I listen to another one  
16 of these public hearings where you attempt to  
17 whitewash the situation. It shouldn't be  
18 whitewashed. You do not have a crystal ball. I'm  
19 sorry. You don't have one where you can predict  
20 what things are going to be like 100 years or a  
21 million years from now, and I really wish that you  
22 would stop insulting our intelligence by claiming  
23 that you do. Thank you very much for the  
24 opportunity to speak.

25 MR. CAMERON: Okay, and thank you,

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1 Bette, very much. And please press star one if you  
2 want to make a comment. Okay, we next have Ace  
3 Hoffman from California. Ace?

4 MR. HOFFMAN: Hi, Chip.

5 MR. CAMERON: Hi.

6 MR. HOFFMAN: Thanks for taking my  
7 call.

8 MR. CAMERON: Absolutely.

9 MR. HOFFMAN: I wanted to mention that  
10 I'm working on a little report here on Darrell  
11 Issa's recent, in September, a bill or a statement  
12 that he's introducing a plan for building an  
13 interim storage site, or several interim storage  
14 sites.

15 And in the first paragraph of his  
16 statement he says that Yucca Mountain has been  
17 stalled because of political problems, and I just  
18 wanted to point out that the fact that we're holding  
19 this hearing on water intrusion issues, and that's  
20 only one of hundreds, if not thousands of issues,  
21 strongly suggests that it's not really political  
22 posturing as Mr. Issa claims, Congressman Issa  
23 claims, from my district, that we have real  
24 problems with Yucca Mountain, and I suppose I could  
25 go into some of those, you know, the volcanoes, and

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1 the earthquakes, and so on and so forth.

2 Also, two weeks ago I was in Las Vegas  
3 to attend the Atomic Veterans' reunion. There  
4 were about a dozen atomic veterans who have been  
5 involved in either watching the blasts, or putting  
6 equipment down to study the EMP or the x-ray bursts,  
7 and some of them were involved in the cleanup.

8 And it seems that one thing that was  
9 universal is that they were not properly protected  
10 from the radionuclides and they're dropping like  
11 flies now. I guess that's two things that seem to  
12 be universal. So I wanted to make sure that that  
13 got noted, that that's a very traditional method  
14 of dealing with radiation here in America.

15 I mean, story after story about the  
16 inadequacy of the - and disposal was pushing this  
17 stuff out to sea or putting it in a pit and covered  
18 it with a couple of feet of cement, and that's  
19 totally inadequate for plutonium with a 25,000 year  
20 half-life.

21 So I hope that if the Yucca Mountain  
22 project does move forward, that things are very  
23 different from the testimonials that I heard two  
24 weeks ago. Thank you, and taking my call, I think,  
25 is part of things being a little different. Thank

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1       you.

2                       MR. CAMERON:   Okay, thank you.  Thank  
3       you, Ace.  And I would just remind everybody to  
4       press star one.  And we are scheduled to be here  
5       from 2:00 to 4:00, and we will continue to see if  
6       anybody else wants to make a comment until the 4:00  
7       closing time.  Hi, Ethyl?

8                       MS. RIVERA:   Hello?

9                       MR. CAMERON:   Hi, Ethyl Rivera.

10                      MS. RIVERA:   Yes, sir.

11                      MR. CAMERON:   Please tell us what's on  
12       your mind.

13                      MS. RIVERA:   Well, I am reading the  
14       safety evaluation report related to disposal of  
15       high-level radioactive waste with respect to a  
16       Yucca Mountain repository that was discussed many,  
17       many years ago, and was ultimately decided after  
18       several years of study, careful study, I might add,  
19       and it was determined that that is a very, very poor  
20       site for disposal of any kind of dangerous  
21       elements.

22                      And I am calling to find out why once  
23       again the NRC and others that are supposed to be  
24       responsible for these dangerous elements have not  
25       paid attention to the determinations that were made

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1 previously, and have now all of a sudden determined  
2 that the huge amounts of radioactive waste that  
3 have been allowed to be generated from the nuclear  
4 industry now must find a home, and that the people  
5 that are - have been studying these options have  
6 all of a sudden decided that Yucca Mountain should  
7 be resurrected.

8 Congress should support the people of  
9 Nevada, and the people of the states that are - that  
10 have this nuclear waste on their doorstep right  
11 now, and through whose territories, neighborhoods,  
12 areas, farms and other lands they would be exposed  
13 to in the transportation of such waste.

14 It is unconscionable to risk the lives  
15 of residents in the area transporting nuclear waste  
16 through our communities just to dump it at Yucca  
17 Mountain where we know it will leak anyway. We  
18 need real solutions to nuclear waste, and we are  
19 never going to get there until Congress abandons  
20 Yucca Mountain.

21 Until then, the waste can be stored more  
22 securely where it is now using hardened onsite  
23 storage without putting it on our roads, our  
24 railways, and our great lakes, traveling through  
25 our communities.

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1           It is almost ludicrous that such a plan  
2           is being pushed through by people who have a little  
3           disregard for the safety of the citizens of this  
4           country, and I thank you for taking my comments.

5           MR. CAMERON: Well, thank you for those  
6           comments, Ethyl. And again I'll just remind  
7           people, if you want to comment, please press star  
8           one and you'll be, you'll be placed online here,  
9           and we'll just wait to see who is next.

10           Hi, everybody, this is Chip Cameron  
11           again, and I'm just reminding people that if you  
12           do want to make a comment, press star one, and I  
13           think we probably can take some brief second  
14           opportunity comments also if anybody wants to make  
15           them.

16           But if at any time we get a new speaker,  
17           we're going to put them right at the top of the list,  
18           so does anybody want to make a second comment? For  
19           example, Mr. Freelain, if you want to, please press  
20           star one and Jennifer will put you through.

21           THE OPERATOR: Mr. Freelain, your line  
22           is open.

23           MR. FREELAIN: Yes, hello, can you hear  
24           me?

25           MR. CAMERON: Yes, we can.

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1 MR. FREELAIN: Can you hear me?

2 MR. CAMERON: Yes, go ahead.

3 MR. FREELAIN: I just wanted to say  
4 that I think it's good that you have these  
5 opportunities for people to provide you with  
6 scientific input and to give you a range of varying  
7 opinions on the subject.

8 If I'm interpreting this correctly, see  
9 my line went dead, and so I couldn't tell whether  
10 that was a disconnection or whether or not there  
11 was just a scarcity of people who were sharing their  
12 comments. So I wasn't quite sure what was going  
13 on, but for a while right after I finished my  
14 comments, my line went dead. I don't know, was  
15 that a technical problem?

16 MR. CAMERON: We're not exactly sure.  
17 This is Chip, Mr. Freelain. We're not exactly sure  
18 what happened to your line, but we know that you  
19 closed off your original, your first comment with  
20 your telephone number and with your email address.

21 MR. FREELAIN: Right.

22 MR. CAMERON: We got all of that, so  
23 you're on loud and clear with us right now, so that  
24 if you want to add anything else about the  
25 engineering tribute or anything else, please go

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1 ahead.

2 MR. FREELAIN: Yes, I will just say  
3 that in a situation like this when you are planning  
4 an event, you estimate the length and time that you  
5 think would be appropriate, but then if you don't  
6 have that many speakers who call in, there will be  
7 some extra time left over. Is that what happened  
8 to us here today?

9 MR. CAMERON: Exactly, we don't have a  
10 whole lot of people who are wanting to comment at  
11 present, but we are going to be here until 4:00.  
12 So we thought that while we're waiting, if anybody  
13 who has already commented, such as yourself, wanted  
14 to make - add additional information, that it would  
15 be appropriate to listen to that.

16 MR. FREELAIN: Okay, I just wanted to  
17 add a general note here just to follow-up. There  
18 is a - what is that website, something dot gov, of  
19 comments or - it's a website where you can submit.

20 MR. RUBENSTONE: Regulations.gov.

21 MR. FREELAIN: Right, right, right,  
22 that's it. That's it. So I presume we can  
23 contribute our comments to that website, right?

24 MR. CAMERON: Okay, that's great, Mr.  
25 Freelain. And we do have, we do have a new

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1 commenter on the line if we could, if we could go  
2 to that commenter? And if you have something else  
3 to say and we still have time, then we'll give you  
4 another opportunity, okay?

5 Okay, we're going to Susan Carpenter.  
6 Susan?

7 MS. CARPENTER: Yes, is it too late to  
8 ask a clarifying question?

9 MR. CAMERON: No, you go right ahead.

10 MS. CARPENTER: Okay, I had some  
11 comments, but I am wondering - I am not a scientist  
12 and I did not read the entire report, but I am  
13 wondering if in the calculations you used, if you  
14 considered at all a catastrophic event underground  
15 during this time or if you were just looking at  
16 normal radiation escaping?

17 MR. CAMERON: That is a process  
18 question in terms of whether a federal agency such  
19 as the NRC is obligated to look at worst-case  
20 accidents like that, and I guess that I'll turn it  
21 over to Jim Rubenstone to try to clarify that for  
22 us.

23 MR. RUBENSTONE: Yes, as we discussed  
24 in the supplement, we used the output from DOE's  
25 performance model as a beginning step to look at

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1 the effects downstream from the regulatory  
2 compliance point, and that model was evaluated in  
3 our safety evaluation report, the last volume of  
4 which was published in January.

5 But the most relevant volume is  
6 probably volume three which came out in October of  
7 2014 that considers the post-closure performance.  
8 And within that model, in accord with our  
9 regulations, DOE treated what we call off-normal  
10 or catastrophic events in a probabilistic manner  
11 such as they included things like major seismic  
12 events, or volcanic disruption, other events of  
13 that sort, weighted by their likelihood of  
14 occurring, and the evaluation of that is in that  
15 volume three of the safety evaluation report.

16 So the impacts on the groundwater that  
17 we discuss in the supplement flow from the analysis  
18 that was done using that model.

19 MR. CAMERON: Great, thank you. Thank  
20 you, Jim. I think that answers Susan's question.  
21 And Susan, do you have a comment that you'd like  
22 to add while we have you?

23 MS. CARPENTER: Yes, first of all, it  
24 seems to me like rather than being a scientific  
25 decision to look at Yucca Mountain, it's been more

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1 a political decision. So people can say, "Well,  
2 we have a solution. This is it. Don't worry about  
3 - you won't have a nuclear dump in your state," and  
4 it's one big experiment.

5 I wonder what would happen if - well,  
6 I guess the casks haven't been developed yet for  
7 transport from what I've heard, and supposedly they  
8 will be made to last 100 years since that's how long  
9 they will be underground before they're rechecked.

10 And I'm wondering how it will be  
11 determined that these will last for 100 years  
12 because already the Holtec casks used for dry  
13 storage are having issues and that hasn't been that  
14 long.

15 But another thing, the transport  
16 concerns me, moving huge amounts of radioactive  
17 waste across this country. It poses, to me, a big  
18 danger to anyone who is along the way.

19 From what I understand, the train would  
20 have several cars between the engine and the  
21 radioactive waste to protect the engineer. Well,  
22 if he needs protection from that, I wonder what's  
23 happening to the people who live along the way where  
24 these are passing through.

25 I feel this is something that we haven't

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1 admitted, and I think we need to admit we don't know  
2 what we're doing with radioactive waste. We have  
3 never found a solution. We keep passing it down.  
4 You know, the next generation will find a solution,  
5 and it hasn't happened, and it's time to say we  
6 can't yet, and perhaps never. Thank you.

7 MR. CAMERON: Okay, thank you, Susan,  
8 for those comments. And if anybody else wants to  
9 comment, please hit star one.

10 MR. RUBENSTONE: And as we said, we  
11 will stay on the line. There may be some periods  
12 of quiet as we are waiting for people to comment.

13 MR. CAMERON: Okay, we have Lorie  
14 Cartwright from the New England Coalition on.  
15 Lorie, are you on the phone?

16 MS. CARTWRIGHT: Yes.

17 MR. CAMERON: Okay, please comment.

18 MS. CARTWRIGHT: Hello, thank you for  
19 hosting this call. I am calling from Vermont, and  
20 I'm calling to voice my opposition. Actually, I'm  
21 calling to request support for an alternative  
22 location to deposit our high-level nuclear waste  
23 at a site other than on top of a magma pile, and  
24 I'm referring to Yucca Mountain. And also, that's  
25 not even raising my concern and many others'

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1 concern for the environmental justice issue with  
2 respect to the Native Americans and their  
3 relationship with Yucca Mountain.

4 MR. CAMERON: Okay, thanks, Lorie.  
5 And please hit star one if you want to make a  
6 comment, and we'll check and see. I think we have  
7 a previous commenter who we'll listen to at this  
8 point, Marvin Lewis. Marvin?

9 MR. LEWIS: Thank you. Again, I do  
10 appreciate the fact I'm being allowed to a second  
11 bite of the apple. Actually, I don't have any  
12 right of a second bite of an apple because that's  
13 the way your rules are set up, and there's a hell  
14 of a lot of issues that are just being brushed  
15 aside. I know this call is supposed to stick to  
16 the issue of water. Well yes, but it's kind of hard  
17 to stick to an issue. What happens when we bring  
18 a load of radioactivity into this area, heading for  
19 Yucca Mountain, and it happens to get struck by a  
20 load of Bakken crude and goes up in flames? That  
21 goes into the water, too. It doesn't have to be  
22 in the Yucca Mountain site to get into the water,  
23 and this is the sort of thing that the NRC says oh,  
24 under PRA, that's a chance of 10 to the minus 8,  
25 or 10 to the minus 6, and the PRA says with that

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1 kind of a percentage, we can ignore it. Well, you  
2 can ignore it, but the guy dying of cancer doesn't  
3 ignore it.

4 Furthermore, this business of Bakken  
5 crude shipments being a danger to everything on the  
6 tracks and the radioactive transport also is a  
7 danger to everything, because trains are flipping  
8 over. Right where I stand, within a mile of where  
9 I stand here in northeast Philadelphia, we had a  
10 train flip over; over 100 cars, eight dead, 100  
11 people in the hospital, and that was a passenger  
12 train. That had nothing dangerous, nothing toxic  
13 that was in it. And what got it was a bunch of  
14 teenage boys or teenage boys and girls --let's not  
15 leave them out; I don't want to be considered  
16 sexist--throwing projectiles of some kind at the  
17 train, getting through a window, and putting out  
18 the operator, the driver out of service for a few  
19 seconds.

20 These are not far-fetched. You can put  
21 a number on it; sure you can put a number on it and  
22 say ooh, it's 10 to the minus 8, we don't have to  
23 worry about it; ooh, it's one in a million, we don't  
24 have to worry about it. I've got news for you.  
25 There's eight people six feet under the ground that

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1 ain't worrying about it no more, and there were 100  
2 people going to the hospital; I don't know how many  
3 were kept. That's just one time, and let's hope  
4 that one time isn't somewhere like the Hope Bridge  
5 crossing the Great Lakes carrying HE, highly  
6 enriched uranyl nitrate from 98 percent enriched  
7 uranium-235 across the Great Lakes; the Great Lakes  
8 containing over 20 percent of the potable water in  
9 the world.

10 Now, take a look at what we're talking  
11 about with these aquifers. We're talking about a  
12 very dry area; some of these aquifers have water,  
13 the same water in them for 100,000 years. They get  
14 pulled down, and there ain't nothing to drink. You  
15 get these contaminated one time, and there ain't  
16 nothing to drink. And L.A. is beginning to feel  
17 that with this recent drought. Look, there are  
18 thousands and thousands of examples like this that  
19 I am sure, because I read the safety reports; in  
20 fact, I am so obnoxious as to get some of them in  
21 hard copy, not just on the ADAMS. And I can tell  
22 you right now, they aren't there. Take a look at  
23 Yucca Mountain, take a look at what started Yucca  
24 Mountain. There were people that went out in a  
25 pickup truck to pick up core samples or borings, and

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1 they threw them in the truck without writing down  
2 which core boring came from which spot.

3 To this day, I don't know if those core  
4 borings have been adequately corrected; I only know  
5 it happened because the NRC and Department of Energy  
6 admitted to it, and you can look it up in the papers.  
7 And if you can't look it up, I can send you around  
8 to somebody at the LPDR and the library at the NRC  
9 who would gladly research it for you so you don't  
10 have to say hey, Marvin said this; therefore it's  
11 right. Well, it may be right, but we have plenty  
12 of references to it, and these references go on and  
13 on. And what worries me is as much effort--and I  
14 do think the NRC does put effort into getting people  
15 to be interested in your group power, to make  
16 comments, to read the Federal Register notices, to  
17 read the SERs, to read this and that, and very, very  
18 few comments come in.

19 As far as I'm concerned, when I see  
20 33,000 comments on something like the waste  
21 hearings, I am not impressed. We have 300 plus  
22 million people in the United States as far as I know  
23 nowadays; they all will be in danger. Now maybe not  
24 all of them at the same time hopefully, and some of  
25 them all the time, but some of them will be in danger

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1 a little too much to live.

2 MR. CAMERON: Okay Marvin, thank you  
3 for those additional comments; we have some other  
4 people who want to comment, so I think we're going  
5 to go to them now, but we did hear your comments.  
6 How about Jan Boudart?

7 MS. BOUDART: Hi, can you hear me now?

8 MR. CAMERON: Yes, we can hear you now.

9 MS. BOUDART: This is my second  
10 comment. I have written an article for a little  
11 newspaper that I write for called--the article is  
12 called "The Mobile Chernobyl," and it is an analysis  
13 of a hearing that was heard on October 1 that was  
14 called by Fred Upton, a Republican of Michigan. It  
15 was also some kind of an analysis of transportation  
16 of nuclear waste; in particular with a focus on  
17 Yucca Mountain. And the nation's cache of spent  
18 nuclear fuel is about 72,000 metric tons, which is  
19 80,640 U.S. tons; it's at 75 sites in 33 states where  
20 it was generated, and so what we're looking for is  
21 where is a geologically suitable site that nobody  
22 cares about?

23 Now the testimony at that hearing that  
24 really impressed me was the testimony of a man named  
25 Robert Quinn, and I won't go into his background,

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1 but he's on the Revolving Door, he worked for the  
2 United States for 25 years and now he works for  
3 Energy Solutions; that is a parent plant of the  
4 company that is decommissioning the nuclear plant  
5 that is closest to me within probably less than 50  
6 miles at Zion, Illinois. Now I was shocked by his  
7 testimony because nuclear waste and nuclear  
8 packages have been transported around the United  
9 States for 70 years, starting with the Manhattan  
10 Project, and he said that there were three million  
11 shipments of radiation packages per year in the US,  
12 including high-level nuclear waste from nuclear  
13 power plants and research reactors, plus the U.S.  
14 Navy has made 850 shipments totaling 1.6 million  
15 miles; since the mid-1970s, there have been 1300  
16 shipments from nuclear power plants.

17 Mr. Quinn cited 60 shipments of more  
18 than 250 foreign reactor fuel casks by sea, land and  
19 air from 1990 to 2012, and he mentioned--this was  
20 October 1--he said two just arrived at Savannah  
21 River in South Carolina. Globally, 7,000 metric  
22 tons of spent fuel in the UK, France, Germany,  
23 Sweden, et cetera. He said no failure of a package  
24 or release of radioactive materials ever. Now he  
25 didn't discuss the gamma rays that beam out from

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1 these packages; he just said that none of the  
2 packages had ever failed in transport. He said  
3 shipping casks designed and built to provide  
4 shielding from radiation prevent release, even in  
5 a serious accident. Standards are enforced by the  
6 federal law and Nuclear Regulatory Commission.

7 Then Mr. Quinn produced a piece of  
8 propaganda--which that's my opinion--he said the  
9 facts speak for themselves in more than 70 years of  
10 nuclear material transport in the United States and  
11 worldwide, no member of the public has ever been  
12 harmed from a radioactive release. Now that is  
13 impossible because if these things are traveling  
14 all over the country, people are getting gamma  
15 radiation from them because nothing can stop it, and  
16 to say that he knows that no person has ever been  
17 harmed is just crazy. So I made a list of things  
18 that he had ignored. First, no structure can  
19 totally contain gamma radiation beaming from a  
20 source, be it high, medium or low level. Two, no  
21 amount of radiation is not harmful to animals, do  
22 I have to say like us and the environment, and  
23 there's an argument going on now about hormesis, and  
24 I think you can tell what side of that argument I  
25 would be on, because Alice Stewart in I think 1979

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1 proved that there is no low level--no lowest level  
2 of radiation that is not harmful.

3 My third point was no rock, concrete,  
4 salt, wild volume of metal will withstand  
5 bombardment forever; the radiation will be in our  
6 offspring's world. Number four, casks  
7 contaminated on the outside have been allowed  
8 transport; number five, transportation of waste in  
9 Europe has an abysmal history. Greenpeace  
10 activists got corroded barrels of beaming waste off  
11 the floor of the Channel; one practice was to sluice  
12 the unspeakable filth in a pipe down into the sea.  
13 Number six--and that comes from a movie called De  
14 Chaix; the movie is in French, but it has English  
15 subtitles and it is totally revealing about  
16 transportation through the North Sea to Siberia of  
17 this compound called uranium fluoride, so fluoride  
18 is not one of my favorite things, nor is uranium.

19 Number six, the truckers, railroaders  
20 and sailors who handle packages, are they protected  
21 and compensated for the risks that they are being  
22 put into, and number seven, shipments need more  
23 shielding from terrorism, a point emphasized in the  
24 Q&A by a Republican from Ohio; his name is Bob Latta,  
25 and Kevin Kamps of Beyond Nuclear fielded the

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1 question citing the tests at Aberdeen, Maryland  
2 where an anti-tank weapon blew a hole the size of  
3 a grapefruit in a German castor forged carbon steel  
4 cylinder, and that cylinder had walls that were 11.8  
5 inches thick. And this article goes on and on; as  
6 long as nobody else is waiting, I'm just going to  
7 finish going through it. Kevin Kamps stated--

8 MR. CAMERON: Jan, could I interrupt  
9 you a minute?

10 MS. BOUDART: Sure.

11 MR. CAMERON: It would be helpful I  
12 think for the NRC if you sent that article in as a  
13 comment. We do have another person waiting on the  
14 line, so if we could just go to him, and then maybe  
15 we can get back to you later for a summary, depending  
16 on what's going on, okay? Okay, good. We're going  
17 to go to Ace Hoffman. Ace?

18 MR. HOFFMAN: Hi, Chip. Hi again.

19 MR. CAMERON: Hi.

20 MR. HOFFMAN: I wanted to go over three  
21 things, and there will be plenty of time for Jan to  
22 continue. The first one is I wanted to use Darryl  
23 Issa's words, who answered those people who think  
24 that it's safe to keep the waste on site. In that  
25 same act that I mentioned before, the Interim

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1 Consolidated Storage Act that he's been proposing,  
2 he states--and he's been very supportive of San  
3 Onofre as long as it was operating, so he's hardly  
4 an anti-nuclear voice, but he says the failure of  
5 the government to make Yucca Mountain has "littered  
6 communities across the nation with high level  
7 nuclear waste stored in less than ideal  
8 conditions." And then he goes on to say that  
9 maintaining the status quo is not an option.

10 The waste from the closed San Onofre nuclear  
11 plant sits near an active fault line adjacent to the  
12 heavily-trafficked Interstate 5 and the Pacific  
13 Ocean, and sandwiched between densely populated  
14 Orange and San Diego Counties. And then--so this  
15 is one example out of 120, that's his quote for how  
16 many sites there are, and continuing to do nothing  
17 while the can is perpetually kicked down the road  
18 is no longer an option, so he's trying to--and it  
19 says "make Americans safer in the process by having  
20 interim storage," which I don't agree is a solution,  
21 but storing it on site is also not a solution, and  
22 Darryl Issa has made that clear.

23  
24 The second point I wanted to talk about  
25 was when I was at the National Atomic Testing Museum

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1 event two weeks ago, one of the people that I met  
2 was Peter Livingston, he was a Ph.D. physicist,  
3 chemist and inventor with over 40 patents and a  
4 witness to some of the bomb blasts, and he's the  
5 inventor of the laser on a chip, the next generation  
6 of ultra-small, ultra high-powered lasers. And  
7 Dr. Livingston told me that they are working on and  
8 expect to be able to invent--it hasn't been invented  
9 yet--a proton laser which can be used according to  
10 Dr. Livingston to neutralize, at least to some  
11 extent, the radioactive wastes, the spent fuel. If  
12 we put the stuff in Yucca Mountain, we're not going  
13 to be able--should this proton laser be invented as  
14 he hopes and expects--we won't be able to use it to  
15 reduce the volume of the waste. And also he stated  
16 that the amount of energy that could be extracted  
17 if this laser gets invented would be enough, from  
18 current amounts of spent fuel, would be enough to  
19 power the entire United States for about seven  
20 years. So it's a net positive energy idea, and if  
21 we put the waste in Yucca Mountain and close it up,  
22 we're not going to be able to retrieve it in order  
23 to reduce its volume per this method, and there's  
24 of course a few other ideas, and maybe none of them  
25 work, but we ought to at least prepare for that.

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1           And then the third thing that I wanted  
2           to mention was that the standard for a dry cask is  
3           apparently that it can withstand an F-16 crashing  
4           into it; I don't think that they really withstand  
5           that, but an F-16 weights about 37,500 pounds and  
6           carries about 1,000 gallons of fuel, and if it has  
7           external fuel tanks, another 750 gallons of fuel.  
8           The standard that we should be working towards, and  
9           this would be for transport to Yucca Mountain as  
10          well as interim storage sites and onsite storage and  
11          the reactors themselves is something more like a  
12          jumbo jet, which can weigh a million pounds and  
13          carry 65,000 gallons of fuel. Now there's no dry  
14          cask on earth that can withstand a crash like that,  
15          not just the size of the airplane crashing into it,  
16          but also the length of time it would take 65,000  
17          gallons to burn would be plenty enough to destroy  
18          the dry cask. So all of these issues need to be  
19          handled before we can determine that Yucca Mountain  
20          is going to be the best solution, and also before  
21          we move forward with any nuclear reactor anywhere.  
22          I think they all need to be shut down because these  
23          are--they're either unsolvable, or at least they  
24          haven't been solved yet and we have no idea whether  
25          or not they are going to work or anything else. So

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1 those are my additional comments, and thank you  
2 again for the time and opportunity.

3 MR. CAMERON: Thank you, Ace. We're  
4 going to see if we have any new people on who want  
5 to comment. If you want to comment, hit star one.  
6 And as we mentioned, we're here till 4:00, and so  
7 there may be times when you won't hear any  
8 discussion because we're waiting for someone to  
9 call in, and we do have someone, Maureen Headington  
10 from Stand Up Save Lives, and we have also Lissa  
11 Weinman from the World Policy Institute, and we're  
12 first going to go to Maureen. Maureen, are you on?

13 MS. HEADINGTON: I am here. Thank you,  
14 I appreciate the opportunity. I'm not a scientist,  
15 I'm not paid for what I do, I'm a grass-root  
16 activist, have been for the last 20 years. A lot  
17 of focus--I served on the board of the Illinois  
18 Environmental Council as the director for six  
19 years; I was the Vice-President the last two of  
20 those, focused on old coal plants, toxic waste  
21 incinerators, napalm shipments and now nuclear  
22 matters. And one thing I've learned over the years  
23 in this is while I appreciate people being smart,  
24 smart does not always equate with common sense, and  
25 just this entire focus on nuclear, it seems to me

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1 that it's a backwards approach to work from where  
2 you're going to be putting it, and it seems that  
3 Yucca is what you're intent on, but a very backwards  
4 approach. I feel that what it'll take to get us to  
5 Yucca, and I do take exception to it being a good  
6 choice anyway, if it's just the easy choice, that's  
7 also a mistake for something like this, because you  
8 can't go back and fix it once it's broken.

9  
10 But what concerns me is the transport of  
11 this material through our towns and communities;  
12 it's not just a matter of the people in that area,  
13 in Arizona agreeing to it, it's all of the people  
14 throughout the country, so many of us that will be  
15 exposed to this. Illinois seems to be a given in  
16 terms of being a crossroads, and all the projects  
17 that I've focused on in my 20 years haven't  
18 been--they're not the "not in my backyard" type of  
19 issues. If I don't want it in my backyard, I don't  
20 want it in yours, either. I just think that we're  
21 really blinded by the prospect of getting rid of it,  
22 and yes this is really a big experiment. It hasn't  
23 been done anywhere successfully, and I think that  
24 it's just a tinderbox. Last evening, I happened to  
25 turn on Rachel Maddow; she's--I'd encourage you,

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1 it's probably online, to check out this segment.  
2 But there were two train derailments in Wisconsin  
3 just in this last weekend, and she made specific  
4 note of one of them were 100 cars derailed because  
5 it was the Bakken crude business, but she pointed  
6 out the transport route, and it was right through  
7 territory where there is a lot of nuclear that is  
8 being--it's either buried or I don't know,  
9 apparently the government has many sites where  
10 there are nuclear being stored, and she pointed out  
11 how the proximity in this was just unacceptable.

12 I don't know if one hand knows what the  
13 other hand is doing, and I know you all do things  
14 that are important, but I think that from the  
15 standpoint when I came online, I heard a fellow say  
16 how, you know, if you count comments, the fact is  
17 that most people don't know what's going on. It  
18 shouldn't be a matter of how many public comments  
19 you get, it should be about giving us the  
20 opportunity to know what's going on. I know I use  
21 --I work, but I take my time on my own to participate  
22 in this and learn about this, but I find that our  
23 mayors are clueless; they don't know anything.  
24 They should know, and I think it's incumbent on  
25 government to let all of our elected officials know.

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1 We will all be impacted; you have the names,  
2 addresses, the ability to electronically make our  
3 village halls aware. Here in Burr Ridge, Illinois  
4 where I reside, we have two interstates that cross  
5 right in Burr Ridge; for sure there will be nuclear  
6 waste traveling. In fact, during the GNEP years,  
7 we were told of the transport routes, and they  
8 mentioned I-55, 294 here in Illinois; our mayors did  
9 not know that.

10 So I think if you truly want to do a  
11 service for the country, and not just for the  
12 nuclear power industry, that you must take a broader  
13 perspective, because I just don't buy it that a  
14 keeping your fingers crossed approach is the way to  
15 go into something like this; saying there won't be  
16 accidents when you know there will be. Lastly, I  
17 would like to point out, and I do this at a number  
18 of public hearings, but until you get rid of  
19 Price-Anderson, you can't convince me that there  
20 won't be a cost to the public. And Congress, until  
21 it's out there and transparent what our elected  
22 officials are getting in the form of campaign  
23 contributions from the nuclear power industry, I  
24 can't buy that either. And until you end the  
25 revolving door of people from government going into

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1 working in the energy sector and pulling in big  
2 bucks and using all of their connections, the public  
3 has so much stacked against it, I wish there were  
4 an agency that totally would represent the people.  
5 I don't--with all due respect, I don't think the NRC  
6 is that agency, I don't think the Department of  
7 Energy is that agency, we need to have that agency  
8 because it shouldn't rely on people like me or the  
9 poorly paid people who work out of passion to try  
10 to get the right things for this country, get the  
11 right things for people. We deserve better, we  
12 just do, and I thank you for your time and for  
13 listening to me.

14 MR. CAMERON: Okay, thank you Maureen.  
15 We're going to go to Lissa Weinman at this--Lissa?

16 MS. WEINMAN: Hi, can you hear me?

17 MR. CAMERON: Yes.

18 MS. WEINMAN: Thanks for this  
19 opportunity to comment on the draft environmental  
20 impact statement at Yucca Mountain; I appreciate  
21 the opportunity to voice my opinion and hope that  
22 there will be more future discussion. Firstly, I'd  
23 like to say that I oppose the placement of any kind  
24 of nuclear waste in the Yucca Mountain site; I've  
25 read some of the materials from different groups and

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1 I think the risk to local area groundwater is  
2 unacceptable. I also have a particular interest in  
3 the maintenance of Native American traditions in  
4 the area, and I understand the Native American  
5 communities are very against the project, and I  
6 would like to lend my voice in support of them as  
7 well.

8           Regarding the scope of the  
9 environmental impact statement, there really was no  
10 consideration about the impact of moving  
11 radioactive waste; the vastly increased number of  
12 movements of radioactive waste across the United  
13 States through our cities, I'm very much opposed to  
14 the transportation of such wastes. Even if there's  
15 been no incidents so far, the number of shipments  
16 would be radically increased, and it's just a folly  
17 to think there would not be an unacceptable type of  
18 incident that would occur from this type of  
19 movement. I would say also I'm opposed to the idea  
20 of consolidated waste storage; I believe that the  
21 waste that is currently sitting at the former  
22 nuclear power plants and in other areas should be  
23 better protected, and that communities that are  
24 hosting that waste, as with my community here in  
25 Brattleboro, Vermont, should be getting federal

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1 subsidies, help for emergency services, and other  
2 economic incentives that make us the place to keep  
3 the waste until such solution is found in the  
4 future. But storing it in a much, much safer way  
5 that will imply more jobs for the community and  
6 potentially even fabrication efforts in local  
7 communities for dry casks, et cetera.

8 I would also like to say that I in  
9 general believe that the Price-Anderson Act should  
10 be rescinded and that the nuclear industry should  
11 be made to take responsibility for its waste, not  
12 the U.S. taxpayer. I'd like to point to the recent  
13 experience with the Waste Isolation Pilot Project;  
14 no one knows when that's even ever going to open  
15 again or what occurred there. This idea of  
16 consolidated storage is another pie in the sky thing  
17 that should not occur. And lastly, in general, I'd  
18 like to voice my opinion that we should not be making  
19 more nuclear waste if we currently do not have a  
20 solution for the waste product that we have already  
21 generated. Thank you for your time, and have a nice  
22 day.

23 MR. CAMERON: Yes, you too. Thank you  
24 Lissa. If anybody else wants to comment, please  
25 hit star one. We have Kevin Kamps on the line from

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1 Beyond Nuclear. Kevin?

2 MR. KAMPS: Hello Chip, thank you.

3 MR. CAMERON: You're welcome.

4 MR. KAMPS: Yes, okay, let me open my  
5 notes real quick here, please. So I just have  
6 several areas I would like to touch on, and the very  
7 first one is something I brought up at the  
8 Rockville, Maryland headquarters public meeting  
9 many weeks back, and it has to do with environmental  
10 justice, environmental racism, radioactive racism,  
11 and I just wanted to bring up the Beatty, Nevada U.S.  
12 Ecology so-called low level radioactive waste dump  
13 trench, which during torrential rains and flash  
14 floods on October 18 and 19 for some reason, yet to  
15 be explained as far as I know, underwent explosions,  
16 very forceful explosions that ejected material some  
17 60 feet into the air according to some media  
18 reports. There's a 40 second long video taken by  
19 a U.S. Ecology official at the hazardous waste dump  
20 next door, because U.S. Ecology has offloaded this  
21 radioactive waste dump onto the state of Nevada at  
22 this point; they don't officially own it anymore.  
23 This 40 second video showed the explosions; reports  
24 of a fire underground with lots of smoke coming out  
25 lasting for 12 hours, shutting down the highway for

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1 a stretch of 150 miles for 24 hours, the main highway  
2 between Las Vegas and Reno.

3 And the reason I bring this up is in the  
4 context of the Beatty, Nevada low level radioactive  
5 waste dump, and in the context of the Nevada nuclear  
6 weapons test site, and in the context of the  
7 proposed Yucca Mountain dump site, this is  
8 environmental injustice. This is environmental  
9 racism; this is radioactive racism. This region of  
10 the country is being treated as a nuclear sacrifice  
11 zone for the rest of the country, and it just so  
12 happens to be Western Shoshone Indian lands  
13 according to the Peace and Friendship Treaty of Ruby  
14 Valley dated 1863 that the United States Government  
15 signed. It's the highest law of the land,  
16 equivalent in stature to the U.S. Constitution;  
17 it's a treaty with a sovereign nation. And so this  
18 isn't okay, and I know one of the environmental  
19 impact statement's study points is  
20 disproportionate impacts on people of color  
21 communities or low-income communities. Believe  
22 you me, this is one of the worst examples of that  
23 in the entire country, or best examples of  
24 radioactive racism I guess you could say, and it's  
25 got to stop. And you know the focus of this

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1 particular environmental impact statement is  
2 radioactive releases from the proposed Yucca dump  
3 into groundwater, which happens to flow into Death  
4 Valley, California; happens to be the place where  
5 the Timbisha Shoshone Indian Nation lives; there  
6 are other Western Shoshone communities elsewhere in  
7 the watershed. So it just isn't right; it's got to  
8 stop.

9 Another area I wanted to mention was  
10 just learning from the wisdom of our elders, and so  
11 kind of a segue to Corbin Harney, the Western  
12 Shoshone spiritual leader who passed away a number  
13 of years ago. I remember him speaking at a  
14 Department of Energy Yucca Mountain environmental  
15 impact statement public comment meeting in Salt  
16 Lake City around the year 2000 or 2001, and he said  
17 that if he--he called them the "DOEs," so I guess  
18 he was referring to the staff people of the  
19 Department of Energy--if they wanted to destroy a  
20 planet, why don't they go up to Mars and destroy that  
21 one, but leave this one for the people who love the  
22 earth, who love Mother Earth. And so I guess I  
23 would remember Corbin's words to the Department of  
24 Energy and share them with the Nuclear Regulatory  
25 Commission; this destruction of Mother Earth has to

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1 stop. It's our home, and we are poisoning it, and  
2 in the context of the Yucca Mountain dump, we would  
3 be poisoning a precious and irreplaceable  
4 groundwater system that is of course vital to those  
5 semi-arid areas downstream that are thriving as we  
6 speak.

7 Amargosa Valley, that's one of the  
8 biggest farming communities in the state of Nevada,  
9 the Ash Meadows National Wildlife Refuge, where  
10 highly endangered species live, including the  
11 various species of pupfish as they're called,  
12 minnows that live in hot springs that seems to defy  
13 biological bounds. The desert hole pupfish that  
14 lives in water at 104 degrees Fahrenheit; you know  
15 the only other places I can think of where life takes  
16 on such high temperatures would be like in deep sea  
17 trenches. So these are very special places being  
18 put at unacceptable risk and ultimate ruination if  
19 Yucca Mountain ever opens and radioactive waste is  
20 buried there, because it's going to leak massively  
21 into the groundwater and poison all those living  
22 communities downstream.

23 And another elder whose name I would  
24 like to invoke in memory is Dr. Rosalie Bertell, who  
25 founded the International Institute of Concern for

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1 Public Health in Toronto, did a lot of her  
2 anti-nuclear work in the Great Lakes bio region, but  
3 her wisdom certainly applies at Yucca Mountain, and  
4 just to quote her, "dilution is not the solution to  
5 radioactive pollution." In fact, there's so  
6 little groundwater flow out there that there won't  
7 be much dilution, and hence the reason for the  
8 11-mile downstream buffer zone that is part and  
9 parcel of the Yucca Mountain project, to try to buy  
10 enough dilution in 11 miles of groundwater that  
11 people who then pump drinking water at a well at that  
12 11 mile mark would not be killed in a short period  
13 of time. So that's unacceptable.

14 Another elder is Grace Thorpe of the Sac  
15 & Fox Indian Nation in Oklahoma, who served in the  
16 Women's Auxiliary Corps in World War II. So here  
17 we are just past Memorial Day, and her assignment  
18 at the end of the war was Nagasaki, Japan, which had  
19 just been bombed with an atomic weapon. And she saw  
20 what happened, and went back to Oklahoma and was  
21 living her life until the Department of Energy's  
22 nuclear waste negotiator showed up in the 1980s and  
23 convinced the tribal council there to consider  
24 becoming centralized interim storage site for  
25 commercial high level radioactive waste. And it

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1 took Grace Thorpe just a matter of days before she  
2 got all of those elected officials on the tribal  
3 council replaced. They were ousted in emergency  
4 tribal elections, replaced with anti-dump tribal  
5 council members, and Grace Thorpe did not stop  
6 there. She took her show on the road so to speak,  
7 and she helped 60 other Native American reservation  
8 communities fend off these parking lot dumps for  
9 high level radioactive waste targeted at them. And  
10 she was honored by President Obama in March of 2009  
11 during Women's History Month, and he placed her  
12 right up there with the likes of Rachel Carson, and  
13 he called them women defenders of planet Earth, and  
14 it is very true. And that was another example of  
15 the U.S. federal government, in that case the  
16 Department of Energy, engaging in environmental  
17 racism, radioactive racism. And it needs to stop.

18 And another elder I will mention is  
19 Margene Bullcreek of the Skull Valley Goshutes in  
20 Utah, who led the effort to stop the parking lot dump  
21 for commercial high level radioactive waste  
22 targeted at her tiny community of 125 adult members,  
23 which the NRC by the way licensed for construction  
24 and operation. So this is radioactive racism; it  
25 must stop, and Margene was active on the Yucca

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1 Mountain issue, working with the Native Community  
2 Action to stop Yucca Mountain as well, and we lost  
3 her a few years ago as well. So I invoke all of  
4 these elders to say that this radioactive racism  
5 must stop.

6 Another area I'd like to touch on is  
7 transportation, that the previous two callers who  
8 I was able to listen to also brought up, and I wanted  
9 to focus my comments about nuclear waste  
10 transportation on what the Department of Energy  
11 has already identified back in its February 2002  
12 final environmental impact statement for the Yucca  
13 Mountain dump, and these are the barge shipments on  
14 surface waters across the country, which is not very  
15 widely known, and some of the surface waters involve  
16 include the Chesapeake Bay, the James River in  
17 Virginia, Delaware Bay, the various surface waters  
18 surrounding New York City, including the Hudson  
19 River and the Jersey Shore, the Atlantic coast, as  
20 well as Long Island Sound. In the Massachusetts  
21 area, Cape Cod Bay, Massachusetts Bay and Boston  
22 Harbor. Also Lake Michigan, as well the  
23 Mississippi River in the states of Mississippi and  
24 Louisiana; also the Tennessee River in Tennessee  
25 and Alabama, the Missouri River in Nebraska, Kansas

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1 and Missouri; California's Pacific coast and  
2 Florida's Atlantic coastline.

3 So these barge shipments would be  
4 necessary if rail-sized casks are used for  
5 transport, which is Department of Energy's  
6 preferred method, mostly rail. But there are some  
7 26 reactors in the United States that lack direct  
8 rail access, so the only options for exporting those  
9 rail-sized containers of high level radioactive  
10 waste would either be heavy haul truck, which is  
11 very complicated and difficult and has many  
12 downsides, or barge shipments. And the dangers of  
13 barge shipments are many. For example, if one  
14 barge shipment were to sink in Lake Michigan and  
15 release its contents, even a fraction of its  
16 contents, that would be an unprecedented  
17 radiological disaster in the drinking water supply  
18 for 40 million people downstream in eight U.S.  
19 states, two Canadian provinces, and a large number  
20 of Native American First Nations throughout the  
21 Great Lakes Basin. If water gets in and there is  
22 a critical mass formed in the accident, then there's  
23 enough fissile material, uranium-235 and  
24 plutonium-239 still present in the irradiated  
25 nuclear fuel that a chain reaction could be sparked

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1 on the bottom of Lake Michigan, which would make  
2 emergency response a suicide mission, because as  
3 the emergency responders, if they were even able to  
4 locate the highly specialized crane on a boat to  
5 lift this 100 ton or heavier weight from the bottom  
6 of the lake, as it came to the surface of the water,  
7 would still be emitting nearly instant fatal doses  
8 of gamma radiation and neutrons by the way.

9 So the releases of course, if a nuclear  
10 chain reaction were to take place on the bottom of  
11 Lake Michigan, would exacerbate the radioactive  
12 releases into the lake water, into the drinking  
13 water supply. So these proposals are  
14 unacceptable, and they are part and parcel of this  
15 Yucca Mountain plan, and it's not okay for NRC or  
16 any other agency to segment or isolate various  
17 aspects of this proposal, as this proceeding has  
18 been doing for the past several weeks, because  
19 transport is not being looked at at all; it's just  
20 looking at the dilution or lack thereof of  
21 radioactivity in the drinking and irrigation water  
22 downstream of Yucca.

23 MR. CAMERON: Okay. Kevin, we have one  
24 more person who wants to talk, and I would thank you  
25 for all that information, particularly the

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1 recitation of the elders that you did for us. So  
2 thank you Kevin. And we're going to see if Ethyl  
3 Rivera has anything more to add for us. Ethyl?

4 MS. RIVERA: Yes, thank you very much.  
5 And just tacking on with what Kevin has just said,  
6 I live in Michigan, and I understand that the  
7 majority of the waste shipments within and from  
8 Michigan would be via rail. I want to point out  
9 that along these routes, there are many, many  
10 millions of people that would be affected, mainly  
11 because something that has not been mentioned  
12 earlier is the fact that we have numerous watersheds  
13 within the state, all of which drain into the Great  
14 Lakes. So even the rail shipments would  
15 have--would be exposing many thousands of people  
16 and millions of people via any kind of accident that  
17 might occur via rail. We have many bridges going  
18 over many waters; as I said, many major tributaries  
19 all draining into the Great Lakes.

20 A couple of years ago, there were many  
21 comments made at a hearing up in Kincardine, Ontario  
22 about the OPG's plans to build a deep underground  
23 dump for radioactive waste there. The fact that we  
24 are contemplating a similar scenario where the  
25 Great Lakes, which provide 20 percent of the world's

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1 fresh water here, and would affect millions of  
2 people, is totally unacceptable. Neither one of  
3 these plans are, in my opinion, taking the public's  
4 interest at heart, and I believe that it is  
5 deplorable that our government is allowing such  
6 plans to continue. Any dose of radiation, no  
7 matter how small, can cause cancer. There are  
8 many, many areas where these rail cars and other  
9 transportation would be traveling through areas,  
10 and many of these areas have volunteer fire  
11 departments that have no training for this kind of  
12 huge disaster. No matter what this environmental  
13 impact statement may provide in the way of  
14 reassurance that safety is a primary consideration,  
15 I take great issue with that and I believe that many,  
16 many thousands of Americans will also take great  
17 issue of this when they find out what kind of a  
18 poorly written, poorly configured plan this is.  
19 And I thank you for the opportunity to make these  
20 comments.

21 MR. CAMERON: Okay, thank you Ethyl.  
22 We're going to go to one more person who has not had  
23 an opportunity for a second comment, and that's  
24 Susan Carpenter, and then I'm going to turn it over  
25 to our senior NRC official here, Jim Rubenstone to

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1 close the meeting for us. So Susan, can you give  
2 us some additional comments?

3 MS. CARPENTER: I just would like to put  
4 things in perspective. We're talking about  
5 storing for long term, as if we know what society  
6 will be like at the time, and I just want to remind  
7 people that we were in the Stone Age between 8,000  
8 and 4,000 years ago, and that the Industrial Age  
9 began with the steam engine 240 years ago, and we're  
10 talking much longer than this for storing the waste,  
11 and I just think we need to look at it in that light.  
12 And thank you for this hearing.

13 MR. CAMERON: Okay, thank you Susan,  
14 and thank all of you for your comments and we're  
15 going to go to Jim Rubenstone now to close the  
16 meeting out for us. Jim?

17 MR. RUBENSTONE: Yes, thanks Chip for  
18 facilitating this meeting, and a special thanks to  
19 all of our commenters; we appreciate you  
20 participating and letting us know your thoughts on  
21 our draft supplement for the DOE's environmental  
22 impact statement. This is the final public meeting  
23 that we had scheduled; the comments close on  
24 November 20, one week from tomorrow. I would  
25 remind you once again that you can submit comments

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1 in writing through the regulations.gov website, or  
2 by mail to NRC, and the information on how to do that  
3 is on NRC's website; if you follow the links from  
4 the front page for radioactive waste high level  
5 waste disposal e-documents, all that information is  
6 there. The information on our previous public  
7 meetings and the draft supplement can also be found  
8 on that page, and we will strive to get the  
9 transcript and the meeting summary up from this  
10 meeting as soon as they are available.

11 So once again, thanks to everyone who's  
12 participated in the process on this draft  
13 supplement. NRC will take all of the comments and  
14 go through them, and we will be taking those into  
15 account as we publish the final version of this  
16 supplement in the first half of 2016. So thanks  
17 once again to all our commenters; we very much  
18 appreciate it, and please stay tuned to our website  
19 as we move forward with this process. Thanks  
20 again.

21 THE OPERATOR: That concludes today's  
22 call, thank you for participating. You may  
23 disconnect at this time.

24 (Whereupon, the proceedings were  
25 concluded at 4:02 p.m.)

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