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PREPAREDNESS GUIDANCE

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TRANSCRIPT OF PROCEEDINGS

Public Meeting

## APPEARANCES

## Session Facilitator:

Rick Daniel  
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## Panelists:

Joseph Klinger  
Assistant Director  
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Mark Thaggard  
Deputy Director for Emergency Preparedness, Division of  
Preparedness and Response  
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Edwin Lyman  
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Union of Concerned Scientists

Eric Epstein  
Chairman  
Three Mile Island Alert, Inc.

1 PROCEEDINGS

2 RICK DANIEL: All right, this session is on emergency planning.  
3 Specifically, we're going to be talking about a guidance document. A guidance  
4 document is based upon emergency planning. It's a two part document, as  
5 probably most of you know. It's an NRC and a FEMA document, it goes by the  
6 nomenclature NUREG0654 and FEMA REP-1. If you don't like numbers and  
7 acronyms and things like that, then you can go by the title, "Criteria for  
8 Preparation Evaluation of Radiological Emergency Response Plans and  
9 Preparedness in Support of Nuclear Power Plants." So, we're just going to call it  
10 the guidance document for the purpose of our session.

11 My name is Rick Daniel and I'm going to be your facilitator today. I  
12 want to emphasize something NRC Chairman Macfarlane said this morning. The  
13 reason we're having this sessions is because it's important for the NRC to be  
14 both transparent and open and make use of the dialogue and collaborative  
15 efforts that we can have with the stakeholders and the public. It only makes us  
16 stronger; it makes us a better regulator. The NRC, believe it or not, does not  
17 have a monopoly on intelligence. So we look to these outside folks, the NGOs,  
18 who I'm going to introduce shortly, stakeholders, the public, to ask questions, to  
19 dialogue with us and get involved with us and ask us those hard questions; that  
20 makes us a better regulator.

21 The objective of today's session is to focus on this guidance  
22 document, number one, and it's also to give the NRC a chance to report on the  
23 status of the document. If you look back in time, and some of you probably know

1 a little bit of the history, back around November 2011, a rulemaking period closed  
2 right about then and, with that, FEMA and the NRC embarked upon a process by  
3 which they could go and start revising this document based upon the rulemaking.  
4 So public meetings have been going on and on and those public meetings just --  
5 I think the last couple of ones were September -- August, September -- in the fall  
6 time frame of 2012. There was recently another public comment period that just  
7 concluded January 31st. But that public comment period focused on the  
8 processes and the format of the document. Just because that comment period  
9 closed does not mean that your comments and your questions and things that  
10 you'll hear today are not valuable. They're very much valuable; in fact, you may  
11 see parts of them repeated on regulations.gov.

12           The format. Let's start talking about the format of the meeting. And  
13 before I go any further, I'm sure you've heard it 10 times today, if you have one  
14 of these electronic gadgets, if you can just shut them off, I appreciate that. With  
15 my eyesight, I think I shut it off when I put it on loud, you know. So I just shut it  
16 off totally. Format. I'm going to introduce the panel members here, and after  
17 Mark Thaggard from the NRC does his introductory presentation, we're going to  
18 hear from the other panel members. I'm going to ask them to make a brief  
19 statement and then we're going to go out to the audience. We're interested in  
20 your questions, your comments; we're interested in having this dialogue with you.

21           So let's start from this side. From this end, Eric Epstein, Eric is from  
22 TMI Alert. And then we have Ed Lyman; Ed is from the Union of Concerned  
23 Scientists. Next to Ed is Joe Klinger; Joe Klinger is the assistant director of  
24 Illinois Emergency Management Agency. And then of course, Mark Thaggard;  
25 Mark is the acting director for the Division of Preparedness and Response. So

1 Mark, why don't you start us off and give us your presentation, please.

2           MARK THAGGARD: Okay, can everyone hear me? Okay,  
3 welcome. As Rick mentioned, my name is Mark Thaggard. I am the acting  
4 director for the Division of Preparedness and Response in the Office of Nuclear  
5 Security and Incident Response at the NRC. I thought it'd be a good idea for me  
6 to provide a very brief presentation just to kind of set the stage for what we're  
7 doing here today. I think Rick gave you a little bit of information. We are in the  
8 process of trying to revise NUREG-0654 FEMA-REP-1, which is a pretty  
9 significant document in the emergency preparedness area. And that's going to  
10 be the focus of this session here today. I should have mentioned -- and I think  
11 Rick didn't mention this -- but this session is being webcast. It's one of the two  
12 technical sessions at the conference here that's being webcast.

13           So just to provide a little bit of background information, this  
14 document, as Rick mentioned, is a joint FEMA-NRC document. It is the primary  
15 document used by nuclear power plants and at the state and locals for  
16 developing their emergency plans for responding to emergency events at nuclear  
17 power plants.

18           Okay, as we embark on this revision of the document, we have  
19 three primary objectives that we're trying to accomplish here. The first is to  
20 update the document. For those of you that are familiar with the document, you  
21 know that it was developed in the aftermath of the TMI incident, and it hasn't  
22 really been changed a lot in over 30 years; so one of our key objectives is to  
23 update the document. One of the challenges that I put on my staff is to come up  
24 with a mechanism so that we can update the document a little bit more frequently  
25 in the future so that we don't go such long time intervals without making changes

1 to it. The second overall objective we have is to consolidate the document.  
2 Right now the document consists of an addendum and four supplements. In  
3 addition, there are numerous other guidance documents that we use in  
4 emergency preparedness area, not only us, but also FEMA. So one of our  
5 objectives with this revision is to consolidate the document to the extent that we  
6 can. As Rick mentioned, we completed a pretty significant revision to EP  
7 regulations; that was completed toward the end of 2011. At the same time,  
8 FEMA revised their REP manual. So the third overall objective, we want to make  
9 sure that the document is consistent with those changes we've made in  
10 regulation and also that FEMA made in their REP manual.

11           This schematic here, just -- it may have been a little busy, I  
12 apologize for that. But I put this on here just to kind of show you all the various  
13 guidance documents that we're currently using in the emergency preparedness  
14 area. And our hope is consolidate that to the extent we can; that's the future  
15 state, which I put a question mark there. As we initiated this effort to revise the  
16 document, we started having public meetings back in, I guess, fall of last year.  
17 One of our objectives was to have early public engagement, which we've done.  
18 And we anticipate having additional public engagement with FEMA as we go  
19 through the revision process. That and the combination of the fact that we're  
20 dealing with two agencies that have their own concurrence and review process,  
21 we are looking at a multi-year effort to make this revision. This isn't something  
22 that's going to happen overnight. We put together this preliminary schedule  
23 here, but we anticipate revising that as we go through the effort of developing a  
24 more detailed project plan, which we're currently working on right now. But I just  
25 wanted to show you that we are looking at a multi-year effort.

1           As I mentioned, we did start off by having a number of public  
2 meetings to get some early engagement. We also had regulations.gov, which we  
3 had opened up through the end of January when we were soliciting comments.  
4 We indicated at the beginning, when we put a docket up on regulations.gov, that  
5 we were going to solicit comments. We're not going to go through the process of  
6 actually responding to those comments. We stated that upfront, so we do have  
7 comments and we're going to take a look at those. Our rationale is that there's  
8 really nothing to respond to at this point, because we do intend to have formal  
9 comment response periods as we go through the revisions. And as Rick  
10 mentioned, the intent of the session at the RIC here was not to solicit formal  
11 comments, although clearly feedback that we get, since we're early in the  
12 process, we will consider it to the extent that we can. As I indicated, as we go  
13 through the more formal comment response process, then we will actually  
14 provide comments to responses that we receive.

15           As I mentioned, as has been mentioned several times, this is a  
16 multi-agency effort; both FEMA and the NRC, we're doing this together. And so I  
17 want to give credit, or blame, however you want to put it, to the lead people that  
18 are leading the effort: Don Tailleart on my staff and Bill Eberst from FEMA. I  
19 don't think they mind me putting their contact information. So that was just to  
20 kind of set the stage to give you a little bit of background information, and so,  
21 with that, I'll turn it back over to Rick.

22           If you do have any comments on the presentation, feel free to ask  
23 me those as we open up the panel of discussion.

24           RICK DANIEL: Thank you, Mark. All right, thanks again, Mark.  
25 Joe Klinger, how about giving us a brief opening statement?

1                   JOSEPH KLINGER: All right, I'd be happy to. I was asked to  
2 address a couple of issues that I'm most passionate about with NUREG-0654.  
3 So the first one is, I want to make sure that just like with Craig Fugate, the FEMA  
4 administrator always preaches about the whole community approach to  
5 everything that we do in emergency management. And the same approach has  
6 to be performed here for this major rewrite. I mean this is a huge project. We're  
7 looking at five years to do it, and there's already been a couple of public  
8 meetings and stuff. The whole community approach has to be used in the  
9 process: the state, county, local, tribal, off-site response organizations have --  
10 they're the ones that are going to be responding -- they do all the time anyways  
11 for other hazards -- so we have to listen to them. It's got to be collaborative  
12 communication and coordination with the people that are out there on the  
13 ground. That's imperative. And we need to do that prior to the formal proposal,  
14 because if we can work out our differences and stuff beforehand, it's really going  
15 to help the process; it might avoid, I think, we're already up to 75 FAQs on the  
16 recently adopted REP manual already. So, maybe we can avoid that in the  
17 future. So soliciting input from all the partners.

18                   The second thing is the guidance should be just that. If it's  
19 something that is strictly required, then put it in the rules. As putting on my other  
20 hat a health physicist, it used to frustrate us was when NRC would put  
21 requirements and reg guides and say, "Oh well let's..." -- we don't want to get  
22 into that if we can avoid it. So if it's strict requirement, there's no exceptions,  
23 then put it in the rules in 44CFR10CFR50.

24                   The guidance should not be too prescriptive. And the area that I  
25 want to just mention is the primary alert and backup system. If we cannot be too

1 prescriptive, because I think right now with the alert notification and then the  
2 public radio, I think for the primary alert, and then what we refer to as the Paul  
3 Revere Backup System, you know, probably isn't the best system right now. And  
4 Harry Sherwood is here and I'll use him. He's mentioned a "system of systems"  
5 approach, rather than something real specified. We need to have that flexibility,  
6 focus on outcomes rather than inputs and strict interpretations. Maybe by doing  
7 that we can avoid things that are still in 0654, and I just want to quote this one,  
8 it's on Appendix Two, "The primary backup communications systems shall have  
9 a dated transmission rate of 1200 baud and the rates" and blah blah. We don't  
10 want to do that; just be performance based, outcome oriented. I think that's  
11 going to help.

12 RICK DANIEL: All right, thank you, Joe. So, more performance  
13 based, less prescriptive in the wording and everything. Ed, how about opening a  
14 comment from you?

15 EDWIN LYMAN: Sure, I think I need to borrow this.

16 RICK DANIEL: Let's move these. You know what? Let's move this  
17 one to there --

18 EDWIN LYMAN: No, that's mine!

19 RICK DANIEL: You can have that one.

20 [laughter]

21 You need two?

22 EDWIN LYMAN: I'm not cooperating --

23 RICK DANIEL: Already.

24 EDWIN LYMAN: Already!

25 RICK DANIEL: All right.

1 EDWIN LYMAN: Is it on?

2 RICK DANIEL: Yeah, you're going to have to get closer though.

3 EDWIN LYMAN: Hi, thank you. Right, I was also asked to  
4 comment on the things I find most passionate about. Now, I don't I usually  
5 associate being passionate with things like revising regulatory guidance. But I  
6 will say that what I am passionate about in this area is making sure that the  
7 public is going to be adequately protected from the potential consequences of  
8 whatever type of severe accident may come their way. And to that end, I'm  
9 concerned about the way the entire emergency preparedness process is playing  
10 out.

11 Now, the guidance we're talking about is hamstrung, because it is  
12 guidance, because it has to comply with the rule and that progressed alongside a  
13 different track. But given the long period of time that is going to be taken just to  
14 complete the guidance process, my expectation is that there will be -- or my hope  
15 -- is that there will be rule changes to the emergency preparedness rulemaking  
16 that will address some of the issues that we're seeing with regard to emergency  
17 preparedness failures at Fukushima. And I really think that that is an important  
18 part of the lessons learned from Fukushima, is looking at where the process  
19 failed, where the public was -- through improper notification, lack of information,  
20 confusing guidance, and every other failure that took place -- led to the avoidable  
21 overexposures of the public to radiation.

22 So, in looking at the particular -- the Attachment Three regarding  
23 the protective action recommendation, these were based on the results on  
24 technical studies which were done prior to Fukushima and, we think that the  
25 technical basis for the specificity of some of the PARs that are now in the draft

1 guidance; in particular, the delineation of when sheltering versus evacuation is  
2 appropriate for various rings around the plant. We don't think that the technical  
3 basis is there yet, based on the current generic models that we used to develop  
4 those criteria. So I think better technical tools are going to be needed before you  
5 can actually support that level of specificity in the PARs. The uncertainties really  
6 have to be more fully accounted for and Fukushima lessons have to be better  
7 understood. And then the primary problem is that the PARs, the protective action  
8 recommendations, are not based on the protective action guides. There is no  
9 direct link between the health and safety impacts of a particular outcome of  
10 protective action recommendation and the recommendations of the EPA and the  
11 PAGs. And that link really needs to be strengthened and better understood,  
12 because we did see at Fukushima, that EPA, the EPA evacuation PAG of one  
13 rem exposure within a four-day period, was apparently exceeded in regions that  
14 were beyond the 10-mile emergency planning zone radius. In fact, there was the  
15 expectation on the part of some -- on the part of the U.S. government -- that you  
16 could potentially exceed the PAGs as far away as Tokyo. And so the possibility  
17 of evacuating the embassy; that's over 140 miles, I think, from Fukushima.

18           So the confusion about what is actually happening during a severe  
19 accident really demonstrates that it's premature to really start talking about  
20 guidance that is too specific until we have a better technical basis. So I'll stop  
21 there and I can --

22           RICK DANIEL: All right.

23           EDWIN LYMAN: -- expand on these issues --

24           RICK DANIEL: All right, thank you very much, Ed. Eric Epstein.

25           ERIC EPSTEIN: I think there's two concepts that we need to

1 capture to be successful at all today. Those two concepts -- and this is just  
2 based on real like experience -- I also represent bus drivers and we have  
3 evacuate on a regular basis -- are social media, which has changed and  
4 rearranged the way we communicate. So no matter how we planned, I can tell  
5 you, the kids who tweet to their parents have another plan. And I'm being very  
6 serious about the causes of major problems. The other issue is social  
7 psychology. And from the TMI perspective -- we were founded in 1977 when we  
8 were marginalized. And we were marginalized because we raised issues of  
9 terrorism and the fact that the plant was two miles from the airport. '79 we had  
10 the accident. Then we, like other states, went through a convulsion of rate hikes  
11 associated with nuclear power.

12 TMI was defueled in '93, but what you may not know is that we had  
13 a huge security incident that year also, where somebody escaped from a mental  
14 hospital and got on site; which basically rearranged the cocktail [spelled  
15 phonetically] -- that's the social psychology I'm talking about. And then we had  
16 an incident, right or wrongly, where we consolidated the EOFs; we didn't notify  
17 the community, and it had to stopped for a year, instead of having our own EOF -  
18 - now Peach Bottom, Limerick and TMI were consolidated in Coatesville. Then  
19 9/11 came, and so just from a community-based organization vantage point, we  
20 were inundated with questions and concerns. And here's the problem: we got  
21 the calls, probably more calls than the licensee. And it prompted us -- and this is  
22 bizarre -- if you go to my house now, I have I think 35 file cabinets -- also I'm  
23 divorced. Obviously I didn't get my priorities correct. But we filed petitions on  
24 daycare. We went around and found out that -- this is nobody's fault -- nobody  
25 really thought about daycare after TMI; we've got 74. I visited all 74 centers.

1 Nobody knew what was going on when there was no transportation. You have  
2 special populations; Alzheimer's. This is a growth industry, unfortunately -- adult  
3 daycare. So again, make sure we get all the populations.

4 Katrina obviously added fuel to the fire, but I can tell you how  
5 important this is to our community: We negotiated, TMI Alert, four settlements  
6 with GPU, British Energy -- if you remember them, if you're still out there, sorry --  
7 First Energy and PECO -- all our resources went to KI and radiation monitoring.  
8 Our community is still that focused and that obsessed. Some of the older  
9 generation use a term that's known as TMI money, where they keep money in  
10 their suitcase packed. That's a social psychology; that's not healthy, it's not right,  
11 and that generation is, you know, fading. Again, as a group, TMI Alert, we  
12 monitor three plants: Susquehanna, Peach Bottom, TMI -- that's six owners and  
13 seven reactors. Let me just throw out a couple of numbers, because I think  
14 every state is different. Pennsylvania is a commonwealth. Within 10 miles of 10  
15 Mile Island, there's 270,000 people accounted for. When you get to the cusp,  
16 Harrisburg's not accounted for; York's not accounted for; Lancaster's not  
17 accounted for; the New Cumberland Army Dept [spelled phonetically] is not  
18 accounted for: that's 165,00 people. We are rural, we are urban, we are  
19 suburban. We have a transitory population that is almost the same population as  
20 Harrisburg during a work week because we're the capital, we have the state,  
21 federal, county. They're not accounted for. We have Lancaster County, which is  
22 the most productive agricultural non-irrigated county in the country. We have  
23 Hershey Chocolate. They're outside of the 10-mile zone. We have a steel mill;  
24 we have Rite-Aid; we have Tyco; we have the Navy support facility in  
25 Mechanicsburg, New Cumberland -- not accounted for. When I have to plan for

1 school bus drivers in the Central Dauphin School District, you've got four primary  
2 counties, 36 municipalities, 13 residential risk school districts, 20 impacted  
3 school districts; over two dozen transportation agencies I have to work with, half  
4 private, half public. The private have no idea what the hell I'm talking about or  
5 that they're even responsible. I even have -- for the Mennonites we even have  
6 horse and buggy emergency planning, which is kind of hard since nobody has a  
7 phone there. And so when you're looking at this, I guess what I'm asking you to  
8 do with the regs, it's the people. Make sure you capture the right people. In  
9 Pennsylvania, fire is all volunteer. School bus drivers don't have to stay. You, in  
10 my mind, have a fluid situation with not only the plant, but the people. You  
11 constantly have to reach -- these are volunteers.

12           One of the things I've learned since TMI is nobody is conservative  
13 when it comes to a new fire truck. Everybody wants one. Doesn't mean they  
14 know how to operate it.

15           I conclude by saying there's a huge benefit to what we do, huge  
16 benefit outside of nuclear power. The plan we use is really helpful for hazardous  
17 waste spills, for emergency accidents, for natural weather. So, I know there's  
18 naysayers out there and it's not perfect and there's problems, but I can tell you  
19 from personal experience, plans are much better than they were in '79 when they  
20 were just a piece of paper in an office somewhere in Harrisburg. So, hopefully  
21 this helps. I just want to give you some real perspective. Social media, social  
22 psychology, at the end of day, people implement the plans and people can blow  
23 up the plans.

24           RICK DANIEL: All right, thank you very much, gentlemen.

25           ERIC EPSTEIN: I guess blow up is not a good word, sorry.

1           RICK DANIEL: All, right, thank you very much, gentlemen. Now  
2 folks, out there in the audience, you're going to have a choice: You can either put  
3 your question on a card and pass it to the center aisle or at the end of the aisle,  
4 or you can just stand up and raise your hand and I'll come to you. And Mark,  
5 thank you for reminding me that we do have folks on the phone. We have about  
6 27 folks on the phone listening in; they can't see us, so don't anybody wave and  
7 say, "Hi Mom," when you get up to ask a question. But they can see the slides  
8 and right now it is looking at the RIC insignia.

9           So these are some interesting issues these gentlemen pose. Do  
10 we have any questions or comments from the audience? I know we do. Or  
11 maybe it's going to be a real short session. And give us your name and the  
12 organization you represent, because we like to capture that.

13           PAUL GUNTER: My name is Paul Gunter and I'm with Beyond  
14 Nuclear in Takoma Park, Maryland. We're a public interest group. I guess what  
15 I'd like to do is get some comment from the panelist on how the interaction  
16 between NUREG-0654 and SOARCA. If there is a connection, and my feeling is  
17 there is, I'm concerned that we have this issue playing out for -- which are almost  
18 diametrically opposed. In my sense, SOARCA is looking to minimize and  
19 trivialize the regulatory response based on these overall assumptions that are  
20 coming out of SOARCA. And yet we're going through this exercise here with  
21 NUREG-0654, and I'm just wondering if I can get some comment on that.

22           RICK DANIEL: Thank you, Paul. Gentlemen?

23           ERIC EPSTEIN: We -- Paul, we share your concern. We testified  
24 on SOARCA -- I think Scott Portzline last February down in Peach Bottom, and  
25 agreed that it appears to be a minimization exercise. And actually, kind of threw

1 up our hands and, you know, what we're doing here is we think there is value to  
2 participate. I think you raise a good question because I don't know. There  
3 seems to be conflicting priorities here, conflicting objectives. And maybe  
4 somebody from the NRC, FEMA can reconcile that, but from our NGOs'  
5 perspective, we're probably not even going to be involved anymore with the  
6 SOARCA process; with this process, absolutely.

7 EDWIN LYMAN: I can take this. The funny thing about SOARCA,  
8 is that as far as emergency planning goes it's, you know, it's circular reasoning.  
9 SOARCA, essentially, took evacuation time estimates at the plants it looked at; it  
10 assumed that they were satisfied. It looked at events that did not lead to any  
11 radiological release for many hours until after the entire 10-mile EPZ had  
12 evacuated. So when they discovered that there were no early fatalities as a  
13 result of that event, it was circular reasoning. SOARCA did not look at the kinds  
14 of, you know, more fast breaking events like the large break LOCA, that the  
15 guidance for emergency planning, dating back to its origin originally  
16 contemplated because that guidance said that you need to consider events that  
17 will lead to a release as early as 30 minutes after the emergency is declared, if I  
18 recall.

19 So SOARCA, you know, despite what we heard this morning -- the  
20 cheerleading going about the results -- if you actually look at what the study  
21 does, I don't think it sheds a whole lot of additional light on these issues and I  
22 don't think it ultimately contradicts the need for extensive emergency planning  
23 that could potentially lead to larger EPZs than what are currently in the rules.

24 RICK DANIEL: All right, Mark?

25 MARK THAGGARD: Yeah, I'd just like to add something. You

1 know, one of the challenges that we faced when we initiated this effort was trying  
2 figure out the right timing in terms of when to do it. Because, you know, the  
3 agency's doing a lot of work, you know, someone mentioned earlier about the  
4 work that we're doing in response to the Fukushima event, and so we, you know,  
5 ultimately at some point may have additional changes to EP regulations.

6           One of the challenges, we as staffed, faced was trying to figure out  
7 when is the appropriate time to revise this document. I will say this much, and  
8 SOARCA, I think the work on SOARCA is still ongoing, and our current plans  
9 right now is not to fold that into what we're doing with the document. So, at some  
10 point, that work may be done and the agency may be in position to make some  
11 decisions on it, but we're not at that point right now.

12           RICK DANIEL: All right, thank you, Mark. Other questions from the  
13 audience? Why don't you stand up here?

14           BETHANY CECERE: Please address -- and this is directed to Mr.  
15 Epstein and Mr. Klinger, but of course anyone can respond, please address the  
16 impact of the increasingly tight state and local government's ability to respond to  
17 emergencies despite the regulatory requirements.

18           RICK DANIEL: Joe?

19           JOSEPH KLINGER: Yeah, I'd be happy to take that one on. It's a  
20 challenge. But I think we're doing a good job and it's all done through  
21 partnerships. I know -- and I'll put on my Illinois hat on now -- and this is all done  
22 through mutual A groups. Of the law enforcement, we have the Illinois Law  
23 Enforcement Association; it's ILEAS, and MABAS is the fire. All these groups  
24 work together every day handling emergencies. They help each other when one  
25 community is overwhelmed, they step up and help.

1           Our Homeland Security funding was quite good after 9/11; it's down  
2 to about 10 percent of what it used to be, but we have the equipment. Now we're  
3 focusing our efforts on training. So, it's a challenge, but there's no degradation  
4 or any compromising of safety at this point. And we really don't anticipate that  
5 happening.

6           RICK DANIEL: All right, thank you, Joe.

7           ERIC EPSTEIN: I think Rich Giannotti is probably here somewhere  
8 lurking around from the state. But one of the observations I have is that when  
9 you say -- I don't know who raised the question -- but in a commonwealth like  
10 Pennsylvania, the municipal response is bifurcated if not trifurcated. The county  
11 has an emergency system; the state has, you know, PEMA and DHS. You then  
12 have the home municipality and, in this case, it's actually Londonderry Township  
13 and not Middletown. And I think the trainings are pretty good at bringing  
14 everyone together, as infrequent as it is.

15           You know, when you say response time, that's a curious, I guess,  
16 term to use. A lot of that is controlled by external factors. There's no response  
17 time if there's a Penn State football game on Friday. You're not going anywhere.  
18 You know, in the summer Hershey has 2.3 million people; doesn't matter what  
19 the response time is. We got people who have no idea that there's a nuclear  
20 power plant. July 4th, Gettysburg is being reenacted every year despite the fact  
21 that I think we know how that comes out.

22           So, you know, I'm saying this, kind of to be cheeky, but just  
23 remember the people that respond are volunteers who also take vacations. So  
24 that, you know, response time and how it works with municipalities and  
25 volunteers is cyclical. It depends on the weather, it's depends on the season, it

1 depends on who's head of that department. It depends on funding levels. I  
2 would say -- and I'm sure Rich is here and he may want to talk to it -- that the  
3 state is probably well prepared and, you know, coordinates rather well.

4           We did have an incident a couple of years ago where we had a  
5 contamination at TMI. And response is tethered to communication. The  
6 company opted not to communicate. Well, then, it doesn't matter how good your  
7 plan is if you don't pick up the phone and call. I think Governor Rendell was  
8 governor at that time.

9           I would also point out -- I don't know if you remember this -- we had  
10 a St. Valentine's Day Massacre, where there were six highways closed in  
11 Pennsylvania for a day. Nobody had ever anticipated this -- for a day. I-78 was  
12 closed for a day. Nobody had anticipated it. I'm not blaming anybody but -- so  
13 the response -- I think we're getting better. I think the plan is getting better, I  
14 think the training is getting better. But there's always emerging externalities and  
15 cyclical challenges that -- I mean, it's a fluid situation. So hopefully that  
16 addressed your issues.

17           I think Rich -- Rich can you raise your hand? There's a  
18 Pennsylvania guy.

19           RICH GIANNOTTI. They always put you on the spot --

20           ERIC EPSTEIN: Okay.

21           RICHARD GIANNOTTI: I do appreciate it. I do agree with you. I  
22 think we're well prepared --

23           ERIC EPSTEIN: Okay, you're done.

24           RICH GIANNOTTI: I got a few more things to say. I think the  
25 training staff got a lot of support from the local officials in the community. So, I

1 absolutely agree. As far as response time, one of the things I want to point out is  
2 that -- and one of the best things we've ever done in this country, is the fact that  
3 our EALs are based on plant conditions. Look at fission barriers, look at plant  
4 conditions. And I can tell you that -- in Pennsylvania -- they actually started this  
5 over and over again. Our decisions, to a large extent, for protective actions  
6 recommendations and protective actions are based on plant conditions. And the  
7 reason is that we don't want to wait until you have a release. It takes a lot of time  
8 away from getting the public out of the area. So we practiced this over and over  
9 and over again. Look at plant conditions. We've got the right people with the  
10 right expertise in the state government so that when we make a protective action,  
11 we have the expertise to have an independent assessment of plant conditions  
12 and make a decision based on plant conditions. And that leaves us a lot of time,  
13 hopefully, plenty of time to make the right protective action. Whether it is  
14 sheltering, or particularly evacuation, if we have to evacuate the people.

15           So, the issue with SOARCA and all that, we haven't done anything;  
16 we haven't changed anything based on the results of this SOARCA study. But  
17 the fundamentals and basic principles of basic management pertaining to public  
18 health and safety is to make the right protective action decision, to give it enough  
19 time so that if we have to evacuate people, you know, we take our [inaudible].  
20 And not wait until there is a release from the power plant. I hope I answered your  
21 question.

22           ERIC EPSTEIN: No, it was a setup, Rich. I mean let's, you know --  
23 you're a good straight man.

24           RICK DANIEL: You talk about plant conditions, so you must have a  
25 good relationship with management at the plant.

1           RICH GIANNOTTI: Absolutely. The way it works is that -- this  
2 maybe kind of unique in Pennsylvania -- when there is an event at the power  
3 plant, the utility contacts Pennsylvania Emergency Management Agency. We  
4 have a 24/7 number they are on-call. And if PEMA -- the person who's on call  
5 gets the message then calls the Bureau of Radiation Protection. And then we  
6 have access to the control room action. Directly we talk to the shift manager, get  
7 all the information, and we close the loop with the Pennsylvania Emergency  
8 Management Agency. Depending on the nature of the event, maybe we staff the  
9 Emergency Operations Center and we continue to monitor the event. And I'm  
10 sure other states do that, some other states.

11           So, the key here is to understand what's going on at the plant and  
12 be able to make an independent decision with cooperation from the licensee, and  
13 based on that independent decision, on what/how severe the event is, to make a  
14 predicative action recommendation, and try and finding a protective action  
15 decision by a Senior State Official, so that we're able to protect public health and  
16 safety.

17           It's very important, if you're a state or local official, to have and  
18 maintain an independent -- the capability in being able to make an independent  
19 assessment of plant conditions. And we don't always agree with the licensee's  
20 recommendations. Sometimes, maybe, they are more conservative; sometimes  
21 less conservative. But you need to have the knowledge level at the state level to  
22 be able to make the right decisions.

23           ERIC EPSTEIN: Let me just point out the reality is that recent  
24 events in Pennsylvania became a communication problem. On the St.  
25 Valentine's Day Massacre, Governor Rendell was watching Penn State almost

1 beat Ohio State in basketball, which has never happened -- nobody wanted to  
2 bother him. The head of the National Guard and the head of PEMA was out of  
3 state. Social psychology -- doesn't matter what paradigm you have if you don't  
4 let somebody know. And I think Rich will remember when we had that  
5 contamination incident, Rendell the governor was pissed; nobody contacted him.  
6 So, we can have all the steps in place but, you know, unless --

7 RICH GIANNOTTI: Absolutely. I think the licensees should have  
8 done a better job in letting us know the timing --

9 ERIC EPSTEIN: Thank you.

10 RICH GIANNOTTI: The only thing was that it was not a classified  
11 event. So if it is a classified event, you have to -- there's a timeline, 15 minutes,  
12 that the licensee has to make the particular action decision and let the state  
13 know. In this case, because it was not a classified event, it took a lot longer, and  
14 at first I wasn't very happy with that, the government wasn't happy with it. But  
15 that's something that the utilities needs to be very sensitive in making sure that  
16 even for those events that are not classified, to let the state and local officials  
17 know in a timely manner, so that there are no confusion or any issues,  
18 communication issues.

19 RICK DANIEL: Thank you, Rich. Thank you, Eric. Any other  
20 comments on this subject before we move on? Yes, David?

21 DAVID LOCHBAUM: David Lochbaum from the Union of  
22 Concerned Scientists. Mark, you kind of addressed it in your opening comments,  
23 but I'd like to hear the panel address -- at the end of all this, when the final  
24 document's issued, finally, what would success look like? And your three  
25 objectives, kind of address that, and you're welcome to add to that if you want to,

1 but I need to hear the others say, what would success look like when the final  
2 document comes out?

3           JOE KLINGER: Thanks Dave, that's a challenging question. It's  
4 good. Just something that's workable, comprehensive, that's been vetted by all  
5 the partners that are involved and, like I said earlier, if its required, put in the  
6 rules. If it's something that has some flexibility and stuff, it's guidance. Make  
7 sure it's clear and something that everybody is comfortable with and can actually  
8 use. Not just -- not just something that everybody can pat themselves on the  
9 back and put up on a shelf.

10           So I know that's kind of general, but that's what I have in mind.

11           RICK DANIEL: All right.

12           ERIC EPSTEIN: I would just point to the fact that -- and I'm going  
13 to be very critical here of our culture -- I spent a lot of time in Israel, and until you  
14 have a culture that's invested in its own personal security, it's an uphill battle.  
15 You know, whenever anything happens people always come to me and say,  
16 "What are you going to do for me?" I mean, I'll give you an example: If you're on  
17 a bus in Israel and there's package that's left alone, everybody knows you get  
18 off. Nobody rides the bus here, and if there was a package you'd wonder how to  
19 sell it on eBay. You know, so, I guess where I'm coming from, Dave -- and I  
20 don't mean to be cheeky -- part of it -- it gets back to the people. Until people  
21 feel that they're invested in the process and stay involved in the process -- I'll  
22 give you an example: We had a fast-moving flood event two years ago with our  
23 bus drivers. Really -- and that's a terrible event to happen because it moves  
24 quick and we had stranded bus drivers. We told all the parents not to come to  
25 the school. They came to the school. They came to the school and just

1 frustrated the plan. So part of where I'm coming from is that I don't know that we  
2 can legislate, mandate or change anything here is -- no matter what we do, I  
3 mean when I schedule a bus route, I'm like transporting to inches away because  
4 Muffie doesn't want to get her hair wet. It's the same problem I have with the  
5 parents. I guess what I'd like to see is, how do we get the community -- and not  
6 just the specialized community -- how do we get everybody to participate?  
7 Because when that EMA signal comes on, everybody turns off their radio.

8 RICK DANIEL: All right, so community involvement --

9 ERIC EPSTEIN: Community awareness.

10 RICK DANIEL: Community awareness, different populations;  
11 planning for them. Ed?

12 EDWIN LYMAN: And I think that it would need to address in more  
13 detail some issues that -- right now, I don't know if it does. For instance, if the  
14 protective action recommendations are going to endorse shelter and place for  
15 some populations -- what they sought from Fukushima was people who never  
16 expected they would ever have to do anything like shelter. Suddenly they found  
17 themselves unable to leave their homes for weeks or months. There were no  
18 provisions for how those people would get supplies. They never prepared  
19 themselves because they had no idea it was ever a possibility. So you just can't  
20 say that shelter in place is going to be a new recommendation for some group of  
21 people without actually understating the implications of that. And they might not  
22 be able to evacuate immediately depending on the circumstance of the event.  
23 So, you know, again, you need to think through some of the more practical  
24 aspects of some these recommendations.

25 RICK DANIEL: All right, very good. Thank you. Thank you,

1 gentlemen. Let's take another question from the audience here. Bethany?

2 BETHANY CECERE: In light of --

3 RICK DANIEL: I think it's right there.

4 Bethany CECERE: Okay. In light of the overwhelming public and  
5 environmental impacts from the Fukushima accident, is the NRC considering  
6 new or additional planning requirements for licensees requiring long-term  
7 environmental cleanup and disposal of radiological materials in the  
8 environment following a severe reactor accident?

9 RICK DANIEL: Mark?

10 MARK THAGGARD: Yeah, I'm trying to recall. You know, the work  
11 that we're doing with response to the Fukushima event, we've been working the  
12 three tiers. We're currently working on the recommendations within tier one and  
13 two. I'm trying to recall some of the recommendations that we put forth in terms  
14 of some of the more long-range stuff that we're doing. There are a number of  
15 activities that we're still planning to look at in response to the Fukushima event  
16 that we're not looking at right now. And those are the things that we put in our  
17 tier three -- I don't recall specifically whether the issues that you raised, if that's  
18 one of the issues we're going to be looking at, because I don't have the  
19 document in front of me. But, just keep in mind that, you know, there are a  
20 number of activities that we are going to be looking at in the future. We, you  
21 know, are limited in terms of the resources. We can't work at everything at one  
22 time. So we did prioritize the work, and so there are going to be some additional  
23 studies and some rulemaking that we're going to be looking at some time in the  
24 future. I can't recall, as I said, whether that's one of the issues I'm not --

25 ERIC EPSTEIN: But let me point out more -- in the event you have

1 an accident, and it seemed like that was an extreme scenario -- I can tell you that  
2 from our community, that there's certain populations that will never evacuate.  
3 Farmers are not going to leave their cattle. I raised cattle last summer -- you're  
4 not going to leave your cattle. You know, you have certain populations, if you put  
5 aside the severity of the accident, the Amish are never going to leave. We have  
6 the third oldest population.

7 I don't know if you're aware of this, we have six mine fires that are still burning in  
8 Pennsylvania. We had to physically remove people from Centralia, if you  
9 remember that incident. So I'm more focused on those special populations that  
10 are hard to get to or aren't going to leave. And I don't know if we account for that  
11 when we plan. Farmers aren't going to anywhere. It's just not going to happen.  
12 In fact, one of the most heartbreaking things that occurred during TMI was trying  
13 to separate people from their pets. So, you know, there's a lot of factors that  
14 come into play.

15 I would also look at it from an economic perspective. You have to  
16 understand, if there is a severe accident, what the community's concerned about  
17 after evacuation is the tax assessment. TMI 2, is now assessed as zero. No tax  
18 dollars; haven't got a tax dollar in 33 years. So, there's a lot of economic  
19 consequences towards emergency planning and then what happens after.

20 RICK DANIEL: All right. Thank you, Eric. Bethany?

21 BETHANY CECERE: How will FEMA and NRC divide the labor  
22 associated with actually revising NUREG-0654/FEMA REP-1? Will there be a  
23 bright line between who is in charge of what?

24 MARK THAGGARD: Well right now, we're doing it kind of as a  
25 team. We put together a working group team. I put the two leads -- the two

1 leads are sitting right here -- I don't know if maybe they want to speak on that a  
2 little bit. So, we have a fairly good working relationship with our colleagues from  
3 FEMA. Right now we're kind of doing it as team. I don't think -- one of the next  
4 steps that we're going to be developing, as I mentioned earlier, is a more detailed  
5 project plan. And that's something the staff is going to work on once we get that  
6 more detailed project plan put together. We may be able to better define who's  
7 going to work on what parts of what. But we're still working on that. I don't know  
8 if Don or Bill wants to say anything on that --

9 RICK DANIEL: Don?

10 DON TAILLEART: Sure, Don Tailleart. My name was up on the  
11 screen earlier along with Bill. So I guess I should say a few words.

12 It's a joint document, as has been pointed out. I think most of you  
13 are familiar with that. And there's a good reason why it's a joint document.  
14 When you get into emergency planning, it's really difficult to separate the on-site  
15 from the off-site when it comes to effective planning and coordination; you have  
16 to work together. And we think that's one of the reasons why it's important to  
17 keep this as a joint document. So we're working on it as a joint team. We're  
18 currently in the process of putting together writing teams to address different  
19 topics and different areas of the guidance. And we envision those as also being  
20 joint, with representatives from both FEMA and the NRC on each of those teams.  
21 And we think it's important to carry that out throughout the process to ensure that  
22 when we get to the end and we come out with the final guidance, that we don't  
23 have some kind of misalignment between the NRC telling and the guidance  
24 licensees should look at doing one set of documents, or making changes in one  
25 area; and then the off-site they being told something different and the two don't

1 line up, and it leads to ineffective response.

2                   So the bottom line is we look at this as a joint effort and we intend  
3 to carry that out throughout the process.

4                   RICK DANIEL: All right, good. Thank you, Don. FEMA folks, any  
5 comments?

6                   BILL EBERST: It getting lonely with Don up there talking and  
7 everything. Bill Eberst from FEMA, kind of co-leading this project with Don. We  
8 always have arguments all the time: "Does this document apply more to the off-  
9 sites, the tribes, the locals, or to the on-site folks?" And you know, we bicker all  
10 the time about this. We have lots of discussions about whether it should be a  
11 joint document or if we should go separately, so that sort of thing. And as Don  
12 said, we found many reasons to keep it a joint document. Does that not mean  
13 we should find some flexibility to be able to better identify and enumerate on  
14 things that are more detailed toward the off-sites, state, locals? Should the NRC  
15 have the option to be able to detail some things a little more differently toward the  
16 on-site? We think so. And we think we may have found a way to be able to do  
17 that. I'm not going to lay the surprise on you now for how we think we're going to  
18 do it. But we've had to discuss that a lot and I think we have a possible solution  
19 to give us that flexibility to be able to work both sides of the fence, but also work  
20 together; but also give us that flexibility we think we need to be able to discuss  
21 some difference. So, anyway, just my two cents.

22                   RICK DANIEL: Thank you very much. Bethany, another question?  
23 Any other comments from folks? Paul?

24                   PAUL GUNTER: I just want to follow up on Ed's comment on  
25 inserting realism into the exercise program -- and I guess one of the concerns

1 that continues to come up, that we don't feel is being addressed, is the issue of  
2 role delay and role abandonment in the actual carrying out in an emergency.  
3 And, you know, we've seen this in real emergencies, where for example,  
4 following Katrina 25 percent or 30 percent of the New Orleans Police Department  
5 left with their families. We would anticipate this in a nuclear accident as well.  
6 And again, we did see this following Three Mile Island in the actual aftermath of  
7 the accident. But how is this played out in these exercises? Do states and  
8 federal actually contemplate attrition of first responders in their exercises? And  
9 then how do you -- or do you even contemplate and deal with that?

10 RICK DANIEL: Thank you, Paul. Role Abandonment -- is that  
11 addressed at all? Mark?

12 MARK THAGGARD: I'm not aware that actually being something  
13 that we exercise. I mean, I think one of the -- I think for the most part general  
14 thinking is that people will do whatever it takes to, you know, in a situation. So I  
15 don't know if maybe -- Scott, do you have any input on that? Scott is in charge of  
16 emergency response group. But we don't really exercise anything like that as far  
17 as I know.

18 RICK DANIEL: No comment? Let's go to Joe for a second and  
19 then we're going to come back to it --

20 JOSEPH KLINGER: Yeah, from the state perspective, you know,  
21 we constantly train. You know, we've got six nuclear power stations, so we're  
22 exercising and practicing constantly. And over the years, we've probably had a  
23 few knuckleheads, that in private conversation that will say, "You know in a real  
24 event, I'm out of here." Oh really? So we get them out of there. Now, maybe,  
25 some people aren't quite so forthright and open. But we feel like we've got

1 enough backfill and stuff and enough trained people to take over the few cases --  
2 we envision that it would be few cases if that were to happen. But we do try -- if  
3 we get an indication of somebody just going through the motions to get a  
4 paycheck and stuff and not really going to be there when we need them, then we  
5 find something else for them to do.

6 ERIC EPSTEIN: But I think the problem is, from the volunteer  
7 vantage point, some people are serving two roles. I can think of three incidents  
8 now where a lot of EP people wouldn't be around - first week of buck hunting. I'm  
9 just telling you, nobody's around.

10 RICK DANIEL: So first week of deer season --

11 ERIC EPSTEIN: It's not going to happen. Friday night football, the  
12 fire police and the police are at high school football games. You can't assume  
13 that when a nuclear power plant happens that there won't be any fires, that there  
14 won't be any floodings, there won't be any emergencies. I mean, I guess what  
15 I'm saying, and I think Paul brings up a good point -- you have to assume a  
16 number of folks -- I mean we do it in public schools every day as substitutes.  
17 You know, 5, 10, 15, 20 percent, so I don't know what the percentage is. The big  
18 problem we had at TMI was bus drivers.

19 RICK DANIEL: All right. So going back to what Ed said and what  
20 Paul mentioned, is injecting a little more realism looking at some of these factors  
21 that might play a part and trying to compensate in the plan in the guidance  
22 document for things like that.

23 ERIC EPSTEIN: I think you can about, for instance, where we're  
24 at, there's you know, cannibalizing or deploying the guard for Indian Town Gap,  
25 Troup H, Pennsylvania State Police. I just think you should at least have a Plan

1 B in place ready to go, instead of saying, "Oh, somebody's not coming."

2 RICK DANIEL: All right. Joe?

3 JOSEPH KLINGER: You know, what our experience has been,  
4 because we're the emergency management agency, we deal with rail cars  
5 exploding and all kinds of floods and everything. It's really been our experience  
6 that it's been the opposite. We get -- through mutual aid group, we get more help  
7 than sometimes is even needed. And spontaneous volunteers too, I mean, they  
8 contribute to the problem really; so we have special teams that manage the  
9 spontaneous volunteers. So, I think if there were really an accident at a nuclear  
10 power plant, if people were hunting -- they'd get out of there and go help. I  
11 mean, that's my experience. Maybe it's the Midwest or something --

12 RICK DANIEL: All right, so --

13 JOSEPH KLINGER: -- I do believe that would happen.

14 RICK DANIEL: All right, so cultural differences from state to state --

15 ERIC EPSTEIN: No, I think they play football there, too. I mean,  
16 look, the issue is timing. I mean that's the reality.

17 JOE KLINGER: It is.

18 ERIC EPSTEIN: I mean the issue timing. And I think most people  
19 who get into it are dedicated, want to do it. You know, sometimes, and I think  
20 you're right, Joe, a little to gung-ho. But there are certain holes and certain  
21 windows, it happens.

22 MARK THAGGARD: I think that we -- I should clarify something. I  
23 mean the issue of other people in an emergency was that they would leave and  
24 maybe go take care of their family or something. That's a different issue than  
25 people not being there because they are hunting. You know, the nuclear power

1 plants, they're required to hire adequate staffing to address their emergencies.  
2 So I think they will have adequate staffing. That's not an issue as far as I'm  
3 concerned. The issue in terms of other people would abandon their posts, that's  
4 a, you know, that's an individual type thing. And that was the question I thought,  
5 which we're trying to answer. I think most of us would envision that people  
6 involved in dealing with these emergencies, they understand the ramifications.  
7 So I don't think that's a real issue as far as I'm concerned. So that's one of the  
8 reasons that we generally don't practice it because most of the people that would  
9 be involved in that, they recognize the severity of the situation.

10 RICK DANIEL: All right. Thanks, Mark. Bill?

11 BILL EBERST: Well just a simple comment, I guess. I'm going to  
12 twist this just a little bit. Let's pretend there's not an incident, there's not a  
13 nuclear incident. But it is something that we do think about and it's the same  
14 type of thing we try to play into some of the national level exercises. Like, we  
15 have this thing we call "Reasonable Assurance," around the power plants. And  
16 we have to, kind of, have that before these plants are operating. I'm sure you're  
17 all familiar with that term. So what we did with NLE-11 is we had to command an  
18 earthquake going up in the middle of the country. So had a bunch of nuclear  
19 power plants there were impacted in different ways. And some of them shut  
20 down and that sort of thing. But, with earthquakes, think about what the  
21 responders do. They may be running to stay in the middle of the country, they  
22 may be running downtown St. Louis to pick people out of buildings that are  
23 broken down, falling, out of the rubble, and that sort of thing.

24 So these responders that would normally be around the nuclear  
25 power plant, you know, may have sent to the city or somewhere else. So now

1 we have a situation where even if we shut the power plant down, what's  
2 important? Well, maybe power to those extreme areas now may become more  
3 important, so then there's decisions that oftentimes become political. Do we turn  
4 the power plant on with maybe marginal reasonable assurance? Or do we move  
5 National Guard in? What do we do to get that reasonable assurance back so we  
6 can bring those power plants back up if they were shut down? So these are  
7 things that we do think about on a regular basis. And I will say that we did get  
8 comments on exactly what you said when we had an open docket period the last  
9 90 days, what to do with an absence of responders, or responders that don't  
10 respond, or other things happen? So I it's something we need to talk about a  
11 little more and see if there's a way of cultivating that maybe in the document a  
12 little bit better.

13 ERIC EPSTEIN: I think Edwin --

14 EDWIN LYMAN: No, no, another subject when we get to it.

15 ERIC EPSTEIN: I guess I'm not willing to let it go, because what  
16 percentage of attendants are you assuming? I mean I don't know of any  
17 workplace where they assume 100 percent of attendance 100 percent of the  
18 time. I mean -- I guess what I'm wondering is, is there some kind of built-in plan?  
19 And I'm talking about secondary and tertiary personnel: the people that may not  
20 let people in to a zone; the fire police, you know, the folks like that. So, I guess  
21 what I'm hoping is that we have not necessarily a Plan B, but we're not assuming  
22 that everything occurs when everybody's in place and the weather is bright and  
23 sunny.

24 JOSEPH KLINGER: Also, I'd like to point out if I could, even if the  
25 local resources are overwhelmed, they turn to the state, just in accordance

1 NIMS. And then if the state is even overwhelmed, we have the Emergency  
2 Management Assistance Compact, the EMAC, where we use it all the time. We  
3 used it for the recent super storms in the northeast. We can call on other states.  
4 So, I think to address it as having that backup. It's like Plan D or E, for that. It's --

5 ERIC EPSTEIN: But in Pennsylvania four years ago we had that.  
6 For one day the entire state was paralyzed, and you had all those personnel  
7 deployed. It's a reality. Six highways closed. We had the states, we had the  
8 Feds, we had the National Guard, and we had to wait for the weather to abate.  
9 So I don't think it is a Plan D. I think it's Reality A.

10 RICK DANIEL: All right. Thank you, gentlemen. Ed, do you want  
11 to --

12 EDWIN LYMAN: Well, I just wanted to throw something else into  
13 the mix, and I know hostile action-based events are being covered in a different  
14 session, but that is another wrinkle that has some bearing on this issue.  
15 Because if there's actually a deliberate attempt to interfere with emergency  
16 response, that could lead to a similar outcome. So, insofar as hostile-action  
17 based events are to be covered in NUREG-0654 and I assume they will, that's  
18 the type of issued that I think should have to be addressed as well.

19 KEVIN LEUER: Kevin Leuer from the state of Minnesota  
20 Homeland Security Emergency Management. Really, two comments: first one is  
21 about performance-based standards and look at development in NUREG-0654.  
22 And I think it's important to look at the outside goal affecting the health and safety  
23 in the population responders, based on their performance versus a prescriptive,  
24 "Do A in 15 minutes; B in 16 minutes." I'll give you an example, one of our  
25 struggles right now in hostile action planning is being able to saying, you know,

1 the reg is saying that those responders who go to the site have to have dosimetry  
2 prior to getting on the site. Well if I do that, I'm going to delay the law  
3 enforcement response to take out the bad guys that prevent the release. And so  
4 there's some applicability that you have to be able to put performance in there,  
5 that says, I can get the dosimetry to them before they're going to get to a point  
6 where they need it. That should be my performance standard versus saying  
7 you've got to have it before you can get onto the site. And trying to look at the  
8 realities of the response and how we make that a functionable response  
9 throughout the systems. So I would really encourage is us to look at the  
10 standard, you look at the performance-based approach, so we don't have  
11 unintended consequences that result, and a regulatory compliance that actually  
12 delays our response, our ability to effect an appropriate response.

13           And the other comment that I would have is that you look at  
14 protective action levels and decision making -- that's the basis of NUREG-0654 --  
15 why we exist. And I think you have to take a look at the 10-mile, the 50-mile  
16 zones as a hand in glove. As we're looking at the NUREG-0654, and  
17 simultaneously you need to look at what are the appropriate distance for those  
18 zones. And I'm not advocating that they be larger or smaller. But we have  
19 SOARCA that says one thing, we've got Fukushima that seems to imply some  
20 other things. I think as this moves forward on a parallel track, there should be a  
21 scientific look at what are the appropriate evacuation and/or shelter zones,  
22 what's the appropriate relocation zone distances, and what are our ingestion  
23 zones. I'm not the expert, but I know how to implement a plan. And if I know that  
24 these people need to be trained out to this distance for evacuation and  
25 sheltering, I can make sure that we put systems and processes in place to do

1 that. Same thing for relocation; I think that's one of the areas we have a gap  
2 right now. I think current wisdom shows that we can get relocation PAGs  
3 exceeded perhaps beyond the 10-mile. If I'm still in the existing risk county, it's  
4 not a big deal because they're all trained; but if I cross another jurisdiction,  
5 they're not trained and ready to implement that.

6 JOSEPH KLINGER: Good point

7 KEVIN MILLER: And so when we look at this and able to say,  
8 "What's our distance for evacuation and shelter?" You tell me the distance, I can  
9 prepare the communities. Tell me the distance for relocation where PAGs are  
10 possibly or likely be exceeded on a severe reactor accident, I can prepare those  
11 communities and have them ready. Same thing for ingestion. You know, tell me  
12 what those numbers are from the state side, and we can implement the programs  
13 and things that do that. And I think it's a hand-in-glove as we look at 0654,  
14 because I can tell you I am always -- every meeting that we have and involve  
15 citizens that live in and near the plants, their questions are, "Are evacuation  
16 zones defined properly? Are ingestion zones defined properly?" My answer is  
17 yes, based on current information and what we have. But I think there's a lot of  
18 discussion out there post-Fukushima that says, you know, we should look at this.  
19 I think it needs to be a parallel track with 0654 because that would create  
20 significant changes in 0654 to any of those boundaries change.  
21 But I do think we need to look at what is the right basis for evacuation and  
22 sheltering zones; if that's two miles, if that's 10 miles, if that's 12, tell me what it is  
23 and we can implement it. I need the science behind it. I'm not the person that  
24 can calculate that. Relocation, I think, is a gap. It's not really defined as a  
25 distance where we need to prepare those jurisdictions on how far we may

1 exceed relocation PAGs, so we can properly have those communities prepared  
2 and implement those types of things. That seems to be a huge gap in  
3 Fukushima, it was more on the relocation PAGs than the evacuation PAGs  
4 potentially being exceeded and where there are training and capabilities to do  
5 those relocations. And finally just, you know, what is that ingestion? Does that  
6 stay the same or does that zone change? We can implement those programs  
7 but, you know, I need the scientific community and those experts behind it to look  
8 at SOARCA, to look at real events, to look at other options, and say what are the  
9 distances. Shelter, evacuation and relocation and ingestion. Thank you.

10           ERIC EPSTEIN: Can I ask you a question? I'm not from  
11 Minnesota. I don't know how many plants there are. Monticello, Prairie -- I don't  
12 know if -- I guess my question is and my frustration is, and I think you raise a  
13 good point -- is that the demographics, the geography are way different in  
14 Pennsylvania. Peach Bottom is like in the middle of nowhere. I mean, if you've  
15 ever been there, it's like Argo. And TMI is different. And I guess one of the things  
16 I like people to think about, and I don't know if your experience in Minnesota is, I  
17 don't know that one size fits all. I mean the support communities, the  
18 demographics, the density, the road conditions, I mean, you know -- at the end of  
19 the day I think that's one of the problems I have with this -- what we're trying to  
20 do here is that they're all so unique and different.

21           KEVIN MILLER: I think the difference between us is that we've got  
22 one site that's a 90,000 population; another site that's got 30,000.

23           ERIC EPSTEIN: Right.

24           KEVIN MILLER: There's a big difference in those. But it's really,  
25 what is the science behind the release? Population impact isn't going to be

1 impacted by, you know -- isn't going to impact the cloud that's potentially being  
2 released or where the dropout is. It's where those distances -- we'll deal with  
3 whatever the appropriate population is that's within that. And we've got  
4 evacuation time estimates and things that enhance that to help show us if we  
5 have a densely populated area, what's the best routing, how we implement it. So  
6 I think that those are really two different things. When we look at what's the  
7 science behind: how far is it out that we exceed evacuation and shelter PAGs  
8 versus relocation PAGs versus ingestion PAGs; and separating those based on  
9 the science. What population I overlay it on is going to be based on that area.  
10 And other than you have some topographical differences that are going to impact  
11 wind and where it disperses, but that's unique to each site.

12 RICK DANIEL: Thank you, Mark. So, more performance-based,  
13 less prescriptive. Kevin? Oh, Kevin, I'm sorry.

14 ERIC EPSTEIN: Kevin, I just want to say that it goes back to the  
15 thing I said before. You have to account for psychology and human behavior. I  
16 mean, that's a reality that we just can't ignore.

17 MARK THAGGARD: Rick, before we go on, can I respond to  
18 something that Kevin said?

19 RICK DANIEL: Absolutely, go ahead.

20 MARK THAGGARD: And I appreciate the comments, Kevin. In  
21 terms of, you know, I mentioned earlier, one of the challenges that we faced  
22 when we initiated this effort is trying to find the right timing, because there's a lot  
23 of moving pieces going on right now. You brought up the discussion about  
24 looking at the size of the EPZ, that's one of the issues that we are actually  
25 looking at, going to be looking at on the tier three; I mentioned the tier three work

1 that we're doing in response to Fukushima event. So that is something that  
2 eventually we are going to look at. And so, you know, one of the challenges that  
3 we're facing is trying to figure out the right timing. When should we revise the  
4 document? Because obviously as we get into looking at things like the size of  
5 the EPZ or even, you mentioned the performance based -- we're doing some  
6 work looking whether or not we should come up with a more performance-based  
7 regulation. So we're doing some work on that right now. So, you know, those are  
8 some of the issues that we are looking at, and that's one of the reasons I  
9 mentioned that I put the challenge to my staff. As we go through this process of  
10 revising this document to try to come up with an approach that would allow us to  
11 make changes to it more easier in the future, where we don't have to wait. You  
12 know, if we make some instant changes to our regulation -- we can fold those  
13 into future revisions of the document without having to wait 30 years to do so. So  
14 that's one of the challenges I put out to staff as we go through this process.

15 RICK DANIEL: All right. Thank you, Mark. Ed?

16 EDWIN LYMAN: Yeah, well, that was actually a question I was  
17 going to ask: Is there a way to write parts of the document to accommodate more  
18 rapid changes if there changes to the actual rule? In particular EPZ size or  
19 related issues, so I guess we'd encourage you to continue looking into how we  
20 might be able to do that in a smart way.

21 Just on one caution on performance-based, I guess at UCS we're  
22 sometime a little skeptical of performance-based as a code work for, you know,  
23 "Don't micromanage us." But, you know, there are cases where  
24 micromanagement, if that's the right term, is appropriate, because too often  
25 performance-based can lead to sloppy compliance. And you just have to look at

1 -- my favorite example are the [EA-02-026, Section] B.5.b measures in response  
2 to the protection against loss of large areas of the plant through explosion and  
3 fire, with B.5.b, requirements are put in to be, quote, "performance based" end  
4 quote. But then when there is inspections of the B.5.b after Fukushima, they  
5 found out that a lot of them wouldn't perform. So it seems the level of regulatory  
6 oversight is not adequate, and that's a lesson we're learning from performance-  
7 based regulation.

8 RICK DANIEL: All right. Thank you, Ed. Speaking of performance  
9 based, I think we have another question on that.

10 BETHANY CECERE: The state says make it performance-based,  
11 and NGOs say make it prescriptive. How will NRC and FEMA strike a balance?  
12 Any initial thoughts on which approach is best for EP?

13 MARK THAGGARD: Well, as I said, we are looking at it right now.  
14 We've got some work that we're doing looking at ways -- if we can, make our  
15 regulations more performance based. But that's something that we're just  
16 looking at right now. That work that is being looked at, we're nowhere close to  
17 being done on that. And it's -- ultimately any decisions on whether to change our  
18 regulations to go towards more performance-based would have to be approved  
19 by the Commission. So that's not something that we're ready to put into this  
20 version of the document, you know. It may be something in the future, but we're  
21 not there yet.

22 RICK DANIEL: All right. Thank you, Mark.

23 BETHANY CECERE: Are there any budget reductions that might  
24 impact your plans?

25 RICK DANIEL: Joe?

1 JOSEPH KLINGER: What's the --

2 RICK DANIEL: Are there any budget reductions that might impact  
3 your plans?

4 JOSEPH KLINGER: I kind of addressed that earlier. We're  
5 challenged just like all the states and locals. I mean it's a tough time. And you  
6 see it right here, and NRC and FEMA even are struggling now. So new  
7 challenges -- heard about the research being cut for NRC and stuff. So it's  
8 challenge that all over -- that's why all these partnerships that we've nurtured  
9 over all these years are so critical, and that's how we get by is eliminate  
10 duplication of efforts on people's parts, sharing resources, communicating more.  
11 The three Cs of emergency management is coordination, collaboration and  
12 communication. So...

13 RICK DANIEL: All right. Thank you.

14 ERIC EPSTEIN: I would just point out that I think we have pretty  
15 good standards for training and certification. I think the resource issue is a valid  
16 issue at the state and local level. There's just no money. Which is contrary to  
17 what happened after 9/11, when I happened to think we didn't necessarily spend  
18 money smartly; I'm not sure that the borough of Perdix needed a fire engine.  
19 But that being said, I think as long as we have those rigorous training standards,  
20 I mean, the people are your most important resources.

21 RICK DANIEL: All right. Thank you, Eric. Questions from the  
22 audience? Okay, we're going to back to the cards.

23 BETHANY CECERE: Do you think NUREG-0654 can be updated  
24 with an all-hazards approach? Or in other words, is there anything specific to  
25 capture in all-hazards plans?

1                   MARK THAGGARD: I don't know. Do one of my colleagues from  
2 FEMA want to take a stab at that --

3                   JOE KLINGER: Yeah. I think there's parts of it probably that are  
4 best suited for an all-hazards approach, but the 0654 ought to be more specific to  
5 the REP program. That's why it exists. I know our Conference of Radiation  
6 Control Program Directors, of which I'm the chair-elect right now, that was one of  
7 their comments is that a lot of the more all-hazards approach shouldn't be in this  
8 document because it's already addressed elsewhere. Why address it there? I've  
9 heard the opposite too, so I'm interested in hearing your opinion there.

10                  BILL EBERST: Okay, and if I get this wrong here, Harry  
11 [Sherwood]'s going to jump up and correct me. Obviously we think about these  
12 things all the time since we're FEMA, and we're kind of an all-hazards agency,  
13 right? So -- but then again, we started with 0654 and this before we had all the  
14 other stuff. So we do think about it a lot. All-hazards approach, basic 101  
15 emergency management. We built plans, right? 0654, the biggest piece of  
16 0654, is guidance for building good emergency plans, right? So when we do that  
17 -- we have another document called CPG-101, which tells you how to build a  
18 plan, but what's not in CPG-101? Standards, right? There's no standards in  
19 there. So we have 16 planning standards and a bunch of criteria underneath  
20 them. You have to have some plan -- standards to put in your plan somewhere,  
21 okay?

22                  So in the FEMA realm , the DHS realm we now have -- and PPD-8,  
23 that talks about core capabilities instead of TCOs, right? So those are things that  
24 are being built into plans lately, right? So we're going to take a look at -- we've  
25 already done some cross walks and stuff on our planning standards and our core

1 capabilities, and showed some relationships because we think that's important.  
2 Because we know that a lot times for states and locals, are funded by those  
3 capabilities in a lot of their areas. They get money, they fund through  
4 capabilities, they show performance, they get grants for capabilities and that sort  
5 of thing, so we probably should show some relationships with our planning  
6 standards and those core capabilities. You know, I think we've got good  
7 standards. I don't think anyone would say we don't have good emergency  
8 management planning standards. But are there some things we can learn by  
9 looking at core capabilities and relating them? Sure. And we want to do that.

10 RICK DANIEL: All right. Thank you, Bill.

11 MARK THAGGARD: Kevin. I think Kevin wanted to --

12 KEVIN MILLER: I guess I wanted to just comment on all-hazards  
13 approach in the NUREG-00654; that's a regulatory document. And I don't think  
14 it's appropriate to put all-hazard additional requirements in the radiological  
15 requirement document. It's not a planning guidance, it's a regulatory document  
16 that we have to comply with and that we're evaluated against. I think it's  
17 maintained its focus of a nuclear power plant and that level of preparedness.  
18 There are other documents that will address the all-hazard approaches.

19 In Minnesota our plan is all-hazard. So I address the regulation  
20 through an all-hazard plan. I address multiple regulations through my all-hazard  
21 plan. But I would caution about rolling other things that are not REP-related in  
22 0654, because they become regulation and they become evaluation criteria. So  
23 I'd be very cautious that the regulation should stay focused on the nuclear power  
24 plant, and nuclear power plant specific things that are not addressed in our all-  
25 hazard plans. Thank you.

1           RICK DANIEL: Thank you, Kevin. Any other comments on this  
2 topic before we move on? Bill?

3           BILL EBERST: Just a final comment, and if I don't say it, Mark  
4 would say it probably: 0654 is a guidance document, it's not regulation. With 16  
5 claiming standards that come from regulation, but -- and that's one of the things  
6 we're addressing when we redo the document is the relationship between where  
7 the regulations are and where all of the guidance is. We have this problem on  
8 the FEMA side all the time, where people -- state and locals -- feel that that's  
9 regulatory and they have to do it. But as you've seen in our REP manual, we  
10 give you the opportunity to do alternative approaches because it is all guidance.  
11 And we really need to look at it as guidance and really know what is regulation  
12 and what isn't. I know Bob [Kahler] will probably want to get up and say a few  
13 more things or Don [Tailleart], here, but it's kind of sticky, but I think we feel part  
14 of our purview for redoing the document is making sure that there's a good  
15 understanding on how these three documents line up: the CFR pieces, the REP  
16 manual piece, and then the 0654 piece, which is caught right in the middle. A  
17 good example -- how everyone is very confused about where it falls and what it  
18 really is. So, I'm glad you brought that up. And I don't know if I clarified it at all,  
19 but we definitely need to do that, and we will do it.

20           DON TAILLEART: I'll just add a little bit from a on-site licensee  
21 perspective. The NRC position on 0654 is essentially the same. It is a guidance  
22 document. It describes a method that's acceptable to the NRC for complying  
23 with the 16 planning standards that Bill has been referring to. There may be  
24 other approaches and, in fact, there are other approaches that some licensees  
25 have used to demonstrate compliance with those planning standards. And as

1 long as they run those by the NRC and we find them to be acceptable, so that's  
2 okay, too.

3           What we find though, the situation that exist is that most sites --  
4 most licensees -- in fact, I think the case is also the same for most off-site  
5 agencies -- do follow the guidance that's in 0654 demonstrate compliance with  
6 those type 16 planning standards. So, in some respects, I think some people  
7 have seen that as becoming, you know, the standard on how to implement the  
8 standards; but it's really just guidance and there may be other acceptable  
9 methods out there that both on-site or off-site agencies could use to demonstrate  
10 compliance.

11           RICK DANIEL: Thank you, Don. Before I go any further -- we'll  
12 almost conclude here -- but just wanted to mention to you folks that are listening  
13 in on the phone, if you have questions or comments regarding this session that  
14 you'd like to direct to the NRC, you can send them to my email address, and I'll  
15 forward it to the proper people. That'd be Richard.Daniel -- D-A-N-I-E-L --  
16 @NRC.gov, G-O-V. Richard.Daniel@NRC.gov. And we will get your questions  
17 to the right people. And that goes for you folks here in the audience as well. If  
18 you think of something on your way, and say, "Gee, I should have brought that  
19 up," please forward it to me, to the facilitator, and I'll make sure that Mark and  
20 company get the question or the comment. We value all of them.

21           Bethany, another question? Okay. I'll go to Scott and come back  
22 to you. Scott?

23           SCOTT MORRIS: Yeah, Scott Morris from NRC, deputy director  
24 for Incident Response at the NRC. So I felt, listening to the conversation today,  
25 feel a little bit compelled to make an observation or a statement before this

1 session ends; and that is preparedness is obviously very important, very  
2 dynamic. It's essential, it's got to happen all the time. It never ends. Planning is  
3 always happening at every level, or should be at every level. But when the event  
4 happens, there's a whole other world that I'm not sure the audience is even fully  
5 aware of. Because the incident response framework, the national response  
6 framework, all the way down to -- somebody mentioned the whole community  
7 and the direct community, is just inculcated in the entire spectrum of response.  
8 And this is something that we practice, that I have an entire staff focuses on, this  
9 inter-agencies work that occurs all the time, all the time at every level. And I just  
10 want to make sure that people didn't think that, you know -- not that you didn't  
11 think there was a response mechanism, but there's a very, very robust response  
12 mechanism already in place and it's practiced routinely. And it goes without  
13 saying that plans are great, but you know, somebody famous said this many,  
14 many years ago: Planning is essential, but when the first shot's fired it all goes  
15 out the window. Because - you can never plan for every possible scenario. I  
16 mean people are not going to show up for work, or abandon their posts, or what  
17 local weather is like or what time of day it is, or when the football game is. You  
18 know, again, you plan, you plan, you plan. But the actual response is not ever  
19 going to be consistent with the established plan. And so our entire response  
20 framework is predicated on that.

21           And Bill mentioned core capabilities; understanding where/what the  
22 core capabilities of all the players are, where they are, how to get to them, how to  
23 bring them to bear. And that includes not just the locals, not just the states, not  
24 just the public, the community centers and all those others, but also the wide  
25 array of federal responders including the military. Very, very large and robust

1 military capability for radiological response in this nation right now, and there's  
2 very detailed, once again, plans, for how to bring those to bear, there's an actual  
3 answer.

4                   So I just wanted to sort of end on that. There is a whole other side  
5 to this.

6                   RICK DANIEL: Great. Thank you, Scott. All right, folks, we're  
7 going to take one more question, and then we're going to close, okay? Why  
8 don't you stand up and give us your name and where you're from?

9                   MARTY PHALEN: My name is Marty Phalen, I'm a health physicist  
10 from Region 3 in the NRC. I just want to let people know there's an NREP  
11 conference coming up in April, for those that know or don't know. It talks about  
12 the other side of the house from the NRC, so maybe some of the NRC's folks.  
13 It's something available for people can make it and budgets can be supported  
14 and find it. I think it's in Austin, Texas this year.

15                   RICK DANIEL: Thank you, Marty. All right, ladies and gentlemen,  
16 if you could just give a round of applause to our panel.

17                   [applause]

18                   Folks on the phone, we appreciate you listening in. And again,  
19 Richard.Daniel@NRC.gov. If you have any questions or comments, we're very  
20 much interested. And ladies and gentlemen in the audience, thank you so much  
21 for being a respectful group of people listening, and we really appreciate you  
22 being here. So thank you.

23                   [Whereupon, the proceedings were concluded]