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5 UNITED STATES NUCLEAR REGULATORY COMMISSION'S  
6 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
7

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9 The contents of this transcript of the  
10 proceeding of the United States Nuclear Regulatory  
11 Commission Advisory Committee on Reactor Safeguards,  
12 as reported herein, is a record of the discussions  
13 recorded at the meeting.  
14

15 This transcript has not been reviewed,  
16 corrected, and edited, and it may contain  
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1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

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4 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS (ACRS)

5 + + + + +

6 SUBCOMMITTEE ON SITING

7 + + + + +

8 OPEN SESSION

9 + + + + +

10 FRIDAY,

11 AUGUST 20, 2010

12 + + + + +

13 ROCKVILLE, MARYLAND

14 + + + + +

15 The Subcommittee met at the Nuclear  
16 Regulatory Commission, Two White Flint North, Room  
17 T2B1, 11545 Rockville Pike, at 8:30 a.m., DR. DANA  
18 POWERS, Chairman, presiding.

19 MEMBERS PRESENT:

20 DANA POWERS, Chairman

21 J. SAM ARMIJO

22 DENNIS C. BLEY

23 MICHAEL T. RYAN

24 DESIGNATED FEDERAL OFFICIAL:

25 NEIL COLEMAN

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

(8:27 a.m.)

OPENING REMARKS AND OBJECTIVES

CHAIRMAN POWERS: The meeting will now come to order. This is the second day of that meeting of the Advisory Committee on Reactor Safeguards Subcommittee on Siting. I am Dana Powers, Chairman of the Subcommittee. Members in attendance are Sam Armijo, Michael Ryan. And we're told that Dennis will join us. We also are joined at the table by our consultant John Flack.

The purpose of the meeting is to continue our examination of the MOX fuel fabrication license application and associated NRC safety evaluation report. Again, the Subcommittee is in the business of gathering information and licensing relative to issues and facts to formulate proposed positions and actions as appropriate for deliberation by the full ACRS.

Neil Coleman is the designated federal official for this meeting.

Let's see. We will close the meeting for proprietary information shortly.

A transcript of the meeting is being kept.

And the portion of that transcript dealing with the open portions of this meeting will be made available.

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1 It is requested, of course, that speakers first  
2 identify themselves and speak with sufficient clarity  
3 and volume so they can be readily heard.

4 I don't have any requests for making  
5 statements from the public for this part of the  
6 meeting. And I don't have any opening comments to  
7 make this morning. Do any of the other members have  
8 comments they would like to make?

9 (No response.)

10 CHAIRMAN POWERS: We will proceed with the  
11 meeting. And I think our first step will be to close  
12 the meeting.

13 (Whereupon, the foregoing matter went off  
14 the record at 8:29 a.m. and reconvened in closed  
15 session. Open session was reconvened at 4:52 p.m., as  
16 follows.)

17 16. SUBCOMMITTEE DELIBERATION

18 CHAIRMAN POWERS: Let's go on the public  
19 record now. We need to do two things. We need to  
20 talk to them about what to present to the full  
21 Committee. And we'll give you faint guidance on that  
22 because I can't tell you very much what to do there,  
23 but I'll do my best. And then we need to discuss  
24 draft positions members think that should come forward  
25 on this.

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1 MR. COLEMAN: Dr. Lyman, this is Neil  
2 Coleman. I had promised to tie you into the meeting,  
3 give you a chance to place some remarks on the record.

4 Sorry we missed you. We ran a little later than  
5 according to the schedule. But feel free to send us a  
6 letter. If you need additional details, you can  
7 contact me at (301) 415-7656. Thank you.

8 CHAIRMAN POWERS: Okay. I think we can --

9 MR. COLEMAN: We are in open session. We  
10 are technically in open session here.

11 CHAIRMAN POWERS: We are not just  
12 technically. We are officially in open session. The  
13 schedule for the full Committee is two hours, of which  
14 some substantial period of time has to be allowed for  
15 a presentation, I mean, questions by the Committee.

16 I am ill disposed to give you much  
17 guidance on this because it's not much time to present  
18 all of this. It seems to me that if I were MOX  
19 Services, that I would formulate a presentation that  
20 said, "Here is what our facility will do," much like  
21 you did at the beginning of this. But you might want  
22 to be a little more elaborate on that because most of  
23 the members of the current ACRS were not members of  
24 the ACRS during the CAR. Okay?

25 And then I would in a fairly summary

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1 fashion say that in developing this facility, we have  
2 addressed the questions posed by the ACRS at the CAR,  
3 maybe give a capsuled description of how you have  
4 handled those things. But you just simply don't have  
5 the time to go to the depth you did, but, for  
6 instance, you can certainly say, "Look, in the area,  
7 we have gone beyond the Defense Nuclear Safety Board"  
8 and you have this strategy, which leaves us an open  
9 position that resolves questions that are raised in  
10 DPO and things like that. And try to treat it in a  
11 fairly capsule fashion, hitting the high points of  
12 what you talked about here, but it's going to have to  
13 be fairly truncated and whatnot.

14 For the staff, you need to explain what  
15 you did in your review. And in general, your  
16 presentations here have been just fine. I mean, they  
17 have been lovely. But to the extent you can say,  
18 "Look, we certainly looked at the documentation, but  
19 if you can give us some sense of the magnitude of the  
20 additional work you did, what you were comparing  
21 against," I think that helps the Committee understand  
22 better how much you have done. You don't have to be  
23 too maudlin about thousands and thousands of hours,  
24 but you can say, "Okay. We certainly went into their  
25 offices. We looked at the additional documentation on

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1 these items."

2 And, again, hitting the high points of  
3 those things that we have covered today, perhaps  
4 reinforcing, you know, "We had these variety of  
5 questions that I am going to talk about especially --  
6 I mean, we viewed the whole damn thing, but here are  
7 the ones that I am going to talk to you about."

8 And Committee members can ask questions.  
9 And you can practically assure that the digital  
10 instrument system that Mr. Rahn discussed, he's going  
11 to get additional questions on it. I mean, he did a  
12 marvelous job there. Mike did a tremendous job on his  
13 presentations as well and whatnot.

14 I am going to try to hold down the  
15 discussions on the ISA as a regulatory entity, but I  
16 will fail miserably on that. But your objective is  
17 not to defend the fact that that is a regulation.  
18 Your objective is to say, "Here is what we've done."

19 Now for the members, we have two chores.  
20 The staff is asking for us to write a letter that  
21 comments on the quality of the review. The Commission  
22 is asking us, can this facility be built and operated  
23 with no undue risk to the public health and safety?  
24 Okay?

25 So we have a twofold job. I mean, our

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1 letter is going to go to the Commission. So we have  
2 to cover both aspects. So I will ask if members have  
3 any particular issues that they think should be  
4 addressed.

5 MEMBER BLEY: Framed in that vein, I think  
6 probably not. I have a few other comments, but I  
7 think in that vein, I have been impressed with the  
8 level of detail and the digging. there were some  
9 things on fire, but I am pleased they're doing the  
10 things I didn't know about when we had those  
11 discussions they told us about later that I think will  
12 address some of my concerns.

13 CHAIRMAN POWERS: John, did you have any  
14 points?

15 MR. FLACK: Well, no. I mean, I think  
16 that the approach they took, I mean, the ISA was very  
17 impressive. The summary, of course, is very  
18 impressive, thousands of pages of information there.

19 I think the four pillars and the  
20 strategies they used was really nice. I like the way  
21 they laid that out, you know, how they addressed these  
22 issues using these four pillars and the strategies.

23 I think the lessons learned from the  
24 French, I mean, that really made --

25 CHAIRMAN POWERS: That certainly helps.

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1 MR. FLACK: Yes. I think you can also  
2 look at that as being supportive of the whole process.

3 CHAIRMAN POWERS: Yes. My tendency is  
4 certainly to acknowledge that information comes from  
5 the French as the knowledge base they have, but they  
6 still have to build a facility here and run it here.

7 MR. FLACK: Right. There are differences.

8 CHAIRMAN POWERS: They get information  
9 that way, and they get lessons learned. But I don't  
10 want to portray this thing as a carbon copy of  
11 somebody else's facility. You carry a lot of baggage  
12 when you do that and whatnot.

13 MR. FLACK: Well, the red oil, I guess the  
14 red oil thing, we'll have to close the meeting if they  
15 want to get into details on that, but we're trying to  
16 keep the meeting open, I guess, the full Committee, at  
17 that point.

18 CHAIRMAN POWERS: My tendency is, but if  
19 we get the questions that have to be answered in a  
20 closed meeting, we can close the meeting. I mean,  
21 there is just no question about that. But my tendency  
22 -- I mean, I would gear my presentations for an open  
23 meeting.

24 MR. FLACK: For an open meeting.

25 CHAIRMAN POWERS: And then if we have to

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1 ask questions, we will close it and do that  
2 separately.

3 MR. FLACK: Yes.

4 CHAIRMAN POWERS: Sam?

5 MEMBER ARMIJO: Well, first of all, I  
6 think there's been excellent work by the applicant and  
7 the staff on a very complex process and engineering  
8 job. About the only place where I think there's a big  
9 ticket safety issue that should be addressed, whether  
10 it's in the regulations or not in the regulations, is  
11 the issue of external fire of a large, deliberately  
12 set fire by virtue of the aircraft impact.

13 And I don't think anybody builds a  
14 facility with walls nine feet thick for the fun of it.

15 So somebody must have had in their minds protection  
16 against something like an aircraft impact. That would  
17 be a localized fire, massive fire, with very little  
18 warning and assessment of the capability of the MOX  
19 facility to perform or shut itself down, protect its  
20 people I think should be done. But other than that,  
21 everything else within the process I think has been  
22 covered very thoroughly.

23 MEMBER RYAN: I will add my thanks for  
24 extremely well-prepared briefings by both the  
25 applicant and the staff. It really has been a very

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1 productive two days. And we have covered an awful lot  
2 of ground. So thank you for that.

3 Let's see. A couple of things. I think  
4 if maybe the conversation about the waste was  
5 sharpened a little bit along the lines of the points  
6 we talked about so that handoff is a little bit  
7 clearer to the full Committee, it would be helpful.  
8 So I think that's one.

9 And I guess, just for my own interest, a  
10 few more sentences here on the radiation protection  
11 program and how that's going to work would be helpful.

12 I am going to guess that, for the most part, external  
13 exposure is not a huge hill to climb, but it really  
14 boils down to the internal dosimetry program and led  
15 by plutonium, which is hard to detect. And it's a  
16 tough radionuclide. If you do have an intake, do you  
17 even quantify it as a dose? So a little bit, just a  
18 few lines on that, might be helpful to understand.

19 And if you want to just add that into your  
20 industrial safety discussion or something along those  
21 lines, that would be fine. And, again, I repeat my  
22 recommendation to think about the combination of  
23 fixed-area air samples, BZAs, and mobile CAMs and all  
24 that other stuff and how you would stay ahead of that  
25 tough-to-monitor situation.

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1                   So thanks very much. I appreciate it.  
2                   And, again, my compliments on a wonderful two days.

3                   CHAIRMAN POWERS: Well, certainly we have  
4 progressed substantially since we did the construction  
5 authorization. And certainly I think the approach to  
6 red oil is robust. And you have gone well beyond the  
7 DNFSB. And I think that certainly addressed our  
8 questions.

9                   You have a much more mechanistic treatment  
10 of HAN, and his issues I think is well-founded. I am  
11 still concerned a little bit about plutonium  
12 precipitation in relation to that. I suspect that can  
13 be resolved by looking at some of your modeling.

14                   And so maybe we can look at that report.  
15 I know the staff reviewed it. And so if we could look  
16 at that, we could resolve that issue.

17                   Criticality safety is pretty classic here.  
18 It looks like it's followed pretty well, kind of  
19 expectations. And, to be honest with you, you have  
20 gone a little beyond what I expected because you're  
21 not so heavily reliant on double contingency. You  
22 have gotten more with your four-pillar approach. So I  
23 think you are in good shape on that.

24                   Fire analysis in the facility is certainly  
25 treated and following industrial standards. I think

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1 you need to resolve this issue of extinguishing the  
2 fire. And it sounds like that is going to happen as  
3 you interface with the fire services there at Savannah  
4 River. So I am not very concerned with that.

5 The external fire, I think because you  
6 have a good way to interrupt the system, that, in  
7 fact, you can respond to external fires in a much more  
8 deliberate fashion. I think at some point you've got  
9 to lay that plan out. But I am not very concerned  
10 about it.

11 I do like what you have done on  
12 interrupting services. And it's an interruption of  
13 your ability to transfer material across the fence  
14 line. I'm concerned for the ACRS. So it does not  
15 hurt to bring that up and talk, say some stuff about  
16 that because, I mean, it sounds like you've got that  
17 worked out pretty well.

18 Again, I'll add I thought the  
19 presentations were vastly better than I anticipated  
20 them to be and appreciated every bit of the amount of  
21 effort, including the backup slides. I was glad you  
22 included the backup slides. It helped a lot because,  
23 I mean, you can read. Some people don't think the  
24 ACRS members can read, but we can --

25 PARTICIPANT: If it's in big print.

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1 CHAIRMAN POWERS: -- if you don't mind us  
2 moving our lips when we're doing it. But it's been  
3 time well-spent. And I think everybody concerned, I  
4 think we've covered the material.

5 And all I can say is good luck in the  
6 Committee meeting because I can't tell you what to  
7 anticipate. I am just at a loss on what to predict.  
8 So bring your dancing shoes so you are agile and  
9 whatnot, but understand that most of the members are  
10 going to have very little exposure to it.

11 I mean, this is going to be the first time  
12 they have seen this. So in a choice, be more  
13 informative than worrying so much about the details of  
14 the regulations and whatnot like that, more strategic  
15 in how you reviewed. Rather than the details of the  
16 review, you know, a little higher level than we  
17 covered here is how I would tend to bias myself. If  
18 people want to plunge into the details, I'm pretty  
19 sure you can and whatnot.

20 That's the best I can do for you.

21 MR. FLACK: Just a question on the details  
22 is that, of course, if you have backup slides, it's  
23 going to have to be some that are open to the public  
24 and some that are closed to the public. So they're  
25 going to have to --

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1 CHAIRMAN POWERS: Yes. We will have to  
2 work that out in some way. And the best thing to do  
3 is pass out what's open and allow if we have to go  
4 into the details, we'll do that via words and stuff  
5 like that. We can work that issue.

6 MR. CAMPBELL: I just have one question.  
7 I guess the site was analyzed for aircraft crash.  
8 But, as I understand, the comment was a deliberate --

9 MEMBER ARMIJO: I am talking about the  
10 fire from all of the -- I don't know the results of  
11 your impact analysis on the building. I don't know if  
12 that was done, but fully fueled, large aircraft has  
13 the Pentagon fire. Is a fire located right up against  
14 your building --

15 MR. CAMPBELL: But you are talking like in  
16 the area of a security assessments base.

17 MEMBER ARMIJO: In the area of where your  
18 diesels were, will your people be --

19 MR. CAMPBELL: If you had kind of like a  
20 fully engulfing fire or something like that.

21 MEMBER ARMIJO: Yes. It's similar to what  
22 the designers are doing on new plant designs. They  
23 assess that. And, of course, they go into a lot of  
24 detail.

25 CHAIRMAN POWERS: But it really is not

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1 something that we are writing about this time.

2 MR. CAMPBELL: Oh, that's right. I just  
3 --

4 CHAIRMAN POWERS: We are writing on 10 CFR  
5 70.64 and a couple of letters.

6 MR. FLACK: But having said that, there is  
7 actually a foot in part 50 under "Production Reactors"  
8 because the reprocessing piece is really under 50.  
9 We're looking at this under 70. But, yet, you have  
10 this other thing here. And then you have a  
11 reprocessing facility is coming our way, which may  
12 require additional --

13 MEMBER ARMIJO: I am just thinking of --

14 17. CONCLUSION & RECOMMENDATIONS

15 CHAIRMAN POWERS: Our question that we  
16 have to answer is, can this facility be built and  
17 operated with no undue risk to the public health and  
18 safety? And, I mean, that is the question the  
19 Commission has been asking us. Security is a  
20 different question.

21 MR. CAMPBELL: Right.

22 CHAIRMAN POWERS: And we will answer that  
23 question when it is posed to us. Okay? But yes. I  
24 mean, thanks a bunch, guys. That was more than I  
25 expected.

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1 MR. GWYN: I am just sharing for my  
2 colleagues here, who actually did all of the work and  
3 all, but I know they do appreciate the professional  
4 interactions that went on the last few days. It was  
5 very well -- it may be easy to have the discussions on  
6 them.

7 CHAIRMAN POWERS: I look forward to seeing  
8 it operating and whatnot. And I think we will --

9 MEMBER RYAN: Site visit.

10 CHAIRMAN POWERS: You go visit the site.  
11 If I'm going to visit the site, it's going to be in  
12 the fall or the spring. It ain't going to be this  
13 month. At this point I am going to adjourn the  
14 meeting unless there is any other comment to be made.

15 (Whereupon, the foregoing matter was  
16 concluded at 5:11 p.m.)  
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