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**Official Transcript of Proceedings**  
**NUCLEAR REGULATORY COMMISSION**

Title: Japan's Fukushima Daiichi  
PMT HHS-FDA Audio Files

Docket Number: N/A

Location: N/A

Date: Friday, March 11, 2011

Work Order No.: NRC-4222

Pages 1-2

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4 JAPAN'S FUKUSHIMA DAIICHI

5 PMT HHS-FDA AUDIO FILES

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7 FRIDAY,

8 MARCH 11th, 2011

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4 JAPAN'S FUKUSHIMA DAIICHI

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7 SATURDAY,

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7 SUNDAY,

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7 MONDAY,

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0%B4F7@603465094

(CONFERENCE CALL INITIATED)

GEORGE ATHIE (phonetic): Hello, this is George Athie (phonetic).

LOU BRANDON: Hey, George Athie, it's Brandon. How you doing?

GEORGE ATHIE: I'm good, how are you? Are you keeping busy?

LOU BRANDON: Oh, man, this is the best exercise I've ever run.

GEORGE ATHIE: Oh, I know. I was talking with, now her names Rampone (phonetic), yesterday when I was there. Oh, she was loving it.

LOU BRANDON: Yes.

GEORGE ATHIE: Field measurements coming in.

LOU BRANDON: She's upcoming, pretty strong dose assessor I think.

GEORGE ATHIE: Yes, she is. She's got a lot of good common sense and good work ethic and smart on the computer and the whole bit.

LOU BRANDON: All right, so I'm back here now, I'm coming back at 11 o'clock so I'm just trying to get these guys off the ground here right now.

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1 GEORGE ATHIE: Okay.

2 LOU BRANDON: We got a couple of dose  
3 assessors, Tony and Fritz.

4 GEORGE ATHIE: Yes.

5 LOU BRANDON: And we have the results of  
6 your efforts from yesterday. Fukushima Unit 1, Unit  
7 3.

8 GEORGE ATHIE: Um-huh.

9 LOU BRANDON: And now we're going to set  
10 up Unit 2.

11 GEORGE ATHIE: Okay.

12 LOU BRANDON: So you put in all the  
13 stats for Unit 2 and I think Unit 3 is very close to  
14 that. But we're wondering where you got those  
15 numbers?

16 GEORGE ATHIE: Which numbers?

17 LOU BRANDON: Hold on, I got a sheet  
18 here. One second. Okay, George.

19 GEORGE ATHIE: Um-huh.

20 LOU BRANDON: When you set up this  
21 generic plant in there you need assemblies in the  
22 core --

23 GEORGE ATHIE: We just went with the  
24 standard ones that were in for a BWR1. All we  
25 changed was the power.

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1 LOU BRANDON: Oh, you did change the  
2 power. And you used 2,500 based on --

3 GEORGE ATHIE: Well no, we didn't use  
4 2,500. We set it, we had some numbers from  
5 somewhere, I don't, maybe they were out of a wiki  
6 thing. There was a pile of papers there but there  
7 were numbers for megawatt electric for each of the  
8 plants and we multiplied those by three to have a  
9 megawatt thermal power.

10 LOU BRANDON: Okay.

11 GEORGE ATHIE: And did you see the note  
12 that Kimberly and I put together that was pasted up  
13 above the dose assessors tape?

14 LOU BRANDON: Yes, we've been struggling  
15 with that for an hour now. And Patricia Milligan  
16 worked last night, she never could figure it out.

17 GEORGE ATHIE: Okay, what part can't she  
18 figure out?

19 LOU BRANDON: Well, we got it figured  
20 out now.

21 GEORGE ATHIE: Oh, you did, okay.

22 LOU BRANDON: They --

23 GEORGE ATHIE: Kimberly and I thought we  
24 had it tested pretty well because we had Casper run  
25 through it and he said, oh, yes, I understand it.

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1 So.

2 LOU BRANDON: Yes, so basically your Met  
3 files are saving in one place, you have to copy them  
4 to another folder --

5 GEORGE ATHIE: Right.

6 LOU BRANDON: -- and then as soon as you  
7 copy them in, you should be able to run RASCAL,  
8 right?

9 GEORGE ATHIE: Yes. Yes.

10 LOU BRANDON: I'm not sure it's fault  
11 less. We finally got it to work but it seems like  
12 we had to go back into the Met, choose the file, say  
13 okay and then RASCAL runs.

14 GEORGE ATHIE: Well, yes. Sure you have  
15 to go pick the data file.

16 LOU BRANDON: Okay.

17 GEORGE ATHIE: Yes, oh, yes. I'm sorry,  
18 that's a --

19 LOU BRANDON: So we copied it over,  
20 tried to run it, it wouldn't work, went back into  
21 the Met --

22 GEORGE ATHIE: Yes, you got to pick it.

23 LOU BRANDON: -- even though it was  
24 already highlighted.

25 GEORGE ATHIE: Because you've refreshed

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1 it basically and --

2 LOU BRANDON: Okay.

3 GEORGE ATHIE: -- Kimberly was doing it  
4 with just keeping the same name and then we decided  
5 later, our Met data was all forecast, we never got  
6 any observation.

7 LOU BRANDON: Okay.

8 GEORGE ATHIE: She was originally  
9 overwriting them and it was getting confusing  
10 because it always had the same name. So I suggested  
11 she date time stamp them.

12 And I think she put that in the  
13 procedure she wrote so that then you always knew  
14 which one was the latest one. And during the copy  
15 process then you would know you done it correctly  
16 because you would see the new one there.

17 LOU BRANDON: Okay.

18 GEORGE ATHIE: And it's all because we  
19 added this site. I wanted to get them so they can  
20 use the maps last night.

21 LOU BRANDON: Yes, good --

22 GEORGE ATHIE: Instead of using these  
23 surrogate plants because then the maps are just  
24 misleading.

25 LOU BRANDON: We shouldn't, yes, she

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1 started to tackle that in Friday night then we soon  
2 found out with the surrogate plant that doesn't  
3 work.

4 GEORGE ATHIE: Yes. So we, when I got  
5 there yesterday we redid a lot of it to use these  
6 and then we could get it into the GIS correctly.

7 LOU BRANDON: Yes.

8 GEORGE ATHIE: So you could get a plot  
9 even though the numbers are real low.

10 LOU BRANDON: So Yong Li was working  
11 with you last night on the GS?

12 GEORGE ATHIE: Yong Li was on the GIS,  
13 right. But he left at like 5:00 I think.

14 LOU BRANDON: Okay.

15 GEORGE ATHIE: So there was nobody  
16 there. Between 5:00 and 7:00 I updated it to get a  
17 little bit better background map in there and to  
18 refresh just to the latest run we had done.

19 LOU BRANDON: Looks impressive. Nicely  
20 displayed there now.

21 GEORGE ATHIE: And we were starting  
22 actually to put in the positions of the reg in, but  
23 it want clear that that was going to be useful.

24 LOU BRANDON: Okay.

25 GEORGE ATHIE: Because our model didn't

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1 go out, you know, our model only went out 50 miles  
2 so we decided, well, at some point if we needed to  
3 get a plume onto the reg then we can maybe plot a  
4 NARAC, they can export also into --

5 LOU BRANDON: That aircraft carrier is  
6 moving around and they were guided to stay beyond a  
7 100 miles because they got basically something  
8 detectable.

9 GEORGE ATHIE: Yes.

10 LOU BRANDON: They're being so careful  
11 they're not going --

12 GEORGE ATHIE: I mean they were doing  
13 swipes on one of the, on the returning aircraft and  
14 getting stuff, but what's his name, Rich Clement was  
15 there and he's saying, yes, but look at the numbers.  
16 He said they're barely above detectable limits.

17 LOU BRANDON: Those are guys are trained  
18 to protect themselves. We don't need to worry about  
19 protective actions with that aircraft carrier.

20 GEORGE ATHIE: Right, they've got all  
21 the instrumentation, everything they need and so.

22 LOU BRANDON: So I guess we're set with  
23 the RASCAL except setting BWR2. I think I'm capable  
24 of going in and setting that up. Once we do that we  
25 can save the file, but can we run, once you save it

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1 can you bring it up on another, how do I say this?  
2 You set it up, Fukushima 2, you do a RASCAL run with  
3 it, you save it and then you can bring up one, two  
4 or three if you save all those cases on that one  
5 work station, right?

6 GEORGE ATHIE: Right. The way Rich and  
7 Kimberly were working last night is one computer was  
8 doing three and one was doing one. And I suggested,  
9 looked, if it's, why not just do them all on one  
10 computer but they didn't want to do that and I said  
11 I don't care. However works well works for you.

12 LOU BRANDON: Okay.

13 GEORGE ATHIE: I was trying to simplify  
14 it for Casper overnight, but he seemed happy with  
15 having it on two different computers. But now  
16 you're into three, so.

17 LOU BRANDON: Yes, Okay, so I think  
18 we'll set it up on one of these two that they're  
19 already working on.

20 GEORGE ATHIE: I didn't quite see the  
21 advantage to having it on two computers because  
22 you're source terms are slightly different but  
23 essential the scenario is the same.

24 LOU BRANDON: Hold on just a minute.  
25 Hey, Fritz, pick that Met file and say okay. You

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1 have to go through that step.

2 FRITZ STURZ: I thought I did.

3 LOU BRANDON: And then run it once more.  
4 Yes, Fritz is struggling here.

5 GEORGE ATHIE: It's been a good learning  
6 exercise for us for supporting something not in our  
7 database.

8 LOU BRANDON: You got to have that data  
9 point in there at the start of the release.

10 FRITZ STURZ: This one started at 1200  
11 and that one started at 1400. So I don't have the -  
12 -

13 LOU BRANDON: Oh.

14 FRITZ STURZ: -- I've got to go add. We  
15 don't know when this one --

16 LOU BRANDON: This one started at 1200?

17 FRITZ STURZ: That's when it started  
18 release, at 1200.

19 LOU BRANDON: Well just go in and change  
20 that, Fritz, to a later time.

21 FRITZ STURZ: Short term.

22 LOU BRANDON: You can change the matter  
23 of the source term. But why would they be different  
24 in terms of, this one started later, right, if  
25 anything? Okay, sorry.

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1           GEORGE ATHIE: Well I was just saying  
2 it's good exercise for us, for me and everybody in  
3 doing a plant not in our database. Because we're  
4 struggling last night with the time.

5           LOU BRANDON: Yes, oh, yes, I can see.  
6 We're, every step of the way we're bumping into  
7 little problems here.

8           GEORGE ATHIE: Yes, on the UTC, which is  
9 what NARAC works in versus Japan's standard time.

10          LOU BRANDON: We're starting to get that  
11 ironed out. But every dose assessor has to come up  
12 to speed on that.

13          GEORGE ATHIE: Yes, exactly.

14          LOU BRANDON: On that kind of stuff.

15          GEORGE ATHIE: Right, yes.

16          LOU BRANDON: It would take me awhile to  
17 let it get sunk in. So once we get going with  
18 RASCAL, and I think we're good here, then we're  
19 getting these requests from NARAC, they want a  
20 model, three plant releases at once.

21          GEORGE ATHIE: Um-huh.

22          LOU BRANDON: I think the best approach  
23 there is to do one at a time, send NARAC the source  
24 terms, they can add the activities together and  
25 model it like that.

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1 GEORGE ATHIE: Yes.

2 LOU BRANDON: All right.

3 GEORGE ATHIE: In fact I was thinking  
4 even for NRC, if you wanted, just model it as one  
5 plant. I mean you're unknowns are so high on the  
6 source term, we're all assuming, I guess we've been  
7 assuming 40 percent core damage.

8 LOU BRANDON: Yes. Yes, they're saying  
9 they want 100 percent core damage now, but we're  
10 controlling it with the release rate. It's a design  
11 based leak rate and we can modify that. That's the  
12 bottleneck in what's going to determine the impact  
13 at this point.

14 GEORGE ATHIE: Yes, right.

15 LOU BRANDON: So if they want a greater  
16 impact, we could do that, but to do a 100 percent  
17 from three plants, phew, that's you know, from mark  
18 one as being modeled, oh, would you do triple the  
19 fuel assemblies to do that?

20 GEORGE ATHIE: Yes, or jack the power up  
21 a lot. I'm not sure it will let you jack the power  
22 up that high, so.

23 LOU BRANDON: Okay, all right. That's  
24 helpful in terms of options.

25 GEORGE ATHIE: I mean I was confused

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1 about the NARAC source term last night because they  
2 looked like they were releasing more then we were.  
3 They had three different numbers. One was a, oh,  
4 what was it, I can't remember exactly but if I  
5 looked at the --

6 LOU BRANDON: Iodine seasons and noble  
7 gases you mean?

8 GEORGE ATHIE: Yes. And they're release  
9 was bigger then ours by about a pack of three. And  
10 I wasn't sure where that came from.

11 LOU BRANDON: From ours for one plant?

12 GEORGE ATHIE: Yes.

13 LOU BRANDON: Well that's what they're  
14 trying to do is model all three plants.

15 GEORGE ATHIE: Okay, so maybe that's --

16 LOU BRANDON: So they're just tweaking  
17 the numbers that we're providing them, yes.

18 GEORGE ATHIE: They state to make a  
19 single, okay. That wasn't clear to any of us.

20 LOU BRANDON: Yes, so the GIS that's  
21 displayed right now, if that's the same as what you  
22 did, has a couple of prongs on it. One to the  
23 Southeast and one to the Northeast?

24 GEORGE ATHIE: Yes, a slight, yes.

25 LOU BRANDON: And that's based on just

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1 one unit?

2 GEORGE ATHIE: Correct.

3 LOU BRANDON: It's just a RASCAL run  
4 that's been copied and pasted in there?

5 GEORGE ATHIE: Right, right.

6 LOU BRANDON: And it looks like it's  
7 pretty far out, was that a 50 mile projection?

8 GEORGE ATHIE: That was a 50 mile  
9 projection, but if you look at the units, Yong Li  
10 had to jack the scale way down to get it to show.

11 LOU BRANDON: Okay.

12 GEORGE ATHIE: Because essentially with  
13 the default scaling using RASCAL, nothing was  
14 showing.

15 LOU BRANDON: I'm sorry, my attention  
16 got split here.

17 GEORGE ATHIE: Umm --

18 LOU BRANDON: So you're saying if I look  
19 at the what on there?

20 GEORGE ATHIE: Well Yong Li, to get the  
21 plume to show to 50 miles, he went in and jacked the  
22 ranges on the colors way, way down.

23 LOU BRANDON: Oh, okay.

24 GEORGE ATHIE: You know, it's not the,  
25 if he had used the standard ones in RASCAL for the

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1 PAG type --

2 LOU BRANDON: But there's no scales on  
3 the map, right? I don't see any scales that  
4 identify --

5 GEORGE ATHIE: Well it's on the table of  
6 contents on --

7 LOU BRANDON: I think we've got DOE on  
8 the phone right now.

9 GEORGE ATHIE: Okay.

10 LOU BRANDON: Fritz has also got a fatal  
11 error, let me let you talk to Fritz and I'll talk to  
12 DOE.

13 GEORGE ATHIE: Sure.

14 LOU BRANDON: Fritz, here you go.

15 FRITZ STURZ: Hey, George.

16 GEORGE ATHIE: Hey.

17 FRITZ STURZ: I got a fatal error on the  
18 Met data.

19 GEORGE ATHIE: Okay.

20 FRITZ STURZ: 53, it's off the screen  
21 now but I restarted it.

22 GEORGE ATHIE: What was the error?

23 FRITZ STURZ: It said fatal error 53 in  
24 the Met data.

25 GEORGE ATHIE: Okay, it sounds like you

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1 didn't have the data or something, huh?

2 FRITZ STURZ: I thought I did have it  
3 but, I mean I copied it from the N drive to two  
4 different C drive there in the RASCAL site --

5 GEORGE ATHIE: Okay.

6 FRITZ STURZ: -- and so I'm just going  
7 to have to go back and try to redo it again and.

8 GEORGE ATHIE: So you just have to load  
9 that saved case I think.

10 FRITZ STURZ: Yes.

11 GEORGE ATHIE: Well I'll hang on the  
12 phone with you while you're doing --

13 FRITZ STURZ: All right. I'll wake you  
14 up when I get back.

15 GEORGE ATHIE: Okay.

16 FRITZ STURZ: Hang on. All right,  
17 George, I thought I got the latest Met data.

18 GEORGE ATHIE: Um-huh.

19 FRITZ STURZ: And I added a observation  
20 from the start of the release and I copied it from,  
21 I guess the RASCAL site, site Met data, and put it  
22 in, saved it in to the site other Met data and tried  
23 to run it and had fatal error. So maybe I didn't do  
24 something in the processing or something.

25 GEORGE ATHIE: So you copied a bunch of

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1 files, right?

2 FRITZ STURZ: Yes, yes. Everything that  
3 was the latest time stamp.

4 GEORGE ATHIE: Yes, okay. Did you get  
5 the error again or did it --

6 FRITZ STURZ: Yes, I got the error again  
7 and I'm trying to figure out, maybe I didn't, yes, I  
8 selected the file and I said okay but maybe I didn't  
9 process it. Do I have to process it?

10 GEORGE ATHIE: Let's see, the steps  
11 would be when you would go in an edit it and add the  
12 whatever new data you had --

13 FRITZ STURZ: Uh-huh.

14 GEORGE ATHIE: -- then you would process  
15 it.

16 FRITZ STURZ: Let me go back and try to  
17 process it again.

18 GEORGE ATHIE: Okay.

19 TONY: Hello, George.

20 GEORGE ATHIE: Hey, Tony.

21 TONY: Hey, this is Tony (inaudible).  
22 I'm working with Fritz and we're getting the same  
23 error. It says error number 53, severity fatal and  
24 it wasn't finding a file. It says file not found.  
25 And then the problem location is called, MOD CALC

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1 control, and the procedure is called, Met, well Met  
2 data setup.

3 GEORGE ATHIE: Okay.

4 TONY: So --

5 GEORGE ATHIE: That's strange. Because  
6 we did that same process last night repeatedly and  
7 didn't get any problems. I'm trying to think what's  
8 different.

9 TONY: Maybe the file size is wrong or  
10 there's a file entry, it's missing a file maybe.  
11 Like if there's six files that need to be copied  
12 over, maybe --

13 GEORGE ATHIE: Yes, maybe one of them  
14 didn't get moved, I don't know.

15 TONY: Yes.

16 GEORGE ATHIE: Yes, what we were doing  
17 last night is on the work station, the normal RASCAL  
18 work station, we would go in and edit the data and  
19 process, you know, the Met data, and add new records  
20 and process it. And then on both machines we would  
21 copy that set of file from that site, site thing,  
22 which is --

23 TONY: Yes.

24 GEORGE ATHIE: -- into this site other,  
25 Met actual. So you're definitely putting it into

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1 the Met actual folders, right?

2 TONY: Yes.

3 GEORGE ATHIE: Not just into the site  
4 folder?

5 TONY: We're putting it into the site,  
6 then actual, I'm sorry. Site, it needs to go into  
7 other --

8 GEORGE ATHIE: Into site, other, Met  
9 actual.

10 TONY: Okay, site, other, what you just  
11 had. There you go, right here. Other then Met  
12 actual and, yes, they all appear to be there.

13 GEORGE ATHIE: Okay. So when you start  
14 RASCAL up and then you load a save case and they you  
15 click the meteorology button and it's saying file  
16 not found?

17 TONY: Okay, go to meteorology and then  
18 it's finding it, yes.

19 FRITZ STURZ: Import.

20 TONY: Import, yes. Met actual.

21 FRITZ STURZ: Let me go back and --

22 TONY: Hit that and then just click that  
23 and then open and hit yes, okay.

24 GEORGE ATHIE: He shouldn't be using the  
25 export import function.

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1 TONY: Yes, then hit okay and then  
2 calculate this and then we just have to put a  
3 different name on it. Oh, 750 email. I'm sorry,  
4 George, I'm talking to you and helping --

5 GEORGE ATHIE: That's all right, you're  
6 multitasking.

7 TONY: I feel like a dispatcher at a  
8 rail yard. And then okay. Now it says file not  
9 found, fatal error number 50. You know what we  
10 should do is we should probably go back to the Met  
11 other file, other Met actual file and just  
12 completely erase everything in there, maybe.

13 GEORGE ATHIE: Sure, that might help.

14 TONY: And then --

15 GEORGE ATHIE: It sounds like, you're  
16 right, that there's something missing or a mismatch  
17 or something.

18 TONY: Yes. So we'll start the process  
19 over again. Do you want us to keep the phone live  
20 while we do our work?

21 GEORGE ATHIE: Why don't you just call  
22 me if you still have problems.

23 TONY: Okay, and what is your phone  
24 number again?

25 GEORGE ATHIE:

(b)(6)

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1 TONY: Okay, just one second please.

2 304?

3 GEORGE ATHIE: (b)(6)

4 TONY: (b)(6)

5 GEORGE ATHIE: (b)(6)

6 TONY: Okay, so it's (b)(6)

7 GEORGE ATHIE: Correct.

8 TONY: Okay, thanks a lot. We'll give  
9 it another whirl here.

10 GEORGE ATHIE: All right.

11 TONY: Thanks,

12 GEORGE ATHIE: Bye.

13 TONY: Bye.

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(CONFERENCE CALL INITIATED)

LAURA BETH: NARAC, this is Laura Beth,  
how may I help you?

TOM GALETTA: Yes, this is Tom Galetta  
with the NRC in Washington, D.C. I'm trying to  
connect with a Phil, a meteorologist, a Phil --

LAURA BETH: Phil Vote?

TOM GALETTA: Yes.

LAURA BETH: Just one minute please.

TOM GALETTA: Okay.

LAURA BETH: Thank you.

PHIL VOTE: NARAC Center, this is Phil  
Vote speaking.

TOM GALETTA: Phil, this is Tom Galetta  
with the NRC in Washington, D.C.

PHIL VOTE: Yes, Tom, what can I do for  
you?

TOM GALETTA: Okay, we got an email with  
some weather forecast for Fukushima.

PHIL VOTE: Yes.

TOM GALETTA: Fill me in, give me some,  
like where did it come from, how did --

PHIL VOTE: There's very little weather  
observations coming out of that area. So we're

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1 running a high resolution weather forecast model for  
2 that region to do our model predictions. And what  
3 we can do is we can tell the model also to give us  
4 the weather data at any point within that domain.

5 So what your seeing is our predicted  
6 model output for the reactor area over the course of  
7 the next several days. Also any plume predictions  
8 that we do are based on the same data.

9 TOM GALETTA: Okay, say that last  
10 sentence again, I got some background noise?

11 PHIL VOTE: Any plume predictions we run  
12 use the same data. Because it's just a small  
13 portion of the grided net from a forecast model that  
14 we're using to drive our prediction.

15 TOM GALETTA: Okay.

16 PHIL VOTE: Not based on actual  
17 observations, as far as we know there are no weather  
18 observation --

19 TOM GALETTA: Okay.

20 PHIL VOTE: -- numbers in that are. Or  
21 else if there are, they're dealing with more  
22 important things then getting us our weather data.

23 TOM GALETTA: Yes, we tried some of the  
24 stations right around the shoreline.

25 PHIL VOTE: Yes, this is acquiring right

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1 from our forecast model for that exact location. So  
2 it's not a nob, it's based on a winds forecast  
3 model. A weather forecast model.

4 TOM GALETTA: Is it the GFS or something  
5 else?

6 PHIL VOTE: No, it's the WRF, it's our  
7 own version of WRF that we run. W-R-F, is what's  
8 called.

9 TOM GALETTA: Okay.

10 PHIL VOTE: It's kind of like the North  
11 American nano (phonetic) model, if you're familiar  
12 with that. It's very similar. It's a relocatable  
13 regional forecast model that we can run  
14 independently anywhere in the world.

15 TOM GALETTA: Okay, I've got another  
16 meteorologist here with me.

17 PHIL VOTE: Okay.

18 TOM GALETTA: It's their version of WRF.

19 KEVIN QUINLAN: Okay.

20 TOM GALETTA: Is there they're getting  
21 data from.

22 KEVIN QUINLAN: Okay, that's kind of  
23 what I assumed because it's pretty hybrid.

24 TOM GALETTA: And you compared it to the  
25 GFS?

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1 PHIL VOTE: Yes, we initialized from the  
2 GSF but we nested down to 15 kilometers.

3 TOM GALETTA: Okay, the initial, okay,  
4 I'm relaying here.

5 PHIL VOTE: Sure.

6 TOM GALETTA: They initialized from GFS,  
7 and nested it down to 15 kilometers?

8 PHIL VOTE: Yes.

9 TOM GALETTA: Okay.

10 KEVIN QUINLAN: What hour, is it the JTZ  
11 GFS?

12 TOM GALETTA: Do you want to talk to  
13 him? Okay, this is Kevin Quinlan.

14 PHIL VOTE: Hi, Kevin, this is --

15 TOM GALETTA: Hang on a second.

16 PHIL VOTE: Yes.

17 KEVIN QUINLAN: Hey, this is Kevin  
18 Quinlan from the NRC.

19 PHIL VOTE: Hey, Kevin, this is Phil  
20 Vote, what can I do for you?

21 KEVIN QUINLAN: Well we were just  
22 curious, we're just trying to verify where you got  
23 your data just so we can make sure we're comparing  
24 apples to apples here.

25 PHIL VOTE: Yes, it's from our WRF model

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1 that we located to run over that region. We can't  
2 get observations to drive our plume model.

3 KEVIN QUINLAN: Nope, I understand.  
4 We're having the same problem.

5 PHIL VOTE: Yes, and I think it might  
6 be, I thought it was at 15 kilometer resolution but  
7 it might actually be higher. We're trying to verify  
8 that.

9 KEVIN QUINLAN: Okay. And just your  
10 initialized, the latest that you sent us initialized  
11 18z?

12 PHIL VOTE: 60.

13 KEVIN QUINLAN: 60.

14 PHIL VOTE: 60 out of 14.

15 KEVIN QUINLAN: 60.

16 PHIL VOTE: Yes, we don't have, it takes  
17 a little while for our model to process. We're  
18 processing 12z right now.

19 KEVIN QUINLAN: Oh, okay. Okay, so the  
20 last one was based off of the --

21 PHIL VOTE: -- 6z WRF run, our own  
22 version.

23 KEVIN QUINLAN: So you're running the  
24 internal WRF, okay.

25 PHIL VOTE: Okay.

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1 KEVIN QUINLAN: Okay, well that sounds  
2 great. Yes, this latest set that you sent us  
3 matches out much better with what I'm finding. I  
4 was comparing it with just some online maps that are  
5 a little bit more rough. Probably 30, 45  
6 kilometers, somewhere around there.

7 PHIL VOTE: Yes, the big thing is the  
8 big shift that's occurring right and that's what  
9 everyone I think is focusing on because it's  
10 predicted to go onshore.

11 KEVIN QUINLAN: Yes. Yes, at about,  
12 which is --

13 PHIL VOTE: Right about now actually.  
14 Anytime. Now or the next few hours it's suppose to  
15 shift.

16 KEVIN QUINLAN: Yes, it looks like, yes,  
17 it is. I was comparing it with your data with the  
18 12z GFS that I was getting.

19 PHIL VOTE: Oh, okay.

20 KEVIN QUINLAN: But I mean it matches up  
21 pretty well.

22 PHIL VOTE: Okay.

23 KEVIN QUINLAN: And I'd rather go with  
24 your because it's a higher resolution data but we're  
25 just kind of making --

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1 PHIL VOTE: I mean --

2 KEVIN QUINLAN: -- check.

3 PHIL VOTE: -- initialize, so.

4 KEVIN QUINLAN: I'm sorry?

5 PHIL VOTE: We're using GSF to  
6 initialize.

7 KEVIN QUINLAN: Yes, yes. Okay, well  
8 that makes it good. They should match up then.

9 PHIL VOTE: I would hope, yes.

10 KEVIN QUINLAN: Yes.

11 PHIL VOTE: All right.

12 KEVIN QUINLAN: Okay, great. Well thank  
13 you.

14 PHIL VOTE: Um-huh, bye.  
15  
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(CONFERENCE CALL INITIATED)

LOU BRANDON: Hello, it's Lou.

TONY HUFFERT: Hi, Tony Huffert calling from the OPs Center.

LOU BRANDON: Hey, Tony.

TONY HUFFERT: Hey, I just have a quick question. This is question for you or for George Athie. It has to do with the spent fuel pool assumptions and the batches and how it handles the decay of the already existing batches in RASCAL.

What we're reading is the work for that particular spent fuel chapter --

LOU BRANDON: Yes.

TONY HUFFERT: -- and it wasn't entirely clear if you gave it a date of when you unloaded the core, whether the existing spent fuel assemblies in the spent fool, if RASCAL had already decayed them away or whether, if you say, like there's seven spent fuel pools, I'm sorry, seven batches in the spent fuel pool, does it assume that all of them are fresh?

LOU BRANDON: Okay, the way it works, Tony, is when you set a date for the freshes batch -

-

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1 TONY HUFFERT: Yes.

2 LOU BRANDON: -- that the next batch  
3 will have decayed away for 18 months.

4 TONY HUFFERT: And the one after that,  
5 yes.

6 LOU BRANDON: And then the next batch  
7 will be 18 months older than that.

8 TONY HUFFERT: Okay.

9 LOU BRANDON: Conceptually, considering  
10 that the reactor had been refueled every 18 months.

11 TONY HUFFERT: Okay, and that's inherent  
12 then. So in this case --

13 LOU BRANDON: Reactor.

14 TONY HUFFERT: -- with the Fukushima  
15 spent fuel pool, they unloaded it on December 1st.  
16 We'll say that we put a full core in there, which is  
17 three batches. There's a total of seven batches in  
18 there and --

19 LOU BRANDON: Basically they just take  
20 one third of the core out when they refuel.

21 TONY HUFFERT: Okay.

22 LOU BRANDON: So you would think of it  
23 as, if they changed the fuel on December 1st then  
24 you would put that date in, it would be like a 100  
25 days old or something like that.

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1 TONY HUFFERT: Yes.

2 LOU BRANDON: And then the next third of  
3 a core would have already had a chance to decay 18  
4 months. And then if you put in ten, each one would  
5 be 18 months older than the one before it. That  
6 make sense?

7 So if you had nine batches in there  
8 altogether, it would be the equivalent of about  
9 three cores worth of fuel in it.

10 TONY HUFFERT: Okay. So this case, I  
11 well I think their spent fuel pool could have seven  
12 batches and they unloaded on December 1st, so it  
13 would be one third of the core they unloaded.

14 LOU BRANDON: Yes.

15 TONY HUFFERT: Okay, I think I got it.

16 LOU BRANDON: But it's an older plant so  
17 it seems to me like it might have more than seven  
18 batches in the pool.

19 TONY HUFFERT: Yes, understood.

20 LOU BRANDON: I don't know if you have a  
21 limit in terms of the number of batches you can put  
22 in there. But conceptual if you actually got a  
23 zirconium fire it could propagate through and  
24 release agent products --

25 TONY HUFFERT: Yes.

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1 LOU BRANDON: -- of (inaudible).  
2 TONY HUFFERT: Even the old ones.  
3 LOU BRANDON: Even the old ones, yes.  
4 TONY HUFFERT: Right.  
5 LOU BRANDON: There wouldn't be any  
6 Iodine's --  
7 TONY HUFFERT: Right.  
8 LOU BRANDON: -- in this season.  
9 TONY HUFFERT: Seasons, right. Okay,  
10 well just checking. I appreciate the help on that  
11 one.  
12 LOU BRANDON: Okay, Tony.  
13 TONY HUFFERT: Okay, thanks a lot.  
14 LOU BRANDON: Hey, Tony?  
15 TONY HUFFERT: Yes.  
16 LOU BRANDON: George is going to come in  
17 tomorrow, so if there's anything that needs  
18 attention, make a note and he can attend to it when  
19 he's here.  
20 TONY HUFFERT: That's great. Okay,  
21 thanks.  
22 LOU BRANDON: All right, see you later.  
23 TONY HUFFERT: Okay.  
24 LOU BRANDON: Bye.  
25 TONY HUFFERT: Bye.

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(CONFERENCE CALL INITIATED)

GEORGE ATHIE: Hello, this is George  
Athie.

LOU BRANDON: Hey, George, this is Lou.

GEORGE ATHIE: Hey, Lou.

LOU BRANDON: I'm in the Op Center on a  
record line and just touching bases before I take  
off here.

GEORGE ATHIE: Okay. You worked all  
night?

LOU BRANDON: Got your message, yes.

GEORGE ATHIE: Okay.

LOU BRANDON: Just a little while ago.

GEORGE ATHIE: Yes.

LOU BRANDON: So the state of affairs is  
that we're managing with this RASCAL --

GEORGE ATHIE: Okay.

LOU BRANDON: -- with these generic  
settings.

GEORGE ATHIE: Yes.

LOU BRANDON: But the map processing is  
really a nightmare.

GEORGE ATHIE: Okay.

LOU BRANDON: That things shades in the

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1 wrong place --

2 GEORGE ATHIE: Right.

3 LOU BRANDON: -- everybody comes in it  
4 takes them a long while to digest it and when you're  
5 pressured and you have to change one little met  
6 line, then you have to go through that whole process  
7 and --

8 GEORGE ATHIE: Let's see, when I made a  
9 call on, whatever, Sunday night, it was more  
10 important that we be able to do the RASCAL or the  
11 maps to the GIS. So I kind of figured out the way  
12 to do it.

13 See we were kind of using an InterAz  
14 (phonetic) functionality. RASCAL wasn't really  
15 setup to do what we're having --

16 LOU BRANDON: Understand, right.

17 GEORGE ATHIE: But what I was going to  
18 propose is, it's an easy fix for me to make a change  
19 to this user interface and either send a file or  
20 bring one in --

21 LOU BRANDON: Okay, sounds good.

22 GEORGE ATHIE: -- that would, you know,  
23 at the time I thought well it's not worth it because  
24 this thing will be over in a day, but it's not.  
25 Because I can basically reconfigure RASCAL to work

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1 more like InterAz, which is I think what we're  
2 trying to do.

3 LOU BRANDON: Okay.

4 GEORGE ATHIE: If that would be helpful  
5 and it sounds like it would.

6 LOU BRANDON: Yes, that would be very  
7 helpful. The other thing is it's crashing a lot.

8 GEORGE ATHIE: Because of the met?

9 LOU BRANDON: I haven't had that  
10 experience but I, well maybe I did have one  
11 experience. Yes, I was working with a guy named  
12 Eric Schrader whose coming up to speed and we  
13 crashed it.

14 GEORGE ATHIE: Okay.

15 LOU BRANDON: So it's because we're  
16 trying to do some weird stuff I think and --

17 GEORGE ATHIE: Yes.

18 LOU BRANDON: -- I'm not sure we can  
19 point to a particular cause for it to crash expect  
20 in one case Tony Huffert said whenever he tried to  
21 do 100 percent fuel failure, 100 percent per hour --

22 GEORGE ATHIE: Really?

23 LOU BRANDON: -- it crashed every time,  
24 in one case.

25 GEORGE ATHIE: I wonder what part of it

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1 is crashing? Is it the source term or the user  
2 interface?

3 LOU BRANDON: I think it was in the  
4 release pathway part of it where you choose design,  
5 you now, under design leak rate?

6 GEORGE ATHIE: Yes.

7 LOU BRANDON: And you can choose 100  
8 percent failure, 100 percent per hour release rate.

9 GEORGE ATHIE: Uh-huh.

10 LOU BRANDON: So I don't know. It will  
11 have to be checked. But I asked Tony to make a  
12 note.

13 GEORGE ATHIE: Okay.

14 LOU BRANDON: And --

15 GEORGE ATHIE: Well it seems like, what  
16 I would like to do is try to get RASCAL, if we need  
17 to tweak it a little bit to make it so it's not so  
18 frustrating that would be useful.

19 LOU BRANDON: Yes. Well, yes, that  
20 definitely would be nice. Because sometimes you get  
21 everything in there, these long met sets, and you  
22 just have to go through these gyrations and then you  
23 find out when you run it you got to tweak the map  
24 again.

25 GEORGE ATHIE: Yes.

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1 LOU BRANDON: And then they go, oh, god,  
2 you know, it's just this whole thing again.

3 GEORGE ATHIE: I guess what I'm thinking  
4 of trying to do then is making changes today and  
5 then (b)(6)

6 (b)(6)

7 LOU BRANDON: Yes, I saw that.

8 GEORGE ATHIE: But after I'm done with  
9 that I could come in there for the evening and bring  
10 this new pieces and get it put in and then work with  
11 somebody to make sure it's doing what we expect it  
12 to do. If that would be useful?

13 LOU BRANDON: Well they, they're calling  
14 in some extra dose assessors. We've been running  
15 with, we started with one --

16 GEORGE ATHIE: Yes.

17 LOU BRANDON: -- on Saturday and Friday  
18 and Saturday, now they went to two and Bruce Watson  
19 is going to call for two more.

20 GEORGE ATHIE: Okay.

21 LOU BRANDON: So we get four dose  
22 assessors working. They can use the practice so I  
23 think it's good idea.

24 GEORGE ATHIE: Yes.

25 LOU BRANDON: He was suggesting that you

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1 might be helpful to see what's going on with RASCAL  
2 and also the GIS.

3 GEORGE ATHIE: Yes. So what's happening  
4 with GIS?

5 LOU BRANDON: But I told him you were  
6 not available today and you could come in tomorrow.  
7 So he was thinking, well, that's probably a good  
8 idea if you came in tomorrow.

9 GEORGE ATHIE: Okay.

10 LOU BRANDON: I guess you can decide  
11 whatever works best.

12 GEORGE ATHIE: Well, I mean, what do you  
13 think? I mean is it going to, it seemed like  
14 earlier night time shifts were very slow and it  
15 wasn't a, but I know it can be frustrating.

16 LOU BRANDON: The chairman was here last  
17 night and they, I'll tell you how bad it was last  
18 night. When I came in, I checked the news just  
19 before I came in and I said, I here there was a  
20 third explosion in Unit 2 and there was some concern  
21 the containment might be cracked.

22 GEORGE ATHIE: Right.

23 LOU BRANDON: When I got here they said  
24 there's been a melt through the vessel in Unit 2.  
25 And in addition there was a zirconium fire going on

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1 in Unit 4.

2 GEORGE ATHIE: Um-huh.

3 LOU BRANDON: And then an old PMT  
4 director, whose now on the executive team, Jack  
5 Grobe, can back and he said, since we had a  
6 zirconium fire in Unit 4, we can be assured that the  
7 progression is going to continue to Unit 5 and  
8 they're going to have exactly the same zirconium  
9 fire. So we want you to model, melt through the  
10 vessel in Unit 2, zirconium fire in Unit 4 and 5 and  
11 send all that stuff to the NARAC.

12 GEORGE ATHIE: Phew.

13 LOU BRANDON: But make sure NARAC is  
14 consistent in their modeling with NRC so there's no  
15 confusion out that we're getting different results.

16 GEORGE ATHIE: Um-huh.

17 LOU BRANDON: So we coordinated all  
18 that, we produced all those runs, we sent them to  
19 NARAC and then we get the news this morning, Unit 2  
20 has pressure in the vessel, so there was no melt  
21 through. Unit 4 was not a zirconium fire, it was a  
22 lube oil fire that was shortly put out after it  
23 started.

24 GEORGE ATHIE: Um-huh.

25 LOU BRANDON: And Unit 5 is in no danger

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1 of following the path of Unit 4, being a spent fuel  
2 pool. (b)(5)

3 (b)(5)  
4

5 GEORGE ATHIE: I mean is the problem  
6 just getting good information from Japan?

7 LOU BRANDON: Well what was reported as  
8 this fuel melt through, when I asked the question,  
9 how do we know, they say, well it's our guy, the NRC  
10 rep, whose over there and he's saying, he's speaking  
11 with a reputable entities and they have confirmed  
12 the melt through of the vessel in Unit 2. So then  
13 we say, okay, this is great, we got a guy right  
14 there, he's getting tuned in and he's seeing much  
15 better then we were able to see in the past. It all  
16 turns out to be all wrong. So what can you do.

17 GEORGE ATHIE: Yes.

18 LOU BRANDON: We're trying to get some  
19 kind of ground based measurement data so we can tie  
20 these wild RASCAL projections back into something  
21 credible, but --

22 GEORGE ATHIE: So you got no modeling  
23 results from the Japanese out of their big NARAC  
24 system or whatever they call it, SPEEDI or whatever?

25 LOU BRANDON: I didn't know they had a

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1 system.

2 GEORGE ATHIE: They had --

3 LOU BRANDON: It seems like they should.

4 GEORGE ATHIE: -- or had at one time a  
5 very big system, you know, kind of a NARAC type  
6 thing with automated met collection and met models  
7 and --

8 LOU BRANDON: Yes, I don't think anyone  
9 here has even thought that they, I mean when I said  
10 to Patricia Milligan last night, (b)(5)

11 (b)(5)

12  
13 GEORGE ATHIE: Right.

14 LOU BRANDON: (b)(5)

15 (b)(5)

16  
17  
18  
19  
20  
21  
22 GEORGE ATHIE: God.

23 LOU BRANDON: (b)(5)

24 (b)(5)

25 should be. But there

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1 GEORGE ATHIE:

(b)(5)

2 (b)(5)

3  
4 LOU BRANDON: On t.v., right?

5 GEORGE ATHIE: Well even if not on t.v.

6 --

7 LOU BRANDON: At least shared with the  
8 NRC.

9 GEORGE ATHIE: -- through IAEA. I mean  
10 always if through IAEA is --

11 LOU BRANDON: Some notifications, yes.

12 GEORGE ATHIE: And occasional that one  
13 fax that was almost unreadable of the up wind  
14 receptors, it's like, okay.

15 LOU BRANDON: So I know you're busy  
16 through the day, you'll have to do a double shift if  
17 you come in tonight. I don't know if you want to  
18 push it that hard or not. I'll be back in at 11:00  
19 tonight.

20 GEORGE ATHIE: Okay.

21 LOU BRANDON: And then off at 7:00 in  
22 the morning. So you choose. Go though the day, see  
23 where you're at --

24 GEORGE ATHIE: Yes, I don't want to  
25 bring something in that an hour after I leave starts

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1 to give them fits.

2 LOU BRANDON: So it may be better to  
3 take today.

4 GEORGE ATHIE: Yes.

5 LOU BRANDON: Get things prepared, come  
6 in tomorrow.

7 GEORGE ATHIE: Right.

8 LOU BRANDON: And we'll start loading on  
9 new versions of the RASCAL.

10 GEORGE ATHIE: And what I could probably  
11 do is try to be in as early as I can tomorrow. I  
12 may just elect to drive in and come in real early.  
13 Because that why I'm not time constrained leaving if  
14 I wanted to stay till 6:00 or 7:00 I could do that.

15 LOU BRANDON: Um-huh.

16 GEORGE ATHIE: All right, that sounds  
17 like a reasonable plan.

18 LOU BRANDON: All right.

19 GEORGE ATHIE: So whose working day  
20 shift today there?

21 LOU BRANDON: Right now we got John  
22 Parillo and Casper Sun as assessors --

23 GEORGE ATHIE: Okay.

24 LOU BRANDON: -- with more help coming.  
25 Tom Galetta is here as meteorologist.

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1 GEORGE ATHIE: Okay.

2 LOU BRANDON: Stacey Rosenberg as PAAD  
3 and we also have Prosanta as coordinator and I  
4 might have missed somebody.

5 GEORGE ATHIE: So you briefed them on  
6 the weirdness --

7 LOU BRANDON: Oh, and Bruce, Bruce  
8 Watson's here again as the RAD. So we've done what?

9 GEORGE ATHIE: You briefed them on this  
10 corkiness of RASCAL trying --

11 LOU BRANDON: Yes.

12 GEORGE ATHIE: -- to do in there --

13 LOU BRANDON: And Casper's been through  
14 it once on Sunday --

15 GEORGE ATHIE: Yes, okay.

16 LOU BRANDON: -- so he's going to help  
17 all and John --

18 GEORGE ATHIE: All right.

19 LOU BRANDON: -- with it if they get  
20 into trouble.

21 GEORGE ATHIE: All right, well then what  
22 I'll plan on doing is tweaking it to make it work  
23 with the met for foreign plant and if, I guess if I  
24 knew anything more maybe I'll try some, just to see  
25 if I can figure out what Tony's problem with these

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1 100 percent/per hour releases were. And then plan  
2 on coming in as early as I can tomorrow and spending  
3 the day there tomorrow.

4 LOU BRANDON: Okay. Hey, Prosanta?  
5 Okay, we'll talk to you later George.

6 GEORGE ATHIE: Okay, bye.

7 LOU BRANDON: Okay, bye-bye.  
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PMT HHS FDA Audio Files

Docket Number: N/A

Location: N/A

Date: Wednesday, March 16, 2011

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(CONFERENCE CALL INITIATED)

PRIYA YADAV: This is Priya Yadav for  
Ann Marie's phone.

LOU BRANDON: Hi, this is Lou Brandon  
from the NRC.

PRIYA YADAV: Hi, Lou.

LOU BRANDON: Hold on just a minute.  
Okay, I'm back Priya.

PRIYA YADAV: Hi.

LOU BRANDON: I'm suppose to call back  
to Ann Marie to try and work out access to the CMHT  
--

PRIYA YADAV: Oh, yes, okay.

LOU BRANDON: -- and the RAMS database  
please.

PRIYA YADAV: Okay, yes, just one  
second. Actually let me take the phone to her then,  
that's going to get work done. Be right back.

MIKE DILLON: Hello, Lou?

LOU BRANDON: Yes.

MIKE DILLON: Hey, this is Mike Dillon  
again.

LOU BRANDON: Mike Dillon, great.

MIKE DILLON: Great. All right, so let

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1 me help you get where you need to go. First  
2 question, the log in front of you, you can log into  
3 NARAC outside the CMwed?

4 LOU BRANDON: I can get into the CMweb,  
5 I'm going to do that right now.

6 MIKE DILLON: Okay, that's great, do  
7 that please. I just want to make sure I got that  
8 first day train.

9 LOU BRANDON: Okay. Okay, I'm signed  
10 in. I can see events, Japan earthquake.

11 MIKE DILLON: Okay, click on that one  
12 please.

13 LOU BRANDON: Okay, if I click there all  
14 I see is NARAC calculations. Just one folder.

15 MIKE DILLON: Okay, all the runs are  
16 within NARAC calculation.

17 LOU BRANDON: Okay, so if I click --

18 MIKE DILLON: So --

19 LOU BRANDON: Yes, I understand.

20 MIKE DILLON: -- any new runs, any new  
21 runs will be in that folder.

22 LOU BRANDON: All right, But I was just  
23 on a conference call and they directed us to the  
24 CMHT folder.

25 MIKE DILLON: Okay, so we are obviously

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1 supporting multiple groups that have different  
2 folders.

3 LOU BRANDON: Yes, that's what I  
4 thought.

5 MIKE DILLON: Let me, hold on one  
6 second. However this run, oh, there it is in your  
7 HG folder, okay. All right, you're part of the  
8 CMHT, I do apologize, I'm just not quite sure all  
9 the connections are here.

10 LOU BRANDON: I'm part of the FRMAC  
11 assessment work group and we're directed to look at  
12 times in different folders.

13 MIKE DILLON: Okay.

14 LOU BRANDON: Consequence Management  
15 Home Team. I don't actively participate on the  
16 consequence management home team but I work actively  
17 with --

18 MIKE DILLON: So you are within the  
19 FRMAC DMHT work group?

20 LOU BRANDON: FRMAC assessment work  
21 group, FRMAC operations work group.

22 MIKE DILLON: Okay, hold on one second.  
23 Just making sure I wasn't missing something. Okay,  
24 now, oh, okay, sorry I thought you need me.

25 All right, I might talk to you in a

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1 second. Okay, FRMAC, okay. All right, so I am  
2 confirming that you don't currently have share  
3 permission to this folder --

4 LOU BRANDON: Okay.

5 MIKE DILLON: -- you're mentioning.

6 LOU BRANDON: All right.

7 MIKE DILLON: It certainly does exist.

8 LOU BRANDON: So how do I --

9 MIKE DILLON: That's what I'm trying to  
10 figure out.

11 LOU BRANDON: Okay.

12 MIKE DILLON: Ultimately the NIT is  
13 running this. What I'm trying to figure out is  
14 those right questions you can ask, or whoever, and  
15 get it through fast.

16 LOU BRANDON: Bill Beal?

17 MIKE DILLON: Oh, certainly. If Bill  
18 says authorize you're in, no questions.

19 LOU BRANDON: Okay. So I don't know if  
20 he's sleeping or not, he's one guy. Also Dan  
21 Blumenthal --

22 MIKE DILLON: Dan Blumenthal, essential  
23 anyone in the NIT. I believe Chris Smith is the  
24 current --

25 LOU BRANDON: Okay, we were just talking

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1 to Chris Smith.

2 MIKE DILLON: So Chris Smith --

3 LOU BRANDON: He probably would be  
4 willing to --

5 MIKE DILLON: -- in the NIT?

6 MALE PARTICIPANT: In the NIT, yes.

7 MIKE DILLON: So Chris Smith is in the  
8 NIT. Hold on one second, just want to make sure we  
9 get these ask question right.

10 LOU BRANDON: Okay.

11 (Off record comments)

12 MIKE DILLON: Okay, Lou?

13 LOU BRANDON: Okay.

14 MIKE DILLON: All right, here it is. If  
15 you can Chris Smith, he's the guy currently at the  
16 NIT.

17 LOU BRANDON: Okay.

18 MIKE DILLON: So don't need to waste a  
19 lot of that, if he says give access to the CMHT  
20 folder in, and underline things, but you want to get  
21 access with CMHT chief coordinator on the line  
22 saying anything new you'll get added to that.

23 LOU BRANDON: All right, now it seems to  
24 be the same problem for the RAMS database.

25 MIKE DILLON: That I suspect you're

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1 going to have to go to somewhere else. We don't  
2 control access to the RAMS database.

3 LOU BRANDON: Should I see it here on  
4 CMweb?

5 MIKE DILLON: You can access it through  
6 CMweb, there's actually a link to the centric one.  
7 I believe it's run through our cell, I honestly  
8 don't know off the top of my head.

9 LOU BRANDON: Um.

10 MIKE DILLON: Is that Keith  
11 (indiscernible, possibly "Fredster")?

12 LOU BRANDON: It's a different website?

13 MIKE DILLON: It is ultimately a  
14 different website though, you know how the web  
15 works, you can kind of set one from the other.

16 LOU BRANDON: Yes.

17 MIKE DILLON: It's not always obvious to  
18 people which ones are which.

19 LOU BRANDON: Yes.

20 MIKE DILLON: And to myself.

21 LOU BRANDON: So if you have --

22 MIKE DILLON: But we don't control the  
23 RAMS website and the access permission that you're  
24 talking about.

25 LOU BRANDON: Okay, so I may need to

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1 talk to someone at RSL.

2 MIKE DILLON: Yes, but it certainly can  
3 get you runs, I don't know if there's runs, but  
4 certainly the books, discussion, etcetera. What I  
5 would, yes.

6 LOU BRANDON: So how do I get the  
7 website, I guess is one, first question?

8 MIKE DILLON: The RAMS website?

9 LOU BRANDON: Yes.

10 MIKE DILLON: Ron is going to send you  
11 some information right now, Ron Baskett.

12 LOU BRANDON: Okay.

13 MIKE DILLON: And --

14 LOU BRANDON: And I'll followup with  
15 Chris on --

16 MIKE DILLON: I would followup with  
17 Chris.

18 LOU BRANDON: Okay.

19 MIKE DILLON: And just hold on one  
20 second. So the group I think you're going to want  
21 to get yourself under is called FRMAC CMHT work  
22 group who is, I believe that's the right one,  
23 honestly that's my best guess at the moment. I  
24 probably can't spend to much more time.

25 LOU BRANDON: Are you saying I should

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1 say that to Chris Smith when I talk to him?

2 MIKE DILLON: Honestly if Chris Smith  
3 says go you're just going to be there. To make it  
4 like easier in the future I think that's the group  
5 you're going to want to get yourself stuck in.

6 LOU BRANDON: Okay, very good.

7 MIKE DILLON: But if you're short term,  
8 you're just getting him to say yes, that one word.

9 LOU BRANDON: Okay, very good.  
10 Appreciate your help and I guess either Chris or I  
11 will call you back. Chris I guess has to do it to  
12 confirm, right?

13 MIKE DILLON: Chris can send an email is  
14 fine, I mean however.

15 LOU BRANDON: Okay, very good.

16 MIKE DILLON: Thank you, very much.

17 LOU BRANDON: Thanks for you're help  
18 Mike.

19 MIKE DILLON: Sorry about that.

20 LOU BRANDON: Um-huh.

21 MIKE DILLON: No problem.

22 LOU BRANDON: Bye now.

23

24

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(CONFERENCE CALL INITIATED)

AUTOMATED MESSAGE: You have reached the United States Department of Energy Operations Center, you're call is being transferred to a DOE watch officer.

ROBERT TURNER: Operations Center, Robert Turner speaking, how may I help you?

LOU BRANDON: Hi, Robert, this is Lou Brandon, NRC. Could you pass me to Chris Smith in the NIT please?

ROBERT TURNER: Chris in the NIT?

LOU BRANDON: NIT Ops, yes.

ROBERT TURNER: You're connected, sir, go right ahead.

LOU BRANDON: Okay, thanks. Chris?

KEITH NELSON: This is Keith Nelson, how can I help you, sir?

LOU BRANDON: Okay. I just talked to Lawrence Livermore and we've been on conference call working with NARAC and the consequence management home team, they guided me to look in a folder on the CMwed --

KEITH NELSON: Um-huh.

LOU BRANDON: -- and I don't have, it's

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1 not shared to me, I don't have access so they --

2 KEITH NELSON: Okay, what folder are you  
3 looking for?

4 LOU BRANDON: It's the CMHT folder. So  
5 you go in and you get NARAC calculations and then  
6 under that are all the runs, there's a CMHT folder  
7 that I was directed to by Sandy to look into. I  
8 just need to have access --

9 KEITH NELSON: Yes, okay. Can I get  
10 your name again, sir, I thought we fixed this?

11 LOU BRANDON: Lou Brandon.

12 KEITH NELSON: Okay.

13 LOU BRANDON: So I just talked to Mike  
14 Dillon at NARAC, he said all he needs is a yes from  
15 Chris Smith, or maybe you can do this.

16 KEITH NELSON: Sure, okay, I'll make a  
17 phone call right now, sir.

18 LOU BRANDON: All right, appreciate it.

19 KEITH NELSON: All right, yes, bye.

20 LOU BRANDON: Thank you very much, bye-  
21 bye.

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1 ANN MARIE: Hello, this is Ann Marie.

2 LOU BRANDON: Hi, Ann Marie, this is Lou  
3 Brandon, NRC.

4 ANN MARIE: Hey, Lou.

5 LOU BRANDON: We just got a call from  
6 some guy who said that the AMS data was available in  
7 CMHT on the CMweb and when I look in there, I was  
8 given access to the CMHT folder, there's AMS  
9 products release but it says there's nothing  
10 available. Am I --

11 ANN MARIE: Let me call you back on that  
12 and I'll go over there and check and then help them  
13 retie in, so let me call you right back in two  
14 minutes.

15 LOU BRANDON: Okay.

16 ANN MARIE: All right, thanks.

17 LOU BRANDON: Thanks, bye.  
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7 FRIDAY,

8 MARCH 18th, 2011

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(CONFERENCE CALL INITIATED)

ANN MARIE: Hello, this is Ann Marie.

LOU BRANDON: Hi, Ann Marie, this is Lou  
Brandon at the NRC.

ANN MARIE: Hey, hello.

LOU BRANDON: You're back again.

ANN MARIE: I'm back.

LOU BRANDON: You working the night  
shift?

ANN MARIE: Yes, I usually pull like  
9:00 to 9:00.

LOU BRANDON: Okay. I've got a couple  
of questions for you.

ANN MARIE: Great.

LOU BRANDON: Number one, I have been  
given access to the CMHT folder in CMweb and there's  
a AMS products release folder in there.

ANN MARIE: Um-huh.

LOU BRANDON: And every time I look in  
it, since I've been given access, it says nothing  
found to display.

ANN MARIE: Hmm, let me look, I have  
that open.

LOU BRANDON: Should there be something

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1 there or?

2 ANN MARIE: It locked me out, here just  
3 a second.

4 LOU BRANDON: We have AMS products that  
5 are circulating around here, somebody else found  
6 them someplace or they got emailed to us, so I'm not  
7 sure how they actual got to us since I --

8 ANN MARIE: Yes, let me look. How about  
9 this, I'm going to right a note because I'm critical  
10 pass right now, I'm doing summation of our source  
11 term to get it right for our different DRL folks and  
12 all that.

13 LOU BRANDON: Okay.

14 ANN MARIE: I'm about five to ten  
15 minutes out from finishing --

16 LOU BRANDON: Finishing that project,  
17 yes.

18 ANN MARIE: -- our cross checking.

19 LOU BRANDON: Okay.

20 ANN MARIE: Well hitting a good stopping  
21 point, let me put it that way. So let me finish  
22 that and then let me sort, because your right, I saw  
23 some email attachments on it.

24 I'm sorting through here now both of  
25 the, well I was looking at RAMS and whatchamacallit

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1 --

2 LOU BRANDON: CMweb?

3 ANN MARIE: Yes. And I'm not --

4 LOU BRANDON: Not seeing it either in  
5 place?

6 ANN MARIE: Yes. But the thing is I'm  
7 going to come back through because it just logged me  
8 out of my NARAC thing as well.

9 So I'm going to come back through NARAC  
10 because I've noticed sometimes depending on how I  
11 come in I see different things. So let me get  
12 squared away with my source terms and then let me  
13 try all pathways and I'll see what I see going  
14 through the different logs.

15 LOU BRANDON: All right, and then the  
16 second question is, do you have any idea when the  
17 next AMS products might be released? Did they do  
18 runs today and have they got updates coming?

19 ANN MARIE: They did and what they just  
20 said about like ten or 15 minutes ago was it's in  
21 progress. And they're trying to finish some plots  
22 for the monitoring and so I think for the AMS in  
23 time for some briefs in like 15 minutes.

24 LOU BRANDON: Oh, okay. So then I just  
25 need to know where to look to find it?

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1 ANN MARIE: Yes, and people were all  
2 kind fo squirly saying, well you put through, it  
3 comes down web and they did the, we'll send it to  
4 the NIT and then, well whatever. So they're pulling  
5 our line of, we sent it to the NIT.

6 You know, other then our standard  
7 products, the successful stuff goes to the NIT and  
8 then it goes back out. So I wouldn't --

9 LOU BRANDON: Okay.

10 ANN MARIE: -- hold my breath, but  
11 keeping me, I have an ear on the bridge line and so  
12 if I hear anything new I'll let you know.

13 LOU BRANDON: Okay, appreciate. I'll  
14 let you go back to work.

15 ANN MARIE: Yes, let me make sure. Are  
16 you going to stay at 5100 or is there a better  
17 number, direct line for you?

18 LOU BRANDON: 5100 works or that number  
19 I gave to you yesterday.

20 ANN MARIE: Okay.

21 LOU BRANDON: You can call 301-816-5184.

22 ANN MARIE: Okay. All right, well hey,  
23 let me finish these numbers up and I will go a  
24 hunting for the AMS stuff.

25 LOU BRANDON: Thanks, Ann.

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1 ANN MARIE: All right, you're welcome,  
2 sure.

3 LOU BRANDON: Bye-bye.  
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7 SATURDAY,

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7 TUESDAY,

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(CONFERENCE CALL INITIATED)

OPERATOR: U.S. Nuclear Regulatory  
Commission.

CYNTHIA BARR: Can I get Chris McKenney  
please?

CHRIS MCKENNEY: Hello, McKenney.

CYNTHIA BARR: Hi, McKenney, it's  
Cynthia Barr.

CHRIS MCKENNEY: Hey, Cynthia.

CYNTHIA BARR: I'm working in the Ops,  
well I didn't really mean to work in the Op Center  
but I came down to see where they were for a little  
bit and got asked a bunch of questions. But anyway,  
before you leave to go catch the train, they were  
worried about the Iodine-131 dose pathway or child  
dose through the milk, I mean cow --

CHRIS MCKENNEY: Right.

CYNTHIA BARR: -- milk pathway and I  
think they have some information on air  
concentrations or deposition rates that a cow and  
then cow like he's suppose to and they wanted I  
guess some dose calculations, but we can get the  
dose conversion factors for the child in SCR-13 or  
SCR-72, right?

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1 CHRIS MCKENNEY: Yes.

2 CYNTHIA BARR: There was a dose  
3 conversion factor tables, CD or something I think I  
4 recall?

5 CHRIS MCKENNEY: CD, yes, I have it.

6 CYNTHIA BARR: Okay. Oh, you have it,  
7 okay.

8 CHRIS MCKENNEY: Do you want to look --

9 CYNTHIA BARR: Yes. And they also might  
10 have a higher consumption rate for the milk pathway.

11 CHRIS MCKENNEY: For, per weight  
12 kilogram they do but they actually don't have a, on  
13 a liter basis.

14 CYNTHIA BARR: Right, they don't drink  
15 as much but for the normalize weight --

16 CHRIS MCKENNEY: The normalize weight  
17 they do.

18 CYNTHIA BARR: Yes.

19 CHRIS MCKENNEY: Yes, I mean we have a,  
20 gosh, I mean they can also go back for a lot of that  
21 analysis, for like the uptake in the plants, I mean,  
22 are they using the stuff from NARAC CR-6526, which  
23 is the, we did it in the 90's which was a expert  
24 elicitation on uptake in the cows?

25 CYNTHIA BARR: No.

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1 CHRIS MCKENNEY: Okay.

2 CYNTHIA BARR: But we can.

3 CHRIS MCKENNEY: I have it right here,  
4 I'll pull it out so when you come up I'll have it  
5 all ready for you.

6 CYNTHIA BARR: Okay. All right, thank  
7 you.

8 CHRIS MCKENNEY: Um-huh.

9 CYNTHIA BARR: All right, bye.

10 CHRIS MCKENNEY: Bye.  
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(CONFERENCE CALL INITIATED)

GEORGE MANASKIE: INPO NRC, George Manaskie.

CASPER SUN: George, my name is Casper Sun, I'm calling from the U.S. NRC Headquarter at Emergency (inaudible) Team for the Japanese accident. And I've got a number for one of your chief and to call this number and further to have some more information, well I need your help George.

GEORGE MANASKIE: Okay.

CASPER SUN: Okay. And you can take my name down, my last name is Sun, S-U-N, my first name Casper.

Okay, and if you have a question you always can call me back here, 301-816-5100 looking for station PMT 11. I'm telling you this to identify myself so hopefully you can help me with a question.

I understand one of the INPO fellow, there's a name, Al, and I cannot say his name, Hotch, Hotchpokin? Do you know that he, at the (inaudible) he traveled to Japan right now?

GEORGE MANASKIE: Oh, Hochevar.

CASPER SUN: Hochevar, can you spell his

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1 name for me?

2 GEORGE MANASKIE: Yes, it's H-O-C --

3 CASPER SUN: H-O-C.

4 GEORGE MANASKIE: H.

5 CASPER SUN: H.

6 GEORGE MANASKIE: Hang on, let me make  
7 sure --

8 CASPER SUN: Okay.

9 GEORGE MANASKIE: -- I get it correct.

10 CASPER SUN: Okay, George, take your  
11 time.

12 GEORGE MANASKIE: Yes.

13 CASPER SUN: That not fair for you to  
14 answer me so quickly. Hochevar, huh?

15 GEORGE MANASKIE: Yes, Hochevar. Big  
16 Al.

17 CASPER SUN: Is he a doctor?

18 GEORGE MANASKIE: No, no. He's  
19 actually, he's one of our directors, he's a director  
20 of the organizational effectiveness department here.

21 CASPER SUN: Hochevar, H-O-C-H --

22 GEORGE MANASKIE: E --

23 CASPER SUN: H-O-C-H --

24 GEORGE MANASKIE: Hang on, I'll get it  
25 right in just a second. H-O-C-H-E-V-A-R.

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1 CASPER SUN: E-Z, like a zebra?

2 GEORGE MANASKIE: No, Victor.

3 CASPER SUN: E-V-A-R?

4 GEORGE MANASKIE: That is correct.

5 CASPER SUN: Okay, Hochevar. Okay,  
6 great. So currently Al is to travel to Japan?

7 GEORGE MANASKIE: That's right.

8 CASPER SUN: Okay.

9 GEORGE MANASKIE: And I just received  
10 word that he has arrived there in Tokyo.

11 CASPER SUN: I see. He's the director  
12 of the INPO, right?

13 GEORGE MANASKIE: That's right.

14 CASPER SUN: INPO. So I have to read,  
15 don't need much of that. Okay, next question is, I  
16 understand he claims he has access of 1 million dose  
17 of KI?

18 GEORGE MANASKIE: Oh, does he have  
19 access to --

20 CASPER SUN: Yes, he claim he access 1  
21 million doses of the KI, the tablet.

22 GEORGE MANASKIE: If he says that then  
23 it is true. We do have a support team here in the  
24 building and I know that we have provided that  
25 information, I thought to the RST earlier today.

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1 CASPER SUN: Uh-huh. Okay, my question  
2 is, where is this KI pill right now?

3 GEORGE MANASKIE: Oh, where exactly is  
4 it?

5 CASPER SUN: Yes.

6 GEORGE MANASKIE: Okay, I'll tell you  
7 what, let me have our logistics guy get back to you.  
8 And it was Jasper?

9 CASPER SUN: Casper.

10 GEORGE MANASKIE: Casper.

11 CASPER SUN: Casper, the friendly ghost.

12 GEORGE MANASKIE: Oh, that makes it much  
13 easier, Casper Sun.

14 CASPER SUN: Yes, Casper Sun.

15 GEORGE MANASKIE: And you're at station  
16 PMT 11?

17 CASPER SUN: 11, yes.

18 GEORGE MANASKIE: Okay.

19 CASPER SUN: In the --

20 GEORGE MANASKIE: At the 5100 number?

21 CASPER SUN: Yes, 5100 number.

22 GEORGE MANASKIE: Okay.

23 CASPER SUN: And George what I needed to  
24 know, where is the pills, KI pills.

25 GEORGE MANASKIE: Right, where is it.

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1 CASPER SUN: Yes, where it is. And so,  
2 okay, and that's about what I need to ask.

3 GEORGE MANASKIE: No problem Casper.

4 CASPER SUN: And where are you located?

5 GEORGE MANASKIE: We're in Atlanta in  
6 the INPO building.

7 CASPER SUN: I see, I see.

8 GEORGE MANASKIE: Yes.

9 CASPER SUN: Much warmer then here --

10 GEORGE MANASKIE: Yes, we're in the 70's  
11 today, but --

12 CASPER SUN: Wonderful.

13 GEORGE MANASKIE: -- I will have Terri  
14 McLaughlin get to you within the next 20 minutes.

15 CASPER SUN: That's wonderful.

16 GEORGE MANASKIE: Okay.

17 CASPER SUN: Thank you so much.

18 GEORGE MANASKIE: You're welcome.

19 CASPER SUN: Bye-bye.

20 GEORGE MANASKIE: Bye-bye.  
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5 PMT HHS-FDA AUDIO FILES

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7 THURSDAY,

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7 SUNDAY,

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(CONFERENCE CALL INITIATED)

JASON SHAPIRO: Hello.

LOU BRANDON: Hello, Jason?

JASON SHAPIRO: Speaking.

LOU BRANDON: This is Lou Brandon, NRC.

JASON SHAPIRO: Yes, hey, Lou, you  
doing?

LOU BRANDON: Sorry to call so early in  
the morning.

JASON SHAPIRO: What's today?

LOU BRANDON: Sunday morning.

JASON SHAPIRO: Oh, okay.

LOU BRANDON: I'm calling about an  
issue. We created some RASCAL source terms, we sent  
them out and NARAC processed them,

(b)(5)

And we've had a meeting tonight,  
Jennifer Ewell wanted us to contact you as the  
subject matter expert and get your insight into this  
issue.

So what happened is we had three source  
terms for Unit 1, Unit 2 and Unit 3. And when we

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1 processed that --

2 JASON SHAPIRO: Back up one step.

3 LOU BRANDON: Yes.

4 JASON SHAPIRO: Okay, I'm familiar with  
5 two primes over the last two weeks that we've dealt  
6 with source terms. One time was, it was about like  
7 March 14th or 15, it was just a few days into the  
8 accident.

9 LOU BRANDON: And we produced probably -  
10 -

11 JASON SHAPIRO: And those source terms  
12 were used to RASCAL and then the RASCAL runs were  
13 put up on the internet on the public website.

14 LOU BRANDON: Oh.

15 JASON SHAPIRO: As part of a press  
16 release.

17 LOU BRANDON: Oh, okay, yes. The one  
18 where they established the 50 mile.

19 JASON SHAPIRO: Yes, that was about,  
20 that's right, that was the one that was --

21 LOU BRANDON: Yes.

22 JASON SHAPIRO: -- answered at the same  
23 time the decision was made.

24 LOU BRANDON: Yes.

25 JASON SHAPIRO: The second was, I was

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1 involved in was on the 18th of March. We worked on  
2 that, well I guess it was Friday evening worked on  
3 it all evening and then I guess in the middle of the  
4 morning, I guess at like 4:00 in the morning or  
5 something it was forwarded to NARAC to do RASCAL run  
6 for the --

7 LOU BRANDON: Okay.

8 JASON SHAPIRO: -- for long distances.  
9 Is there a third source term that was developed?

10 LOU BRANDON: Oh, yes, there's a bunch  
11 of them. We sent them probably ten or 20 before we  
12 left --

13 JASON SHAPIRO: Oh, wow.

14 LOU BRANDON: -- a couple weeks here.

15 JASON SHAPIRO: Wow.

16 LOU BRANDON: But this is a conceptual  
17 issue. What happened in this latest case was the  
18 RASCAL operator had the core uncovered, and  
19 typically that's the time when the release starts,  
20 but they had a delay of 23 hours before they had the  
21 release start.

22 So this stuff was released into  
23 containment, bottled up, set there for 23 hours and  
24 then began the release.

25 JASON SHAPIRO: Yes.

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1 LOU BRANDON: The way RASCAL models it  
2 is it has some substantial reduction factor when  
3 it's in containment. And they're so substantial  
4 that we're seeing a reduction of the Cesium and  
5 Iodine by a factor of 100.

6 JASON SHAPIRO: Yes.

7 LOU BRANDON: That's where we need your  
8 expertise.

9 JASON SHAPIRO: All right.

10 LOU BRANDON: This was unbelievable to  
11 Jennifer Ewell that it could go down so fast but  
12 we'd been looking at NUREG-1150. And it basically  
13 suggests if you got 24 hours in containment, the  
14 amount left in the atmosphere is really low.

15 JASON SHAPIRO: Okay, can you hang on  
16 one second, I'm going to switch phones.

17 LOU BRANDON: Okay.

18 JASON SHAPIRO: And put some slippers  
19 on. I'll have to put the phone down for a minute or  
20 two.

21 LOU BRANDON: Sure, I'll stand by.

22 (Off record comments)

23 JASON SHAPIRO: Okay, Lou.

24 LOU BRANDON: Okay, Jason.

25 JASON SHAPIRO: Yes, I looked at this a

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1 little bit the other day.

2 LOU BRANDON: Oh, you did?

3 JASON SHAPIRO: Well not the one whole  
4 day worth of, I was looking at the original RASCAL  
5 run that was used back, well the one, I shouldn't  
6 say original, I looked at the RASCAL run that was  
7 done again back when we made the 50 mile evacuation  
8 determination for U.S. citizens. And the way the  
9 RASCAL run was setup was it was a release of, let's  
10 see, it was a core, it was one of the core  
11 uncovered, how long the core was uncovered?

12 LOU BRANDON: Yes, that was the --

13 JASON SHAPIRO: It was setup to --

14 LOU BRANDON: Source term.

15 JASON SHAPIRO: The source term was  
16 setup to basically put the entire, let the entire  
17 release go into the dry well and then it leaked out  
18 from the dry well.

19 LOU BRANDON: 100 percent per hour I  
20 think.

21 JASON SHAPIRO: Yes, that's it. It was  
22 total failure, 100 percent per hour from the dry  
23 well into the environment. And I'm remembering, I  
24 probably should go get the, let me pull it out,  
25 okay.

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1 LOU BRANDON: Okay.

2 JASON SHAPIRO: Let me just find my,  
3 I've actually got it in my backpack believe it or  
4 not. I've been carrying that thing around. Let me  
5 just find my backpack. There it is. Yes, sorry I'm  
6 so slow on the draw.

7 LOU BRANDON: No --

8 JASON SHAPIRO: I was snoozing.

9 LOU BRANDON: No rush.

10 JASON SHAPIRO: I did go to bed early  
11 last night though.

12 LOU BRANDON: You did get to bed early?  
13 Well you answered on the second ring, I assume you  
14 must be a light sleeper.

15 JASON SHAPIRO: No, I was actually, I'm  
16 fine now. All right, got my backpack here. Let me,  
17 I got a speaker phone, I'll just put it on speaker  
18 here.

19 LOU BRANDON: Okay.

20 JASON SHAPIRO: Okay. Yes, here it is.  
21 Okay, time core uncovered, released path has  
22 created a total failure. Okay, so the RASCAL I'm  
23 looking at here from the 15th of March had the time  
24 core uncovered, core uncovered on March 15 at the 0  
25 hours and same thing, the release also, okay, the

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1 release path also started at 3:15 at 0 hour. Okay -

2 LOU BRANDON: Yes.

3 JASON SHAPIRO: So what you said is you  
4 did something like this but you offset the release  
5 start time by about a day?

6 LOU BRANDON: Yes. So there was a  
7 different RASCAL operator who ran a case like that.

8 JASON SHAPIRO: Yes, sure.

9 LOU BRANDON:

(b)(5)

10

11

12

JASON SHAPIRO: Oh.

13

LOU BRANDON: --

14

(b)(5)

15

16

17

JASON SHAPIRO:

18

(b)(5)

19

20

LOU BRANDON: Yes.

21

JASON SHAPIRO: It came with that group,

22

I'm guessing.

23

LOU BRANDON:

(b)(5)

24

25

JASON SHAPIRO: Yes.

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1 LOU BRANDON: They just said we would  
2 like to have an explanation. Why is --

3 JASON SHAPIRO: All right.

4 LOU BRANDON: -- noble gas high and  
5 everything else low in this case?

6 JASON SHAPIRO: Yes, RASCAL's got a  
7 reduction factor --

8 LOU BRANDON: Yes.

9 JASON SHAPIRO: -- for the dry well.  
10 And I'm remembering, I don't have the RASCAL manual  
11 with me but I'm, it's some kind of, it's a so called  
12 landa (phonetic) or deposition rate constant.

13 LOU BRANDON: Yes, it's an exponential  
14 in three parts.

15 JASON SHAPIRO: Yes.

16 LOU BRANDON: So --

17 JASON SHAPIRO: Hang on a second, I'm  
18 trying to, saying it's been a long time and I didn't  
19 find the actual number when I was looking at the  
20 RASCAL manual the other day, so if you could help me  
21 with that I'd appreciate it.

22 LOU BRANDON: Okay, well I can give you  
23 the exponential or I can tell you what the percent  
24 is?

25 JASON SHAPIRO: Yes, you want to give me

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1 the three numbers, the three parts of it.

2 LOU BRANDON: Okay, yes.

3 JASON SHAPIRO: All right.

4 LOU BRANDON: Let me, I got to grab one,  
5 oh, here it is right here, hold on. Okay, for the  
6 first, 1.75 hours.

7 JASON SHAPIRO: Hang on one second.  
8 Okay, so from 2 equals 0 to 1.75 hours. Okay.

9 LOU BRANDON: It's E to the minus 1.2  
10 times the time.

11 JASON SHAPIRO: All right.

12 LOU BRANDON: That works out to be about  
13 .12 for 1.7 hours.

14 JASON SHAPIRO: Oh, you're saying if you  
15 put a plug in, 1.75 hours --

16 LOU BRANDON: Yes.

17 JASON SHAPIRO: -- what do you get?

18 LOU BRANDON: Yes, .12.

19 JASON SHAPIRO: Okay, so let me just  
20 make a, okay, hang on a second. .12, all right.

21 LOU BRANDON: Yes. And it says that's  
22 the reduction factor multiplier. So does that  
23 suggest if you hit a 100 curies you would get a  
24 reduction to 12 or does that mean a 12 percent  
25 reduction of a 100 to 88?

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1 JASON SHAPIRO: This E-1.2 is the number  
2 that you multiple against the --

3 LOU BRANDON: Activity.

4 JASON SHAPIRO: -- activity, so if you  
5 have a activity of 100 you multiple 100 times E-  
6 1.2T.

7 LOU BRANDON: So it actually reduces to  
8 about 12 percent in the first two hours?

9 JASON SHAPIRO: Yes.

10 LOU BRANDON: Okay.

11 JASON SHAPIRO: Yes.

12 LOU BRANDON: So that confirms what we  
13 suspect here.

14 JASON SHAPIRO: Well now I can further  
15 confirm it if I had a copy of the report, the  
16 NUREG/CR in my hand, but I don't.

17 LOU BRANDON: Oh.

18 JASON SHAPIRO: I think it's probably  
19 sitting on my shelf --

20 LOU BRANDON: Well I have a copy --

21 JASON SHAPIRO: It went down, 1.2 is not  
22 out of the question. That numbers going to start  
23 going down though at some point. I mean that 1.2T  
24 is not going to be 1.2T, it's going to be like .012T  
25 or something after awhile. I mean it's going to

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1 shrink.

2 LOU BRANDON: Yes, there's two more  
3 factors, you want those?

4 JASON SHAPIRO: Yes, please.

5 LOU BRANDON: 1.75 to 2.25 hours, that's  
6 the next half hour. The factors exponent to the  
7 minus .64T.

8 JASON SHAPIRO: Yes, I think we're  
9 starting to get smaller.

10 LOU BRANDON: Yes. And then after 2.25  
11 hours, this is the third piece, it's exponent to the  
12 minus 0.15T.

13 JASON SHAPIRO: See, it's going down.

14 LOU BRANDON: Yes. So it drops off  
15 pretty fast in the beginning.

16 JASON SHAPIRO: Okay, E to the minus,  
17 what is it, point?

18 LOU BRANDON: 0.15 times time.

19 JASON SHAPIRO: Yes, all right. Do you  
20 have the NUREG/CR number that came from?

21 LOU BRANDON: Yes, it refers to NUREG-  
22 1150 and I'm looking at NUREG-1150 on Page B53 right  
23 now.

24 JASON SHAPIRO: The first act of NUREG-  
25 1150, huh.

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1 LOU BRANDON: Yes.

2 JASON SHAPIRO: All right.

3 LOU BRANDON: And it says, the release  
4 that commences a day or more after the onset of core  
5 damage --

6 JASON SHAPIRO: What's the page?

7 LOU BRANDON: Page 53.

8 JASON SHAPIRO: Page 53.

9 LOU BRANDON: B, it's Appendix B, 53.

10 JASON SHAPIRO: Oh, Appendix B, Page 53?

11 LOU BRANDON: Yes. NUREG-1150.

12 JASON SHAPIRO: Huh, all right.

13 LOU BRANDON: It says, release that  
14 commences a day or more after the onset of core  
15 damage or ten hours or more after vessel breach --

16 JASON SHAPIRO: Stop, slow down a  
17 minute, I'm trying to write the phases. Release  
18 that commences when?

19 LOU BRANDON: A day or more after the  
20 onset of core damage or ten hours or more after  
21 vessel breach.

22 JASON SHAPIRO: A little slower. A day  
23 or more after onset --

24 LOU BRANDON: Okay, a day or more after  
25 the onset of core damage.

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1 JASON SHAPIRO: Okay.

2 LOU BRANDON: Or --

3 JASON SHAPIRO: All right.

4 LOU BRANDON: -- ten hours or more after  
5 vessel breach.

6 JASON SHAPIRO: All right.

7 LOU BRANDON: Would be expected to have  
8 very small releases. Then it gives a table.

9 JASON SHAPIRO: Oh, okay.

10 LOU BRANDON: So under late release you  
11 get a 100 percent of the nobles, but Iodine's 4.4E-  
12 3.

13 JASON SHAPIRO: Sorry, under late  
14 release.

15 LOU BRANDON: Yes, noble is a factor --

16 JASON SHAPIRO: Okay, I wrote down noble  
17 core, now what was the other one?

18 LOU BRANDON: Iodine's 4.4E-3. Cesium's  
19 8.6E-8. And then there's a bunch more factors, 10-7  
20 and an I-8 for the other chemical groups there.

21 JASON SHAPIRO: Okay, so how much is the  
22 RASCAL source term to the environment for the case  
23 where, you know where the Iodine Cesium for that  
24 one? The one we were talking about tonight?

25 LOU BRANDON: Yes, we wrote down the run

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1 without hold up --

2 JASON SHAPIRO: Okay, hang on one  
3 second.

4 LOU BRANDON: Okay.

5 JASON SHAPIRO: Okay, without hold up --

6 LOU BRANDON: Without hold up, Cesium  
7 137 2.45E-4th. With hold up, 2.69E-2.

8 JASON SHAPIRO: Okay, with 24 hours held  
9 up?

10 LOU BRANDON: 23 hours actually.

11 JASON SHAPIRO: Yes, okay, with 23 hours  
12 hold up. What's the number?

13 LOU BRANDON: 2.69E-2.

14 JASON SHAPIRO: Okay. What's the  
15 release fractions for those, what's the  
16 corresponding core release fraction --

17 LOU BRANDON: Well it's about 20, I have  
18 to find a table we produced, but it was  
19 approximately 22 percent without the hold up and  
20 approximately one percent with the hold up. Okay,  
21 John just handed me the table here.

22 JASON SHAPIRO: Oh, thank you.

23 LOU BRANDON: So for Cesium 137 --

24 JASON SHAPIRO: Yes.

25 LOU BRANDON: -- without the hold up,

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1 I'm looking for the percent here, 22 percent and  
2 with the hold up was one percent.

3 JASON SHAPIRO: Okay, I'm actually a  
4 little bit surprise that without the hold up it's so  
5 small. I mean the release from the core is 60  
6 percent, right?

7 LOU BRANDON: Um.

8 JASON SHAPIRO: Or the other, I guess  
9 that leak rate must be allowing some of it to  
10 settle.

11 LOU BRANDON: Yes, well that's why we're  
12 calling you.

(b)(5)

13 we raised our  
14 eyebrows here in PMT and then when we tried to  
15 explain it to the executive team, Jennifer, Ewell  
16 said this is unbelievable it can be so small.

17 JASON SHAPIRO: Yes.

18 LOU BRANDON: But NUREG-1150 seems to  
19 suggest that's right and we're looking for your  
20 expert opinion.

21 JASON SHAPIRO: Well, okay, I think I'm  
22 with you now. Sorry it took so long, had to go from  
23 waking up to seeing the numbers to the --

24 LOU BRANDON: Yes --

25 JASON SHAPIRO: -- thinking about it a

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1 little.

2 LOU BRANDON: -- it's a complex  
3 technical issue.

4 JASON SHAPIRO: Yes.

5 LOU BRANDON: We've been scratching our  
6 head for ten hours on this now.

7 JASON SHAPIRO: What, so you say neither  
8 case has a release rate from the dry well of a 100  
9 percent per hour?

10 LOU BRANDON: That's what, in this case  
11 it was a 100 percent per day that was modeled.

12 JASON SHAPIRO: Which one, the without  
13 holdup or the with holdup?

14 LOU BRANDON: Both of them.

15 JASON SHAPIRO: Oh, oh. 100 percent per  
16 day.

17 LOU BRANDON: Yes.

18 JASON SHAPIRO: Oh, that's a little  
19 different than the so called total failure case in  
20 REV.

21 LOU BRANDON: Yes, that would be a 100  
22 percent per hour. So this release is --

23 JASON SHAPIRO: Well that explains why  
24 with the without holdup case had some holdup.

25 LOU BRANDON: That's right. That's

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1 right, it was actually in there for 24 hours and  
2 then got --

3 JASON SHAPIRO: Okay, well that explains  
4 why it's down to 22 percent. That looks reasonable  
5 to me.

6 LOU BRANDON: Okay.

7 JASON SHAPIRO: The other case, yes, I -  
8 -

9 LOU BRANDON: It sounds like RASCAL, you  
10 know --

11 JASON SHAPIRO: It's actually got a lot  
12 more than 23 hours holdup if you're releasing a 100  
13 percent per day.

14 LOU BRANDON: Well most of it will get  
15 out in one day and then the residual, like an air  
16 change, you get some residue coming out after 24  
17 hours.

18 JASON SHAPIRO: Yes. Okay, well --

19 LOU BRANDON: But, yes, you would hold  
20 it up and then it would slowly leak out. So some of  
21 it would be in there more than 24 hours.

22 JASON SHAPIRO: I don't think, it's not  
23 unreasonable to have a lot of deposition like this  
24 for where it's in containment for a day or two. I  
25 mean --

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1 LOU BRANDON: Yes, okay, good. So it  
2 sounds like RASCAL's modeling correctly.

3 JASON SHAPIRO: If you want a better  
4 answer, I mean, I'll go into my office and pull my  
5 reports on this topic. Again, I don't have any  
6 materials at home.

7 LOU BRANDON: Well I'll convey that to  
8 Randy Sullivan who's our director right now and he  
9 can convey it to the executive team and if they want  
10 you to dig in further then we'll let you know. But  
11 --

12 JASON SHAPIRO: Now we've also got, we  
13 can also have our experts at Sandia look into this  
14 even further. You know we have a --

15 LOU BRANDON: Well that was actually  
16 part of the concept was that we would call you and  
17 Charlie Tinkler, I tried to call but he didn't  
18 answer, and then you guys could consult with Dana,  
19 what's his name.

20 JASON SHAPIRO: Yes, well --

21 LOU BRANDON: Dana Powers, yes.

22 JASON SHAPIRO: -- it's like 4:30 in the  
23 morning in Albuquerque so I don't know if they'll  
24 even be waking --

25 LOU BRANDON: Well went through this

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1 discussion at 3:00 in the morning here and they were  
2 going to have us call you then.

3 JASON SHAPIRO: Yes, that's fine. I'm  
4 happy to be woken up.

5 LOU BRANDON: But, yes, thanks to Marty  
6 Virgilio he was the voice of reason. He says, well  
7 we're in no rush, why don't we just wait till 6:00  
8 and call him at 6:00.

9 JASON SHAPIRO: Yes, yes, that's fine.  
10 Again, I've got materials in my office that I can  
11 use to further confirm it. We did a study back in,  
12 when I first came to, my early years there at the  
13 NRC back in the mid 90's when we were developing the  
14 NUREG-1455 source term, when we did that we also did  
15 some companion studies to develop deposition rates  
16 in the containment.

17 LOU BRANDON: Oh.

18 JASON SHAPIRO: With sprays and without  
19 sprays.

20 LOU BRANDON: Uh-huh.

21 JASON SHAPIRO: And I can of, I was kind  
22 of expecting you to cite me, cite that report to me  
23 as the basis for these numbers. The minus 1.2T, the  
24 minus .64T and the minus 0.15T.

25 LOU BRANDON: Well there is a NUREG-1228

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1 reference at the bottom of this table and we use  
2 1465 for the source term in RASCAL but it's not  
3 noted in this particular page in our tech doc.

4 JASON SHAPIRO: That would have been  
5 NUREG/CR, something or other, simplified models of  
6 aerosol deposition --

7 LOU BRANDON: Oh, NUREG/CR-4722 is  
8 mentioned here. Does that ring any bell?

9 JASON SHAPIRO: I don't know. It's been  
10 like 15 years.

11 LOU BRANDON: Containment sprays, that's  
12 a reference for containment sprays.

13 JASON SHAPIRO: Yes, well there were a  
14 set of four documents that were written by Dana  
15 Powers and one of them was on so called natural  
16 deposition processes. When you didn't have sprays,  
17 you didn't have suppression pools.

18 LOU BRANDON: Okay.

19 JASON SHAPIRO: Yes.

20 LOU BRANDON: And so this is not beyond  
21 reason what we got modeled in RASCAL?

22 JASON SHAPIRO: Yes. No, I don't think  
23 it's beyond reason. I'm kind of wondering why we're  
24 using the RASCAL so much. I mean just kind of  
25 taking a step back at some issues I've kind of

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1 struggling with the last few weeks. Why are using  
2 RASCAL source terms when we have new source terms  
3 from SORCA.

4 I guess I, I mean we try to do, use some  
5 of the new source term material back on March 18th  
6 when I was involved, but it sounds like we've been  
7 doing other calculations with RASCAL source term.  
8 And RASCAL is really a --

9 LOU BRANDON: Old technology.

10 JASON SHAPIRO: Well it's really, and  
11 actually the NUREG .65 source term is largely based  
12 around ALOCA. Now we don't know whether or not they  
13 had ALOCA or not as part of projections, we know  
14 they had a station blackout and we know --

15 LOU BRANDON: Yes.

16 JASON SHAPIRO: Yes. On the other hand  
17 we also know that they had, seem to have a close  
18 relationship between the start of the release and  
19 the core damage.

20 You know, the one thing that would be  
21 helpful too is if we got some information from the  
22 Japanese. That's been really coming in drips and  
23 drabs.

24 LOU BRANDON: Yes, understand.

25 JASON SHAPIRO: I mean it's really hard

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1 to do. To do these kind of RASCAL predictions the  
2 main thing that's really good to know is like, well  
3 when was the core uncovered and when was the  
4 containment vented.

5 You know I think there's information out  
6 there on this. I think it just hasn't been shared  
7 with as far as I can tell.

8 I saw some the other day that, I saw  
9 some plots just a day or two ago of reactive vessel  
10 water level and containment pressure and reactor  
11 pressure. You know, that's the first I saw of them  
12 and they've been floating around apparently for days  
13 and days.

14 LOU BRANDON: Ah.

15 JASON SHAPIRO: So we're having a lot of  
16 information problems.

17 LOU BRANDON: Yes, that's true. There's  
18 stuff piling up here that I haven't had a chance to  
19 look through.

20 JASON SHAPIRO: I know, but I just --

21 LOU BRANDON: But your suggestion is  
22 appreciated. RASCAL is the only tool we have and  
23 Jocelyn Mitchell got us a SORCA source term to build  
24 in, but we haven't gotten there yet.

25 JASON SHAPIRO: Yes, yes understood,

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1 understood.

2 LOU BRANDON: So if you guys have the  
3 capability to run SORCA runs, I wouldn't hesitate to  
4 encourage you to do so.

5 JASON SHAPIRO: Yes, we'll we're  
6 actually moving towards that direction. But we do  
7 have source terms for station backout, for page  
8 file. We got release fractions and timing and we  
9 feed those to the protective measures team on March  
10 18, the evening of March 18.

11 LOU BRANDON: Okay, and I think they  
12 sent those to NARAC to be modeled and there's  
13 probably a NARAC run based on that.

14 JASON SHAPIRO: All right, I would be  
15 more than happy to hop in the old car and get over  
16 to my office and pull up mu NUREG's and take a look  
17 at those and give you a call if you want?

18 LOU BRANDON: All right, well standby  
19 and we'll see if you want those to do that.

20 JASON SHAPIRO: I would say those  
21 numbers are non-reasonable if you just put the stuff  
22 in containment and let it sit there for 24 hours or  
23 so.

24 LOU BRANDON: Yes.

25 JASON SHAPIRO: I mean they will, it

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1 will go down. The original release fraction was 60  
2 percent anyway. So you're not starting even with a  
3 100 percent, you're already starting at 60 percent.

4 And as you point out here, you're really starting  
5 at 22 percent.

6 So you're really going out from 22  
7 percent to one percent. So that's not totally out  
8 of the question.

9 LOU BRANDON: Yes, okay.

10 JASON SHAPIRO: I mean did you, can you  
11 (inaudible) the hand calculation of the three E to  
12 the minuses? I see you got the first one.

13 LOU BRANDON: Yes we did. We put them  
14 in a spreadsheet and modeled that through. So for  
15 the first one it was .12, for the second one it was  
16 .76 and the third one was .038, I think.

17 JASON SHAPIRO: .038, oh, because  
18 there's so many hours.

19 LOU BRANDON: Yes, that's right.

20 JASON SHAPIRO: So you moved the number  
21 down from 22 percent to one percent, is that how it  
22 worked?

23 LOU BRANDON: Well it went down to about  
24 four percent, I think, right in the neighborhood of  
25 four percent.

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1 JASON SHAPIRO: All right.

2 LOU BRANDON: If we started with 100  
3 curies.

4 JASON SHAPIRO: You got about the same  
5 effect.

6 LOU BRANDON: Yes.

7 JASON SHAPIRO: All right, that seems  
8 quite reasonable. I think that's reasonable just  
9 from I guess a high level, but I don't know. I  
10 would be more than happy to just hop in the old car  
11 and go over and take a look at the --

12 LOU BRANDON: Okay.

13 JASON SHAPIRO: -- my books and my  
14 materials to see what else I can think of.

15 LOU BRANDON: We'll see if we can  
16 convince Jennifer that this is acceptable, if not  
17 then I will ask you to get some more feedback there.

18 JASON SHAPIRO: So Jennifer suggested  
19 you call me?

20 LOU BRANDON: Yes.

21 JASON SHAPIRO: Yes. All right, well  
22 just let me know what you want and like I said, I'll  
23 be more the happy, the one document in particular in  
24 the NUREG that Dana Powers wrote --

25 LOU BRANDON: Okay.

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1 JASON SHAPIRO: -- and the information  
2 and I'm trying to think of what other information I  
3 can pull on to go look, now there is another issue  
4 actually which is the so called vapor, Iodine vapor  
5 release.

6 LOU BRANDON: Uh-huh.

7 JASON SHAPIRO: There's been a lot of  
8 stuff floating around, well you know some of the  
9 Iodine might not be there so it might be a vapor.  
10 You know, so, but those releases were way less than  
11 one percent and they were small.

12 LOU BRANDON: That's what the impression  
13 I got from this NUREG-1150, is that there's a number  
14 of different --

15 JASON SHAPIRO: Yes.

16 LOU BRANDON: -- avenues for this stuff  
17 to be in containment, but it doesn't last long in  
18 the atmosphere once it gets there no matter how --

19 JASON SHAPIRO: Yes. No, that's  
20 absolutely correct. And again, we've been involved  
21 with this statement testing program over at France  
22 and they said, well we've got some vapor, you're  
23 like, well how much did you get, well less than one  
24 percent. Like uh.

25 LOU BRANDON: Yes, okay.

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1 JASON SHAPIRO: Can't get so excited  
2 about that.

3 LOU BRANDON: Me too.

4 JASON SHAPIRO: Yes, how do you we have  
5 an idea whether the release happened, whether the  
6 release from the containment happened simultaneously  
7 with core damage? Where do we, do we have  
8 information on that?

9 LOU BRANDON: Release fractions?

10 JASON SHAPIRO: No, no. I mean as you  
11 point out from this whole exercise it's very  
12 important when, how the release start time coincides  
13 with, the release start from the core whether that  
14 corresponds with containment failure.

15 LOU BRANDON: Yes, the way RASCAL model  
16 said is as soon as you uncover the core at all then  
17 you can get a release at that time. And you get the  
18 most if you release it at exactly the time it starts  
19 to be uncovered.

20 JASON SHAPIRO: What I'm saying though  
21 the containment failure would have been --

22 LOU BRANDON: Oh.

23 JASON SHAPIRO: What's going on is that  
24 if you recall earlier in the accident they had, I  
25 remember seeing reports that the steam pressure was

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1 going up, up to like three times, I remember at one  
2 point I saw the containment pressure from one of the  
3 reactors three times the design pressure.

4 LOU BRANDON: Uh-huh. Yes, I remember a  
5 situation like that.

6 JASON SHAPIRO: And it happened pretty  
7 quickly I guess.

8 LOU BRANDON: Uh-huh.

9 JASON SHAPIRO: And so what's going on  
10 in those cases is the hydrogen building up in  
11 containment from core damage.

12 LOU BRANDON: Uh-huh.

13 JASON SHAPIRO: And what they would like  
14 to do is they would like to not vent containment  
15 right away because they want to give the fission  
16 products a chance to deposit.

17 LOU BRANDON: Aw.

18 JASON SHAPIRO: But their kind of stuck  
19 with a hydrogen so they have this dilemma, should we  
20 vent now.

21 LOU BRANDON: How long, what's the  
22 optimum time.

23 JASON SHAPIRO: Yes. You know, the long  
24 we wait the better because we want to let more  
25 fission product deposit, but if we wait too long

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1 we'll have so much hydrogen the hydrogen may tear  
2 the containment.

3 LOU BRANDON: We're going to blow the  
4 roof off this thing or containment even.

5 JASON SHAPIRO: Yes, well it wouldn't  
6 explode it would just tear because it's a, I mean  
7 there's no oxygen in containment it's only nitrogen.

8 LOU BRANDON: I see.

9 JASON SHAPIRO: So --

10 LOU BRANDON: Oh, okay.

11 JASON SHAPIRO: -- containment is now  
12 full of nitrogen, steam and hydrogen.

13 LOU BRANDON: Uh-huh.

14 JASON SHAPIRO: We don't want to tear  
15 the containment so we will have to vent it at some  
16 point, but we want to also leave the containment  
17 bottled up until the fission products deposit. So  
18 I'm kind of wondering if they really had an  
19 opportunity to allow, I don't know if they really  
20 had 24 hours between when the core damage started  
21 and when the containment was vented. I'm guessing  
22 it's more like maybe a couple of hours.

23 LOU BRANDON: Well we're --

24 JASON SHAPIRO: I'm guessing it was  
25 probably close to simultaneous. I'm kind of

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1 wondering what, I mean the whole idea of, I'm not  
2 sure why we would wait 24 hours to start leaking the  
3 containment, based on what I've seen.

4 LOU BRANDON: Well it was based on real  
5 situation where we reported on the 13th that the  
6 core was beginning to be uncovered and then it was  
7 23 hours later that the explosion occurred. So  
8 that's when they attributed the release to that day.

9 JASON SHAPIRO: Oh, I see. Huh, the  
10 only thing is is though the hydrogen may have bene  
11 released to the reactor building --

12 LOU BRANDON: Yes.

13 JASON SHAPIRO: -- but it may have sat  
14 there for awhile before it exploded. There were, I  
15 mean it was station blackout, what was the ignition  
16 sources, did they say? What lit the thing off?

17 LOU BRANDON: Yes.

18 JASON SHAPIRO: There was no spark or  
19 anything. I don't know, I see why you came up with  
20 the idea. So the core damage was reported about a  
21 day before the explosion?

22 LOU BRANDON: Yes.

23 JASON SHAPIRO: Oh, wow. Well could be,  
24 I don't know.

25 LOU BRANDON: Yes, it's an interesting -

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1 -  
2 JASON SHAPIRO: That's why I say it  
3 would be really helpful if we had more data from the  
4 Japanese, if they would tell us when they vented it.  
5 That's something they know. They know when they  
6 vented.

7 LOU BRANDON: We've got, we've been --

8 JASON SHAPIRO:

9  
10 (b)(5)  
11  
12

13 LOU BRANDON: Well we've got these  
14 monitoring points about a half a kilometer to a  
15 kilometer around the plant and we've been graphing  
16 needles --

17 JASON SHAPIRO: You probably get little  
18 spikes when they vent?

19 LOU BRANDON: Yes, there's a bunch of  
20 spikes all through the last six or eight days there.

21 JASON SHAPIRO: Of course, probably  
22 every several hours.

23 LOU BRANDON: Some of them are giant.  
24 Back on the 15th they got the most giant one.

25 JASON SHAPIRO: Oh, that's probably when

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1 they vented the first time.

2 LOU BRANDON: Yes, I'm not sure what  
3 happened. Maybe containment breach or something.

4 JASON SHAPIRO: No, I think what's going  
5 on is they've been venting all along.

6 (b)(5)

7  
8 LOU BRANDON: Yes.

9 JASON SHAPIRO:

10 (b)(5)

11  
12 LOU BRANDON: So we're just getting  
13 little blips now.

14 JASON SHAPIRO: I think, like you say,  
15 once this thing is over, you know, a couple few  
16 weeks from now, a few months from now they'll start  
17 giving, we'll get that information.

18 LOU BRANDON: Yes, and then can  
19 correlate it to monitors they're saying.

20 JASON SHAPIRO: Pardon? Yes. But, no,  
21 if they bottle that thing up for a day then you  
22 probably should get a deposit.

23 LOU BRANDON: Good, I'm glad to hear  
24 that. That gives me more faith in our model than we  
25 were --

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1 JASON SHAPIRO: No, I don't know if I  
2 want to play NUREG-1465, NUREG-1150 numbers, I would  
3 prefer something a little more recent like the work  
4 that Dana did back in like '96 or '97.

5 LOU BRANDON: Oh, okay.

6 JASON SHAPIRO: But whatever. I mean  
7 it's all going to be in the ballpark for the kind of  
8 things we're doing.

9 LOU BRANDON: Okay, I didn't realize  
10 1150 was so old.

11 JASON SHAPIRO: Well the new work was  
12 based on some, a little more recent co-calculations  
13 and it was specifically designed around the NUREG-  
14 1465 source term. Again, I think the number was  
15 NUREG-5966 or something was the number, it's called  
16 simplified model of deposition by natural processes.

17 LOU BRANDON: Simplified model of  
18 deposition --

19 JASON SHAPIRO: By natural processes.

20 LOU BRANDON: Okay.

21 JASON SHAPIRO: Yes. Again, I just  
22 don't have it at home. Actually wait a minute, you  
23 know, it's on the internet. Hang on a second. You  
24 got a few more minutes, I'll go pull up my laptop  
25 and --

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1 LOU BRANDON: Yes, I can --

2 JASON SHAPIRO: -- look it up. Sure.

3 LOU BRANDON: I can hang here.

4 JASON SHAPIRO: I keep forgetting we got  
5 all this great technology now. I'll be right back.

6 LOU BRANDON: Hey Randy?

7 Randy: Yes.

8 LOU BRANDON: Jason is saying, yes, the  
9 models, it's modeling fine.

10 RANDY: The model is fine.

11 LOU BRANDON: Yes.

12 JASON SHAPIRO: Okay, I'm back.

13 LOU BRANDON: Okay.

14 JASON SHAPIRO: I touched the old on  
15 button here. I just bought a brand new laptop, I  
16 mean this thing is --

17 LOU BRANDON: Oh, really, a good chance  
18 to try it out.

19 JASON SHAPIRO: Yes, I tell you, well I  
20 got a few weeks ago, it's like lightning. It's like  
21 brief lightning the thing is so fast.

22 LOU BRANDON: Yes.

23 JASON SHAPIRO: All right. And I think,  
24 we have all of our, NRC's got all of our documents  
25 online, it's really beautiful. All right.

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1 TONY HUFFERT: Will you ask him if he  
2 realizes that the suppression pool was (inaudible)?

3 LOU BRANDON: I'm still not clear on  
4 your question? For the RASCAL run? I'm talking to  
5 Tony Huffert.

6 JASON SHAPIRO: Oh, hi, Tony.

7 TONY HUFFERT: The linkage pass, does in  
8 include the suppression pool or not? If you buy  
9 into that?

10 LOU BRANDON: In RASCAL?

11 TONY HUFFERT: How we model this going  
12 through the suppression pool or not for this  
13 accident to take place?

14 LOU BRANDON: Oh, should we go through  
15 this --

16 TONY HUFFERT: Should we go through the  
17 suppression pool?

18 LOU BRANDON: Okay, I got a question for  
19 you. Tony Huffert's asking, when we model these  
20 releases, should we be going through the suppression  
21 pool or just through unfiltered release to the  
22 atmosphere?

23 JASON SHAPIRO: Um --

24 LOU BRANDON: For a realistic situation.

25 JASON SHAPIRO: Well it kind of depends

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1 on where they vent it from. Did they vent from the  
2 dry well or the wet well?

3 LOU BRANDON: Yes, right. It's --

4 JASON SHAPIRO: Again, this is something  
5 that is we had, if the Japanese told us what they  
6 were doing we could figure it out.

7 LOU BRANDON: Yes. So for worse case we  
8 do unfiltered direct to the atmosphere and if we had  
9 enough information we could go through that  
10 suppression pool.

11 JASON SHAPIRO: Yes. Well one thing I  
12 was thinking about though is chances are the initial  
13 release was through the suppression pool. I mean  
14 they didn't vent immediately on, because remember  
15 the pressure built up to like three times design  
16 pressure so --

17 LOU BRANDON: Yes.

18 JASON SHAPIRO: I mean initial release  
19 would have been through the suppression pool.

20 LOU BRANDON: That release on the 15th.

21 JASON SHAPIRO: It would have been  
22 through the suppression pool.

23 LOU BRANDON: Let's see, we blew up 1  
24 then 3 and then 2.

25 JASON SHAPIRO: Yes.

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1 LOU BRANDON: So I think maybe it was --

2 JASON SHAPIRO: Well we never blew up 2.

3 LOU BRANDON: Three that went on, yes, I  
4 think it was 3 that went on the 15th. That was the  
5 biggest --

6 JASON SHAPIRO: Yes, but 2 never went is  
7 actually, we're also mystified by that as well.

8 LOU BRANDON: The tops still on the  
9 reactor building, yes.

10 JASON SHAPIRO: So did they not vent  
11 into the reactor building, did they vent outside the  
12 reactor building for that plant?

13 LOU BRANDON: I'm not sure.

14 JASON SHAPIRO: Or maybe there was no  
15 ignition source. Maybe they vented to the reactor  
16 building and there was no spark or high temperatures  
17 to ignite the thing.

18 LOU BRANDON: There was constant concern  
19 about reactor breach. In fact when I came in one  
20 night they said there was X vessel in Unit 2.

21 JASON SHAPIRO: Yes.

22 LOU BRANDON: And it was about that time  
23 that we saw the biggest spike going out to the  
24 Northwest and --

25 JASON SHAPIRO: But Tony's got a good

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1 point. I mean regardless of where they vent it they  
2 did have a big pressure build up inside the  
3 containment, at least for one of the reactors, and  
4 for that one I would refer that, I mean they  
5 wouldn't have vented yet and the release would have  
6 probably most likely been into the pool. That would  
7 have been the most likely.

8 LOU BRANDON: Okay.

9 JASON SHAPIRO: So I'm online here.

10 LOU BRANDON: Then you wouldn't expect  
11 much at all being released, right?

12 JASON SHAPIRO: Yes.

13 LOU BRANDON: Expect for the noble  
14 gases.

15 JASON SHAPIRO: Yes, very small numbers,  
16 yes. Well expect for noble gases.

17 LOU BRANDON: Yes.

18 JASON SHAPIRO: So I guess --

19 LOU BRANDON: But the noble gases  
20 wouldn't deposit and the NARAC flyover shows a lot  
21 of deposit going out to the Northwest.

22 JASON SHAPIRO: Well I don't know if  
23 that's a lot of deposit, I mean.

24 LOU BRANDON: Well the most out of all  
25 the --

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1 JASON SHAPIRO: Yes, they did have three  
2 reactors have meltdown.

3 LOU BRANDON: Yes.

4 JASON SHAPIRO: Here we are. Okay, I  
5 found the document I think. I'm going to try to  
6 open it up. Okay hold on. I just did a google  
7 search for it, for Reference 14.

8 LOU BRANDON: It came up?

9 JASON SHAPIRO: I think it's got a link.  
10 Let's see.

11 LOU BRANDON: Okay.

12 JASON SHAPIRO: So I don't know if I can  
13 get, may have to put this differently. Yes, I got  
14 to look it up a different way. Let me go to the  
15 NRC's public website here. All right, document  
16 collections, NUREG's, --

17 LOU BRANDON: Appreciate you coming in  
18 today. This has been a hard slap to fill for days.

19 LARRY WHEELER: Not a problem.

20 JASON SHAPIRO: Here we are, NUREG  
21 publications.

22 LARRY WHEELER: Any new RASCAL changes?

23 JASON SHAPIRO: All right, NUREG/CR.

24 LARRY WHEELER: Are you coming or going?

25 MALE PARTICIPANT: Going.

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1 JASON SHAPIRO: Hang on.

2 LOU BRANDON: Yes, he's been here all  
3 night.

4 JASON SHAPIRO: All right, it's not  
5 listed.

6 LOU BRANDON: He didn't even have time  
7 to --

8 JASON SHAPIRO: Any idea where I can  
9 find this on the NRC? So I guess I can do a search.

10 LOU BRANDON: You got it? It's not  
11 coming up?

12 JASON SHAPIRO: It's not under NUREG/CR.  
13 The NUREG/CR list is tiny.

14 LOU BRANDON: I see.

15 JASON SHAPIRO: Well maybe I, oh, it  
16 says go to ADAMS it says, okay, I go to ADAMS. All  
17 right, let's see if I can find it here.

18 LOU BRANDON: You going through Citrix  
19 then?

20 JASON SHAPIRO: No, I don't have Citrix.

21 LOU BRANDON: Oh, you should have  
22 Citrix, that's good stuff.

23 JASON SHAPIRO: Yes, well I didn't know  
24 we would have three meltdowns. We should get it on  
25 Monday, right. Okay, here's web based data, this

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1 will work fine.

2 LOU BRANDON: All right, so what you're  
3 telling me is if you find this NUREG it's going to  
4 say the same kind of a deal that you get pretty  
5 significant deposition when it's in containment,  
6 right?

7 JASON SHAPIRO: Yes, sure, sure.  
8 Actually we did some works on (inaudible) comments  
9 too. NUREG/CR, let me type this, 5966. I'm almost  
10 positive, that's definitely the number of this  
11 thing.

12 LOU BRANDON: You got the number?

13 JASON SHAPIRO: Yes, I'm pretty sure I  
14 have that number right.

15 LOU BRANDON: 5966.

16 JASON SHAPIRO: Yes, let me just double  
17 check it here.

18 LOU BRANDON: Search for NUREG-5966.

19 JASON SHAPIRO: I'm surprise you don't  
20 even have it on the shelf there.

21 LOU BRANDON: We might, yes. I'm bound  
22 to the phone right now, but --

23 JASON SHAPIRO: Wait a minute, 5966 is  
24 the sprays. There was another one that was done at  
25 the same time which is not sprays.

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1 LOU BRANDON: Not sprays. That's not  
2 the right one then.

3 JASON SHAPIRO: Let's see, deposition by  
4 natural processes.

5 LOU BRANDON: Yes, search sprays is --

6 JASON SHAPIRO: NUREG --

7 LOU BRANDON: Deposition by natural  
8 processes.

9 JASON SHAPIRO: You know you would find  
10 it in that Regulatory Guide 1.183 would have it  
11 listed.

12 LOU BRANDON: Okay.

13 JASON SHAPIRO: There it is, alternative  
14 source term. All right, let's see, source term  
15 assumption, transport primary containment, there it  
16 is. Oh, there it is, I found it. It's NUREG/CR,  
17 you ready?

18 LOU BRANDON: Uh-huh.

19 JASON SHAPIRO: 6189.

20 LOU BRANDON: 6189, okay.

21 JASON SHAPIRO: A simplified model of  
22 aerosol removal --

23 LOU BRANDON: Simplified model of  
24 aerosol --

25 JASON SHAPIRO: Removal.

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1 LOU BRANDON: Aerosol, okay.  
2 JASON SHAPIRO: Processes.  
3 LOU BRANDON: Okay.  
4 JASON SHAPIRO: In reactor containments.  
5 LOU BRANDON: It says the model is  
6 incorporated in RADTRAD.  
7 LOU BRANDON: Oh, okay.  
8 JASON SHAPIRO: That's why I was  
9 confused. I thought it was in RASCAL but I guess it  
10 went into RADTRAD.  
11 LOU BRANDON: Oh. Okay. Oh, yes,  
12 somebody was mentioning that, RADTRAD.  
13 JASON SHAPIRO: Yes, it's in RADTRAD.  
14 Let me see if I can find the model though.  
15 LOU BRANDON: Wow, it's been a long  
16 night.  
17 JASON SHAPIRO: It sure has.  
18 LOU BRANDON: It seems like a couple  
19 days ago that somebody mentioned that. But I think  
20 it was actually at the beginning of this shift.  
21 JASON SHAPIRO: Was it 6189, right?  
22 LOU BRANDON: Yes, 6189, got that.  
23 JASON SHAPIRO: All right.  
24 LOU BRANDON: NUREG/CR-6189.  
25 JASON SHAPIRO: I'll search for that.

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1 Maybe I can find it.

2 LOU BRANDON: We can probably search for  
3 it here and pull it up and look in there.

4 JASON SHAPIRO: Yes.

5 LOU BRANDON: But I suspect it's going  
6 to say the same thing.

7 JASON SHAPIRO: It's got models in it.  
8 In the last chapter I think it has a model of this E  
9 to the minus land of T stuff where they give values  
10 for land --

11 LOU BRANDON: Oh, okay.

12 JASON SHAPIRO: It's a slightly more  
13 complicated probably than what you got here but not  
14 much.

15 LOU BRANDON: Okay. All right, we'll  
16 check it out. I'm going to go off shift here in  
17 about five minutes. I mean they called me in five  
18 hours early last night.

19 JASON SHAPIRO: Oh, okay, give me one  
20 more minute. Let me see if I can locate it here. I  
21 mean I've got a long day, but. No, it's not here,  
22 all right. So you worked 13 hours, wow.

23 LOU BRANDON: Well actually I think I  
24 misspoke. My shift started at 11:00, they called me  
25 about 7:15, I got here by 8 o'clock last night, so.

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1 JASON SHAPIRO: Oh, wow.

2 LOU BRANDON: Not quite that much.

3 JASON SHAPIRO: Okay, all right. Who's  
4 replacing you there, Lou?

5 LOU BRANDON: I don't know yet. Let's  
6 see, I don't see anybody who looks like a PMT  
7 coordinator here.

8 JASON SHAPIRO: Oh. I hope they show up  
9 on time.

10 LOU BRANDON: I hope they do.

11 JASON SHAPIRO: They should be there by  
12 now, right? I think it's time to turn it over.

13 LOU BRANDON: It's just about time to be  
14 here. It looks like everyone else is here, but --

15 JASON SHAPIRO: All right. Well again,  
16 I'd be more than happy to swing by my office and  
17 look some things up if you need anymore help.

18 LOU BRANDON: Okay, I'll communicate  
19 that load and clear to these guys and you may get a  
20 second call back here.

21 JASON SHAPIRO: Sure, I mean it's only a  
22 20 minute ride. I'll just hop in the car and I'll  
23 be there in 20 minutes.

24 LOU BRANDON: I think what they're  
25 anxious to do (b)(5) and

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1 --

2 JASON SHAPIRO: Pardon?

3 LOU BRANDON: -- and tell them, okay, we  
4 pulled up that NUREG here.

5 JASON SHAPIRO: Oh, okay, can you email  
6 it to me as well?

7 LOU BRANDON: Yes, we can do that.

8 JASON SHAPIRO: All right.

9 LOU BRANDON: And I think what they're  
10 anxious to do here (b)(5)  
11 and then to the site team over there in Japan.

12 JASON SHAPIRO: Yes, I'd like to see  
13 that NUREG. Whoever's replacing you I'd like to  
14 continue working with a little bit, I guess, if  
15 you're leaving right now.

16 LOU BRANDON: Okay. I'll put Larry  
17 Wheeler on, he's right here beside me, and you can  
18 talk to him for a minute. We'll try and get this  
19 email to you.

20 JASON SHAPIRO: Yes, let me give you an  
21 address, let me give you two, you can send it to my  
22 NRC address but I'd like you to also send to my  
23 personal one --

24 LOU BRANDON: Okay.

25 JASON SHAPIRO: --since web mails not so

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1 great.

2 LOU BRANDON: Yes. So go ahead.

3 JASON SHAPIRO: (b)(5)

4 (b)(5)

5 LOU BRANDON: Okay.

6 JASON SHAPIRO: (b)(5)

7 (b)(5)

8 LOU BRANDON: Okay. We'll see if we can  
9 get this right out.

10 JASON SHAPIRO: Thank you.

11 LOU BRANDON: All right, Jason, here's  
12 Larry Wheeler.

13 JASON SHAPIRO: All right.

14 LOU BRANDON: This is Jason Shapiro.

15 LARRY WHEELER: Jason, okay.

16 LOU BRANDON: And basically we're  
17 talking about hold up and containment and how  
18 decision started, decision in containment played it  
19 out.

20 LARRY WHEELER: Hey, Jason, this is  
21 Larry Wheeler.

22 JASON SHAPIRO: Hey, Larry, what  
23 position are you in at the PMT?

24 LARRY WHEELER: I'm sorry, I just got in  
25 today and I'm slowly coming up to speed what's going

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1 on.

2 JASON SHAPIRO: What position are in on  
3 the --

4 LARRY WHEELER: I'm the RASCAL runner.

5 JASON SHAPIRO: Oh, you're the dose  
6 analysts.

7 LARRY WHEELER: But I've been RASCAL  
8 trained but that's about as far as my experience  
9 goes.

10 JASON SHAPIRO: Yes, I'm the guy that  
11 comes up with the release fractions from the core  
12 and the containment.

13 LARRY WHEELER: Okay, hang on just one  
14 second.

15 JASON SHAPIRO: Yes, I work in the  
16 research. No one thought we'd ever need this. They  
17 stuck us over in research.

18 LARRY WHEELER: That file is 34  
19 megabytes --

20 JASON SHAPIRO: Oh, boy. Hmm, I don't  
21 know if the NRC's email, the active email system  
22 can't handle that.

23 MR. WHONG: Yes, you'd have to split it  
24 in half I guess.

25 JASON SHAPIRO: It's probably PDF, you

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1 probably can't.

2 LOU BRANDON: I guess Ron's suggesting,  
3 can you get to www.osti?

4 JASON SHAPIRO: Well if you can tell me  
5 where it is on the NRC's website I can look there.

6 LOU BRANDON:

(b)(5)

7 (b)(5)

--

8 LARRY WHEELER: Hey, Ron? Jason's  
9 asking where you can find this on the NRC website?

10 LOU BRANDON: So he's going to, tell  
11 Jason we'll send him a link.

12 LARRY WHEELER: We're going to send you  
13 the link.

14 JASON SHAPIRO: Oh, wonderful.

15 LARRY WHEELER: So we're going to send  
16 you the link shortly. Hang on one second. Is Jason  
17 RASCAL or --

18 LOU BRANDON: No, he's an expert on  
19 containment and reactors.

20 LARRY WHEELER: Okay.

21 LOU BRANDON: And so he and Charlie  
22 Tinkler were (inaudible).

23 LARRY WHEELER: Um-huh.

24 (Off record comments)

25 LOU BRANDON: Since RASCAL's not in

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1 here, we want Jason to weigh in on what he --

2 LARRY WHEELER: Oh, okay.

3 LOU BRANDON: So we had him (inaudible)  
4 in RASCAL and he's not saying natural (inaudible).

5 (Off record comments)

6 LARRY WHEELER: Okay. What's Jason's  
7 last name?

8 LOU BRANDON: Shapiro. S-C-H-A-P-E-I-R-  
9 O.

10 LARRY WHEELER: And he works for the  
11 NRC?

12 LOU BRANDON: Yes.

13 JASON SHAPIRO: Yes.

14 LOU BRANDON: He's been on the PMT but  
15 he's assigned to the reactor safety team.

16 LARRY WHEELER: Okay, Jason, it looks  
17 like we're going to send you the link right now.

18 JASON SHAPIRO: All right.

19 LARRY WHEELER: And I'm slowly getting  
20 up to speed on what's going on. This is my first  
21 time doing this position.

22 JASON SHAPIRO: Oh, this is your first  
23 time on shift as well?

24 LARRY WHEELER: Right.

25 JASON SHAPIRO: Oh.

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1 LARRY WHEELER: Hang on one second.  
2 Okay, we just sent it to you, can you physically see  
3 if it's going to open for you?

4 JASON SHAPIRO: All right, I'm waiting  
5 for it to show up here.

6 LARRY WHEELER: Yes, they are really  
7 (inaudible).

8 JASON SHAPIRO: Oh, there it is. All  
9 right. Okay, it's open, it's working.

10 LARRY WHEELER: It is working.

11 JASON SHAPIRO: Well it's working to  
12 open it up.

13 LARRY WHEELER: Okay.

14 JASON SHAPIRO: It's a big file.

15 LARRY WHEELER: Okay.

16 JASON SHAPIRO: It's about 20 megabytes.

17 All right.

18 RON: Was he able to get to it?

19 LARRY WHEELER: Yes, he's able to open  
20 it.

21 JASON SHAPIRO: Yes, it just opened.  
22 That's the one. All right.

23 LARRY WHEELER: Okay.

24 JASON SHAPIRO: Thank you.

25 LARRY WHEELER: So now what?

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1 JASON SHAPIRO: So do you know what the  
2 question is?

3 LARRY WHEELER: No, I'm sorry.

4 JASON SHAPIRO: Oh.

5 LARRY WHEELER: I don't know what the  
6 question is.

7 JASON SHAPIRO: All right.

8 LARRY WHEELER: Hey, Lou, Jason wants to  
9 know --

10 JASON SHAPIRO: I can email you the  
11 question if you like?

12 LOU BRANDON: The question is, if you  
13 hold up a source term in containment for 24 hours,  
14 are you likely to reduce everything except noble  
15 gases by a factor of 100? That's what we're seeing.

16 LARRY WHEELER: Yes, I'll let Lou  
17 explain that to you. Lou, that's too much for me to  
18 digest, you want to explain that to Jason?

19 LOU BRANDON: Yes. Hey, Jason, I'm  
20 back.

21 JASON SHAPIRO: Yes, sir.

22 LOU BRANDON: So the question was, as I  
23 presented before --

24 JASON SHAPIRO: Sure, how we get from 22  
25 percent down to one percent.

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1 LOU BRANDON: Yes, right.

2 JASON SHAPIRO: By having an additional  
3 23 hours of hold up.

4 LOU BRANDON: Yes, that's right.

5 JASON SHAPIRO: Yes, no, this is the  
6 right report.

7 LOU BRANDON: Okay.

8 JASON SHAPIRO: And there are --

9 LOU BRANDON: All right, so I'm going to  
10 go on. They want me to do two more briefings and I  
11 should be getting off and I'm tired and I want to  
12 finish up the work here.

13 JASON SHAPIRO: All right. Okay.

14 LOU BRANDON: So you can continue to  
15 work with the next shift if you want. Larry Wheeler  
16 can be you're contact.

17 JASON SHAPIRO: Yes, I'll talk to Larry,  
18 that's fine.

19 LOU BRANDON: But I'll see if they want  
20 further research done or not and I think you may  
21 have answered the question well enough already here.

22 JASON SHAPIRO: I wouldn't be surprised  
23 if it went down from 22 to one percent.

24 LOU BRANDON: Okay, good.

25 JASON SHAPIRO: And the correlations in

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1 RASCAL are not unreasonable.

2 LOU BRANDON: Okay.

3 JASON SHAPIRO: I hate to use this mushy  
4 language, but that's the best I can do in 45 minutes  
5 on Sunday morning.

6 LOU BRANDON: Yes, well you've done a  
7 great job. I appreciate your assistance here.

8 JASON SHAPIRO: Yes.

9 LOU BRANDON: And I'm going to carry it  
10 forward and see what they say.

11 JASON SHAPIRO: Yes, all right.

12 LOU BRANDON: Stay tuned.

13 JASON SHAPIRO: Thanks.

14 LOU BRANDON: Okay, I'll talk to you  
15 later. Bye-bye, Jason.

16 JASON SHAPIRO: Okay. Wait --

17 LOU BRANDON: You want to talk to --

18 JASON SHAPIRO: Yes, here's the, Page  
19 216 has, now the --

20 LOU BRANDON: What's that NUREG 1631,  
21 1689?

22 JASON SHAPIRO: 6189.

23 LOU BRANDON: 6189. Okay, page?

24 JASON SHAPIRO: What do they got here?  
25 Okay, if you look at Page 216 --

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1 LOU BRANDON: 216, okay.

2 JASON SHAPIRO: -- these numbers here.

3 So this kind of supports what you're doing actually,  
4 I guess. Yes, all right. Here we go. Yes, there's  
5 some numbers here that support what you're doing.

6 LOU BRANDON: All right, so another  
7 reference.

8 JASON SHAPIRO: Yes. If you look at  
9 the, yes, all right. It will probably take me a  
10 couple of hours to come up with something better  
11 than what I told you.

12 LOU BRANDON: Okay.

13 JASON SHAPIRO: So if you need an answer  
14 int eh next five minutes, I can't really say much  
15 more. But if you give me a couple more hours I can  
16 look into it further.

17 LOU BRANDON: Okay. All right, that's  
18 up to you at this point.

19 JASON SHAPIRO: Not really, because it  
20 just depends on how good of an answer you want. You  
21 know, a five minute answer or the hour, couple hour  
22 answer.

23 LOU BRANDON: Yes, well I'm saying  
24 there's no order to do that at this time yet.

25 JASON SHAPIRO: Oh, okay, right.

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1 LOU BRANDON: But if they want you to do  
2 more we'll call you back.

3 JASON SHAPIRO: All right, got it.

4 LOU BRANDON: Otherwise you can not feel  
5 to much pressure.

6 JASON SHAPIRO: All right, thanks, Lou.  
7 I guess I'll call it quits as well then.

8 LOU BRANDON: All right.

9 JASON SHAPIRO: I'll be around all day  
10 pretty much. I may be going in and out for, to run  
11 an errand or two but I'll be around.

12 LOU BRANDON: Okay, sounds fantastic.

13 JASON SHAPIRO: All right.

14 LOU BRANDON: Thanks, Jason.

15 JASON SHAPIRO: Yes, thanks. Larry, can  
16 I talk to you for a minute?

17 LOU BRANDON: Who do you want to talk  
18 to, Larry?

19 JASON SHAPIRO: Larry, yes.

20 LOU BRANDON: Okay, here he is.

21 LARRY WHEELER: Hey, Jason.

22 JASON SHAPIRO: Yes, hi, Larry, how you  
23 doing?

24 LARRY WHEELER: Pretty good.

25 JASON SHAPIRO: Hey, if you're going to

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1 be doing dose analysis today I guess there's a  
2 chance you might need to call me so please don't be  
3 afraid to give me a call.

4 LARRY WHEELER: Okay, it' looks you're  
5 at (b)(6)

6 JASON SHAPIRO: Yes, that's my home  
7 number and I'll be around much of the day and if not  
8 I'll call you right back.

9 (b)(6)

10  
11 LARRY WHEELER: Okay.

12 JASON SHAPIRO: Other than that I'm not  
13 planing any big outings today.

14 LARRY WHEELER: So with me just coming  
15 up to speed it looks like Lou has you working on  
16 this and then how are you going to get back with us?

17 JASON SHAPIRO: I think I'm done unless  
18 you need more information.

19 LARRY WHEELER: Okay.

20 JASON SHAPIRO: Yes, the RASCAL  
21 calculation that was, there were two that were done.

22 One calculation I assume that the radiation release  
23 went from the reactive vessel directly into the dry  
24 well.

25 LARRY WHEELER: Okay.

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1 JASON SHAPIRO: And then leaked out of  
2 the dry well. And the second one was the same but  
3 they're saying the dry well leak it didn't start for  
4 23 hours.

5 LARRY WHEELER: Um-huh.

6 JASON SHAPIRO: In the first case they  
7 had a Cesium release into the environment of 22  
8 percent and in the second case one percent.

9 LARRY WHEELER: Okay.

10 JASON SHAPIRO: So the question came up,  
11 well, geez, 23 hours of additional waiting before a  
12 release start, that really resulted in a lot of  
13 deposition in the dry well.

14 LARRY WHEELER: Right, right.

15 JASON SHAPIRO: So, you know, it got  
16 reasonable.

17 LARRY WHEELER: Okay.

18 JASON SHAPIRO: So I would say it's not  
19 unreasonable.

20 LARRY WHEELER: Um-huh.

21 JASON SHAPIRO: Like I can tell you that  
22 in an hour.

23 LARRY WHEELER: Okay.

24 JASON SHAPIRO: They called me about an  
25 hour ago.

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1 LARRY WHEELER: Okay, got it.

2 JASON SHAPIRO: So that's all I can say  
3 at this point.

4 LARRY WHEELER: Okay, sounds good.

5 JASON SHAPIRO: And if you need any  
6 other support in any other source term issue, again,  
7 I'm around, I'm not in an airplane over this ocean  
8 or anything. I'm here.

9 LARRY WHEELER: Okay, sounds good.

10 JASON SHAPIRO: You can get a hold of me  
11 and we have a small group of people that researched  
12 that that works on zero accident and source term  
13 issues. And I'm perhaps the --

14 LARRY WHEELER: The expert.

15 JASON SHAPIRO: I'm perhaps the more  
16 experience guy as far as fission part release go.

17 LARRY WHEELER: Okay.

18 JASON SHAPIRO: But we've got people who  
19 have even more experience in hydrogen release,  
20 hydrogen releases and hydrogen burns and people that  
21 know about core concrete interactions and things  
22 like that, so.

23 LARRY WHEELER: Okay.

24 JASON SHAPIRO: All right. Do you know  
25 who the coordinator is that's coming on?

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1 LARRY WHEELER: No, I don't. I haven't  
2 got to any turn over other than --

3 JASON SHAPIRO: Oh.

4 LARRY WHEELER: -- physically sit down  
5 and pickup the phone with you.

6 JASON SHAPIRO: All right. All right,  
7 thanks a lot Larry.

8 LARRY WHEELER: Okay.

9 JASON SHAPIRO: Have a nice day.

10 LARRY WHEELER: Thank you, Jason. Bye.

11 JASON SHAPIRO: Yes, bye-bye.

12

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