

This transcript of the Advisory Board on Radiation and Worker Health, Savannah River Site Work Group, has been reviewed for concerns under the Privacy Act (5 U.S.C. § 552a) and personally identifiable information has been redacted as necessary. The transcript, however, has not been reviewed and certified by the Chair of the Savannah River Site Work Group for accuracy at this time. The reader should be cautioned that this transcript is for information only and is subject to change.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL 1  
NATIONAL INSTITUTE FOR  
OCCUPATIONAL SAFETY AND HEALTH

+ + + + +

ADVISORY BOARD ON RADIATION AND  
WORKER HEALTH

+ + + + +

WORK GROUP ON SAVANNAH RIVER

+ + + + +

TUESDAY,  
FEBRUARY 12, 2013

+ + + + +

The Work Group convened telephonically at 1:00 p.m., Eastern Standard Time, MARK GRIFFON, Chairman, presiding.

MEMBERS PRESENT:

MARK GRIFFON, Chairman  
BRADLEY P. CLAWSON  
JAMES E. LOCKEY

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

This transcript of the Advisory Board on Radiation and Worker Health, Savannah River Site Work Group, has been reviewed for concerns under the Privacy Act (5 U.S.C. § 552a) and personally identifiable information has been redacted as necessary. The transcript, however, has not been reviewed and certified by the Chair of the Savannah River Site Work Group for accuracy at this time. The reader should be cautioned that this transcript is for information only and is subject to change.

ALSO PRESENT :

2

THEODORE M. KATZ, Designated Federal  
Official

DAVID ANDERSON

MATT ARNO, ORAU Team

ELIZABETH BRACKETT, ORAU Team

JOE FITZGERALD, SC&A

STU HINNEFELD, DCAS

MIKE MAHATHY, ORAU Team

ARJUN MAKHIJANI, SC&A

PAT McCLOSKEY, ORAU Team

JIM NETON, DCAS

KNUT RINGEN

LAVON RUTHERFORD, DCAS

TIM TAULBEE, DCAS

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

[www.nealrgross.com](http://www.nealrgross.com)

This transcript of the Advisory Board on Radiation and Worker Health, Savannah River Site Work Group, has been reviewed for concerns under the Privacy Act (5 U.S.C. § 552a) and personally identifiable information has been redacted as necessary. The transcript, however, has not been reviewed and certified by the Chair of the Savannah River Site Work Group for accuracy at this time. The reader should be cautioned that this transcript is for information only and is subject to change.

## TABLE OF CONTENTS

AGENDA ITEM	PAGE
	3
Welcome and roll call	4
1. Update of NIOSH actions	6
a. OTIB-81	6
b. Np urinalysis data availability post 1990	9
c. Status of whole body scan issues discussed on technical call	13
d. Example DRs	14
2. Update of SCA actions	24
a. Status of site visit	24
b. Status of review of Addendum 3, regarding thorium dose reconstruction	27
c. Status of review of ORAUT-RPRT-56 on Np (Matrix issue 5)	27
d. Status of review of other ORAUT reports issued last year: trivalent actinides, tritium, fission products, exotic radionuclides	29
3. Other matrix issues	48

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

[www.nealrgross.com](http://www.nealrgross.com)

This transcript of the Advisory Board on Radiation and Worker Health, Savannah River Site Work Group, has been reviewed for concerns under the Privacy Act (5 U.S.C. § 552a) and personally identifiable information has been redacted as necessary. The transcript, however, has not been reviewed and certified by the Chair of the Savannah River Site Work Group for accuracy at this time. The reader should be cautioned that this transcript is for information only and is subject to change.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21

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

4

(1:00 p.m.)

WELCOME AND ROLL CALL

MR. KATZ: Why don't we do the roll call and remind Board Members and agency-related staff to keep the conflict of interest since we are speaking about specific sites. And we'll get going beginning with Board Members.

(Roll call.)

MR. KATZ: Okay. Very good. The agenda is on the website, NIOSH website, under the Board section, under Meetings. There is an agenda. I don't believe there are any other documents associated with the agenda or they certainly are not posted.

And let me just ask everyone who is not speaking, not speaking, mute your phones. Press \*6 if you don't have a mute button to mute your phone. And then press \*6 again to come off of mute. That will make the

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealgross.com

1 audio better.

5

2 And, Mark, it's your agenda.

3 CHAIRMAN GRIFFON: Okay. Thanks,  
4 Ted. And thanks, everyone, for making this  
5 call.

6 Yes. I had put together a brief  
7 agenda. And it falls primarily in two  
8 sections, the first section being NIOSH  
9 actions, the second being SC&A updates and  
10 actions. And then last is other matrix items  
11 that we may have not covered. So, as NIOSH  
12 and SC&A are doing these two items, I would  
13 also say it might be useful to, if I missed  
14 anything, you know, elaborate on other work  
15 that you are working on. But I think I hit  
16 the primary ones that we want to discuss. And  
17 some of this is follow-up from a technical call  
18 that we had. So I hope this will be useful in  
19 that regard as well.

20 So I think I can turn it over to,  
21 probably Tim if you are going to be addressing

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 these to start with OTIB-81. And maybe you 6  
2 can just describe this just so everyone knows  
3 what OTIB-81 is. And you can go through the  
4 items in any order you think makes sense, too.  
5 I should say that.

6 DR. TAULBEE: Okay.

7 CHAIRMAN GRIFFON: All right.

8 DR. TAULBEE: No problem, Mark.

9 1. UPDATE OF NIOSH ACTIONS

10 A. OTIB-81

11 DR. TAULBEE: OTIB-81 is our  
12 general coworker model for the entire Savannah  
13 River Site, which incorporates tritium,  
14 plutonium, uranium, neptunium, americium,  
15 curium, californium, mixed fission products.

16 I think I sent you an email last  
17 evening about identifying that OTIB-81 has  
18 been approved internally here at NIOSH. And  
19 so I posted it out there for the Work Group  
20 Members that they can now begin to review and  
21 look at. It hasn't been approved for public

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 release yet. I was hoping it would be by 7  
2 yesterday evening or today, but we are just  
3 waiting on the final review from DOE for  
4 public release. It shouldn't be an issue at  
5 all.

6 It has already gone through one  
7 particular review. So as soon as that is  
8 available, we will post it on our website,  
9 but, as far as we're concerned, you know, it  
10 is there for the Work Group to begin to review  
11 or consider as part of our coworker models for  
12 workers who were at Savannah River and didn't  
13 have bioassay for a particular radionuclide.

14 Now, keep in mind that in the  
15 past, we have had a very low need for a  
16 coworker model because there is so much  
17 bioassay for the workers in particular areas;  
18 for example, workers in the tritium  
19 facilities. Virtually everybody was monitored  
20 for tritium. And so this coworker model is  
21 really for cases where we're applying it to

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 workers who we find possibly should have been 8  
2 monitored that the site didn't monitor. So  
3 the population is not huge for this the  
4 application of this particular OTIB, but it's  
5 there for the worker to review now.

6 MEMBER CLAWSON: Hey, Tim, this is  
7 Brad Clawson. I hate to interrupt, but where  
8 is this OTIB? Is it on the SRDB or what would  
9 it be under?

10 DR. TAULBEE: It would be under  
11 the Savannah River Site SEC directory on your  
12 -- I don't know if it's your O: drive or K:  
13 drive. I don't know which one it is you all  
14 call it. Has anybody in the Work Group been  
15 able to find that?

16 CHAIRMAN GRIFFON: Yes. I  
17 haven't. I didn't get a chance to look at  
18 your email last night. I was traveling this  
19 morning. So I have not.

20 MEMBER CLAWSON: That's been my  
21 problem. I haven't been able to get onto it,

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

This transcript of the Advisory Board on Radiation and Worker Health, Savannah River Site Work Group, has been reviewed for concerns under the Privacy Act (5 U.S.C. § 552a) and personally identifiable information has been redacted as necessary. The transcript, however, has not been reviewed and certified by the Chair of the Savannah River Site Work Group for accuracy at this time. The reader should be cautioned that this transcript is for information only and is subject to change.

1 but I needed to know for sure where it was at 9  
2 so I could kind of refine my search. Sorry  
3 about interrupting. I just wanted to make  
4 sure I knew where it was at.

5 MR. KATZ: Tim, this is Ted. This  
6 is Ted. That was Brad a moment ago. Tim, I  
7 didn't get a copy of an email or anything  
8 related to this, but could you please send it  
9 to me so I can make sure it gets distributed  
10 to everyone it needs to go to?

11 DR. TAULBEE: Sure. Will do.  
12 Sorry, Ted. I apologize for not having you on  
13 that. Okay. And yes, I will do that so that  
14 everybody can find it.

15 DR. KATZ: Okay. Thanks.

16 DR. NETON: Maybe even put the  
17 pack, the file pack --

18 DR. TAULBEE: I will try and put  
19 the file pack in that email -- okay? -- which  
20 kind of gets us to item number 2.

21 B. NP URINALYSIS DATA AVAILABILITY POST

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealgross.com

1 1990 10

2 DR. TAULBEE: This is where I  
3 think there is a miscommunication, I think  
4 from our technical call about the neptunium  
5 urinalysis availability post-1990. In OTIB-  
6 81, there are hundreds of neptunium results  
7 post-1990 that we used in the coworker models  
8 all the way up through 2006.

9 So this data is available. And we  
10 used it as part of OTIB-81. I think there is  
11 some misunderstanding with the -- I believe it  
12 was Report 56. Is that the right number?  
13 What the intent of that report was, it's  
14 simply to compare construction trades workers  
15 with regular operations workers for neptunium  
16 exposures.

17 And so we only went up through  
18 1989 for that particular comparison. And we  
19 weren't seeing any difference. So we didn't  
20 continue on with that. You know, if the Work  
21 Group feels that it is important that we

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 continue on with that evaluation for the 11  
2 post-1989, we can. It's just a lot of coding  
3 effort to try and identify who is construction  
4 trades, who wasn't, whereas previous efforts  
5 have made that very easy for us to do.

6 So there is data available. It is  
7 there in OTIB-81. So that is one of the  
8 things that I just think there is a  
9 misunderstanding on this particular agenda  
10 item. Are there any questions associated with  
11 that neptunium urinalysis data?

12 DR. MAKHIJANI: This is Arjun.  
13 Actually, once you explained that the Report  
14 56 was to compare construction workers and  
15 non-construction workers, I understood that.  
16 So there wasn't a misunderstanding. It's,  
17 during the call, you had said that you are  
18 going to use urinalysis data post-1990. And  
19 1990 and afterwards was not mentioned at all  
20 in Report 56. And so we didn't have the  
21 urinalysis data. And so the request was to

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 make it available. Presumably, is it there in 12  
2 a spreadsheet format that you can post?

3 DR. TAULBEE: It is not in  
4 spreadsheet form in OTIB-81, obviously. But,  
5 sure, we can get that data posted for you.

6 DR. MAKHIJANI: Yes, because we  
7 will need that. We will need the detailed  
8 compilation of the data to look at.

9 DR. TAULBEE: Okay. Do you just  
10 need it for neptunium or for other  
11 radionuclides for 81?

12 DR. MAKHIJANI: We would need all  
13 of the data that you have used in TIB-81.  
14 Now, some of it we may have or we may not  
15 have. I thought we had all of the tritium  
16 data that you are using, but maybe you updated  
17 your files. So if you could put the files  
18 that you are using with the dates on which  
19 they were compiled in that same directory, it  
20 would be very helpful.

21 DR. TAULBEE: Okay. We will get

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 that posted. It is probably going to take us 13  
2 a few days to compile all of that. So give us  
3 a couple of weeks here, and we'll get that up  
4 there for you.

5 DR. MAKHIJANI: That's fine. I  
6 have one other question, if I might, Mark.  
7 That pre-1990 neptunium dose reconstruction  
8 method has not changed from what you indicated  
9 in Report 56, right? It's still using the  
10 whole body count.

11 DR. TAULBEE: That is correct.

12 DR. MAKHIJANI: Okay. Fine.

13 MR. ARNO: Jim, this is Matt Arno.  
14 Let me clarify. It's the body counts for a  
15 certain time period. In the '60s, it's  
16 usually using urinalysis data.

17 DR. TAULBEE: Yes. Thank you,  
18 Matt, for reminding me of that. Yes. And  
19 OTIB-81 actually points that out, Arjun, that  
20 in the 1960s, we were using urinalysis.  
21 Nineteen seventies and '80s, we used whole

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 body count. And in the 1990s, we go back to 14  
2 urinalysis.

3 DR. MAKHIJANI: Yes. I am just  
4 focused on the post-'72 period. So that's why  
5 I asked that. Thanks.

6 DR. TAULBEE: Thanks, Matt. Okay.

7 C. STATUS OF WHOLE BODY SCAN ISSUES  
8 DISCUSSED ON TECHNICAL CALL

9 DR. TAULBEE: Status on the whole  
10 body scan issues discussed on the technical  
11 call. We're still looking into this. And so  
12 I don't really have too much of an update  
13 other than we are still investigating this.  
14 And we have had some conference calls  
15 discussing it. And as we get more details, I  
16 will provide that to the Work Group.

17 D. EXAMPLE DRs

18 DR. TAULBEE: The final one,  
19 example DRs, we are going to conduct some  
20 example dose reconstructions and give them to  
21 the Work Group here. The task ordering just

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 went from Grady over to ORAU yesterday. So 15

2 that will be in the works. So I don't have a

3 schedule just yet because I've got to look

4 against their staffing and other priorities.

5 So when I get a date as to that, Mark, I will

6 give you an update as to when we expect to

7 have those completed and delivered to the Work

8 Group, but I don't have a date right now.

9 CHAIRMAN GRIFFON: Okay.

10 DR. TAULBEE: And so that is

11 pretty much an update of us here at NIOSH.

12 CHAIRMAN GRIFFON: And did you do

13 -- you might have just hit on this -- the

14 example DRs?

15 DR. TAULBEE: Yes.

16 CHAIRMAN GRIFFON: That was your

17 last item? Okay.

18 DR. TAULBEE: That's correct.

19 CHAIRMAN GRIFFON: Okay. Sorry.

20 DR. TAULBEE: Once I get the date

21 of when those will be completed, then we will

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 be able to give that to you. 16

2 CHAIRMAN GRIFFON: Okay.

3 DR. TAULBEE: I guess one other  
4 item that I could bring up here: this has to  
5 do with the thorium discussion during the  
6 technical call of whether thorium comes  
7 through in that second extraction or whether  
8 it comes out in the first one -- and we have  
9 had a radiochemist look at this. And clearly  
10 it goes with the second extraction. Less than  
11 one percent will be going out with the first  
12 one, with plutonium, uranium and neptunium.

13 So we have got a White Paper on  
14 that. If the Work Group wants to see, we can  
15 certainly do that now or if you wanted to wait  
16 until -- I don't know if SC&A is going to make  
17 a comment about that or not, but if they do,  
18 our response is basically prepared for that  
19 already.

20 DR. MAKHIJANI: Yes. Well, as you  
21 know, this is an item of concern from the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 technical call. And so definitely we could 17  
2 make a comment on it. So if you have data to  
3 give us as to what the efficiency in the  
4 second extraction round is of thorium compared  
5 to americium, curium and californium, that  
6 would be very helpful.

7 DR. TAULBEE: Well, it's in that  
8 paper of 97 percent.

9 DR. MAKHIJANI: No. That is the  
10 --

11 DR. TAULBEE: No. That is the  
12 second one, Arjun.

13 DR. MAKHIJANI: I have a  
14 misunderstanding about this. The 97 percent  
15 relates to when the eight or nine actinides  
16 are separated together. That is where the  
17 thorium efficiency is 97 percent. I've read  
18 the paper.

19 DR. TAULBEE: Arjun, I've had a  
20 Ph.D. radiochemist read the paper as well.  
21 And he's telling me that less than one percent

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 goes out with the plutonium. That 97 percent 18  
2 is, in fact, that second extraction.

3 DR. MAKHIJANI: That's what I'm  
4 asking, is the paper that you referred to did  
5 not mention the efficiency in the second  
6 extraction. And so if you have a  
7 radiochemist's opinion on paper about that  
8 second one, it will be very useful to have it.

9 DR. TAULBEE: Okay.

10 MEMBER CLAWSON: Hey, Tim, this is  
11 Brad. Can I ask you a question on the samples  
12 that you're going to do? How are these  
13 samples going to be picked? Are they just  
14 going to be random or are they going to be of  
15 actual cases or -- these sample DRs, how are  
16 you going to choose which ones you are going  
17 to do?

18 DR. TAULBEE: In the past, Brad,  
19 what we have done is just general examples.  
20 We haven't taken actual cases and done this.  
21 We have grabbed some typical scenarios

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 informed from actual cases, but generally we 19  
2 will take scenarios of a worker being exposed  
3 in this area for this period of time and then  
4 calculate out their dose and show how the  
5 methodology works.

6 MEMBER CLAWSON: Okay. That's  
7 what I was wondering. I just wondered if they  
8 were going to be actual cases or if they were  
9 just going to be illustrations, how it would  
10 do those. Thank you.

11 DR. TAULBEE: Okay.

12 CHAIRMAN GRIFFON: Okay. And I  
13 think it goes without saying that SC&A, I  
14 mean, you are going to review OTIB-81. And I  
15 don't think we have to retask or anything,  
16 just part of our continuing effort here.

17 DR. MAKHIJANI: Yes.

18 CHAIRMAN GRIFFON: Yes.

19 DR. MAKHIJANI: I think, you know,  
20 essentially some of what I imagine is in OTIB-  
21 81 in terms of a method but not the detailed

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 data is already being examined, you know, and 20  
2 we've had that technical call about it. So  
3 yes, we will include OTIB-81 in the review,  
4 yes. Sure.

5 I had a question about the example  
6 dose reconstruction to follow up on what I  
7 think Brad asked.

8 CHAIRMAN GRIFFON: Yes, please.

9 DR. MAKHIJANI: In this particular  
10 instance, you know, a lot of what is at issue  
11 is, do we know who was working with neptunium  
12 and who was working with thorium? So it  
13 actually would be useful to have actual cases,  
14 you know, examination of actual claims to see  
15 in the real world -- because I have looked at  
16 claims to see what is in the DOE files. And  
17 it's more difficult than what I read in Report  
18 56.

19 And it does raise questions, at  
20 least at this stage, that could be set to rest  
21 by these examples or since we attribute

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 everything to neptunium, that you see for 21  
2 chromium-51, what happens to chromium-51  
3 exposure? Are you going to attribute the same  
4 peaks to chromium and use the same data for  
5 two different radionuclides?

6 And so there would be practical  
7 questions that arise when you look at actual  
8 data. And it would be useful to address  
9 actual data, at least in the case of  
10 neptunium.

11 DR. NETON: Arjun, this is Jim. I  
12 think we prefer not to use actual cases for  
13 various reasons, mostly for Privacy Act  
14 considerations. But I think we can get very  
15 close in putting scenarios together that would  
16 answer your questions. So we kind of know  
17 what your questions are.

18 DR. MAKHIJANI: Okay. Yes, so  
19 long as the concern is addressed, you know.

20 DR. NETON: Sure, I understand  
21 what you are saying, but I'd hate to go pull

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 an actual case. It just doesn't make me feel 22  
2 comfortable to do that in public.

3 DR. MAKHIJANI: Sure.

4 MEMBER CLAWSON: Mark, this is  
5 Brad again. Maybe this is something that the  
6 Subcommittee for Dose Reconstruction can also  
7 keep in mind of upcoming cases, that we may  
8 actually want to pull one of these and have it  
9 reviewed as an actual case, as a dose  
10 reconstruction, as we have done before. It's  
11 something to think about.

12 CHAIRMAN GRIFFON: Yes. I agree,  
13 Brad. We should be aware of that on the DR  
14 committee going forward. Also, I think, you  
15 know, we probably want to find one that  
16 applied the coworker models. And, as Tim  
17 suggested, it is probably not many that -- you  
18 know, so it might be hard to select that, but  
19 I take your point. I agree.

20 MEMBER CLAWSON: Okay. Thank you.

21 CHAIRMAN GRIFFON: All right. Is

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 there any more from Tim for a NIOSH update? 23

2 DR. TAULBEE: Nope. That's all  
3 I've got.

4 CHAIRMAN GRIFFON: Okay. I just  
5 have a couple of actions that I noted. I  
6 might have missed something. But you are  
7 going to -- NIOSH will post all of the data  
8 associated with TIB-81 along with the TIB-81.  
9 That might take several days, but you're going  
10 to get that up there soon.

11 The second action is the example  
12 DRs, you're -- they're not yet posted. You'll  
13 let us know about the timing on that in the  
14 fairly near future. And then a follow-up  
15 action on this White Paper: you're going to  
16 provide an expert opinion on this issue of the  
17 second extraction. Does that sound like  
18 accurate there, Tim?

19 DR. TAULBEE: Yes. The only other  
20 one that I had on there is to get Ted the  
21 information of where OTIB-81 is.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 CHAIRMAN GRIFFON: Okay. Yes. 24

2 DR. TAULBEE: So that's what I had  
3 listed.

4 CHAIRMAN GRIFFON: I didn't note  
5 that. Yes. That's fine.

6 DR. TAULBEE: And, by the way,  
7 Mark, on those example DRs, the first part  
8 will be getting you a schedule of when those  
9 would be done.

10 CHAIRMAN GRIFFON: Right.

11 DR. TAULBEE: I hope to have that  
12 within the next few weeks.

13 CHAIRMAN GRIFFON: Okay.

14 DR. TAULBEE: Okay.

15 CHAIRMAN GRIFFON: All right.

16 DR. TAULBEE: Thanks.

17 CHAIRMAN GRIFFON: Thank you. And

18 --

19 DR. MAKHIJANI: You hope to have  
20 the schedule or the dose reconstruction?

21 CHAIRMAN GRIFFON: I think the

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 schedule, he was saying 25

2 DR. MAKHIJANI: Okay.

3 DR. TAULBEE: Schedule.

4 CHAIRMAN GRIFFON: Yes. All

5 right. Arjun?

6 DR. MAKHIJANI: Yes. Well, Joe is

7 going to give the --

8 CHAIRMAN GRIFFON: Oh, okay.

9 DR. MAKHIJANI: -- update on the

10 statuses.

11 2. UPDATE OF SC&A ACTIONS

12 A. STATUS OF SITE VISIT

13 MR. FITZGERALD: Yes, it's been

14 about two weeks since we got the data capture

15 plan into Savannah River and also the request

16 letters in to their management by hard copy.

17 And at the same time, I had a call

18 with Greg Lewis, who then approved funding for

19 Savannah River to go ahead and do the data

20 capture. So, again, it's been about two

21 weeks. So I will check with them to confirm

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 where they stand. I doubt they're, you know, 26  
2 ready for us but just to see where they stand  
3 and what guesstimate that they would have as  
4 far as what time frame.

5 I would think it's not going to be  
6 until maybe latter March depending on what the  
7 budget issue is, but I will try to feed back  
8 anything I hear from them. I will contact our  
9 point of contact down there.

10 My understanding right now, we  
11 have three folks from SC&A: myself, John  
12 Stiver, and one other and Tim Taulbee,  
13 certainly. I don't know who else will be  
14 slotted for that. There will probably be at  
15 some point we need to collect those names and  
16 get these security clearances transferred.  
17 I'll go ahead and send an email out. And if  
18 people can begin confirming who would want to  
19 participate in that data capture, I'll start  
20 keeping that list so that Savannah River can  
21 have that when we're ready.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 DR. MAKHIJANI: And we sent a list 27  
2 of names for interviews also to DOE.

3 MR. FITZGERALD: Right. That was  
4 part of data capture. They had those names,  
5 right.

6 DR. TAULBEE: This is Tim. From  
7 the NIOSH ORAU side, there will be one or two  
8 of us. It depends upon which dates you select  
9 for the data capture. So just keep us posted  
10 and let us know as soon as you find out what  
11 dates there are. And then we can give you the  
12 names of who would be tagging along for this  
13 data capture.

14 MR. FITZGERALD: My guess is, you  
15 know, by the time they have figured out who is  
16 available for interview and what the retrieval  
17 is on the boxes, that is when we will start  
18 getting some dates that we can pass around.  
19 But we will certainly pass that around, make  
20 sure everybody has the opportunity to figure  
21 out schedule-wise if they can come.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 DR. TAULBEE: Thank you. 28

2 DR. MAKHIJANI: That is our  
3 update. Do you want us to move to the next  
4 item?

5 CHAIRMAN GRIFFON: Yes. Sorry,  
6 Arjun. Go ahead.

7 B. STATUS OF REVIEW OF ADDENDUM 3,  
8 REGARDING THORIUM DOSE RECONSTRUCTION  
9 C. STATUS OF REVIEW OF ORAUT-RPRT-56  
10 ON NP (MATRIX ISSUE 5)

11 DR. MAKHIJANI: Why don't we take  
12 the next two items together: Review of  
13 Addendum 3, which is thorium; and review of  
14 Report 56? We've started intensive review of  
15 both of these things. That is one of the  
16 things that led up to the technical call  
17 because we had quite a number of questions.

18 Joyce is looking at the technical  
19 issue. We have compiled some claimant data  
20 that we are looking at in more detail as to  
21 how those proposed dose reconstruction methods

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 would work because we have a pretty good idea 29  
2 of what is proposed, although we didn't have  
3 OTIB-81 until yesterday.

4 I just opened OTIB-81 during this  
5 call. So I haven't had a chance to look at  
6 it, but certainly after this Work Group  
7 meeting, you know, we will kind of put our  
8 heads together around this and factor in the  
9 review of OTIB-81 for thorium and neptunium.

10 The present plan is to kind of  
11 issue a report on each, although thorium and  
12 neptunium are proceeding so much in parallel,  
13 we might combine them into a single report.

14 Is that okay, Mark?

15 CHAIRMAN GRIFFON: Yes. That  
16 sounds fine.

17 DR. MAKHIJANI: You know,  
18 originally we had thought that this could be  
19 completed a little more rapidly, but the site  
20 visit issues have taken so long, it's kind of  
21 hard for me. The work of reviewing the paper

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 and the data is shorter, I think, in terms of 30  
2 schedules than to figure out what is going to  
3 happen with the site visit and what we are  
4 going to come up with. So I'm afraid it looks  
5 like a little bit of a more extended schedule  
6 than what we had discussed last year at the  
7 Board meeting. I won't be able to give you a  
8 very good estimate until Joe and his team have  
9 gone over there and given John Stiver and me  
10 an idea of, you know, when we can complete  
11 this work.

12 I hope that it will be before the  
13 fall, that all of it will be complete before  
14 the fall meeting, or the summer. I'm not sure  
15 whether we can complete it before the summer  
16 meeting, but we will try.

17 In terms of the technical issues  
18 that are on the table, we have the review  
19 reasonably in hand. Of course, we're  
20 reviewing what NIOSH has sent us in terms of  
21 their positions on how these data are to be

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 interpreted. And we have to look at the urine 31  
2 data for neptunium.

3 D. STATUS OF REVIEW OF OTHER ORAUT REPORTS

4 ISSUED LAST YEAR: TRIVALENT ACTINIDES,  
5 TRITIUM, FISSION PRODUCTS,  
6 EXOTIC RADIONUCLIDES

7 DR. MAKHIJANI: On the other  
8 report, the tritium was, you know, partially  
9 in progress when NIOSH said that they are  
10 going to expand upon it and we stopped in  
11 2011. So Harry Chmelynski is looking at that.

12 And that work will be completed.  
13 So we think -- those three are proceeding in  
14 parallel. The trivalent actinides, fission  
15 products and exotic radionuclides, we haven't  
16 begun serious work on them yet. Preliminary  
17 review of those indicated that the most  
18 important issues were in these other areas:  
19 neptunium, thorium, and -- neptunium and  
20 thorium mainly. So, you know, that is not a  
21 definitive judgment. That is just a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 preliminary reading.

32

2 We can put more people on this,  
3 but my suggestion at the present time would be  
4 to kind of do the review in those areas where  
5 it seems like the biggest SEC-related issues  
6 might be there to sort out but open to your  
7 guidance, of course.

8 CHAIRMAN GRIFFON: Yes. I agree  
9 with that in principle. Can you say that list  
10 again, Arjun? Neptunium and thorium are being  
11 prioritized, but the other ones that --

12 DR. MAKHIJANI: Neptunium and  
13 thorium are being prioritized and also  
14 tritium. And when we go to -- well, I might  
15 as well bring this up now. It is in the  
16 matrix list, which is your next agenda item.  
17 All of these reports, 56, 55, the reports  
18 dealing with construction worker versus  
19 non-construction worker, and comparisons that  
20 NIOSH has done, NIOSH has not addressed one of  
21 the biggest issues that we have consistently

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

[www.nealrgross.com](http://www.nealrgross.com)

1 raised in Savannah River sites on this point, 33  
2 which is that it's not enough to compare the  
3 collection of construction workers with  
4 non-construction workers or to put nuances on  
5 that comparison because there are clearly some  
6 subgroups of construction workers, for example  
7 pipefitters, who clearly have more exposure  
8 potential, as demonstrated by actual data,  
9 sometimes a lot more exposure potential. And  
10 then some areas are more important for some  
11 radionuclides. And NIOSH's analysis in all of  
12 these reports puts construction workers and  
13 non-construction workers in comparison as a  
14 group.

15 Now, they have got a little bit  
16 more nuanced comparison in these reports, but  
17 basically they do not break down construction  
18 workers by job types. And this issue  
19 continues to be unresolved for some years,  
20 actually now, two, three years.

21 So that is going to be a

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 significant part of our review until it seems 34  
2 -- I mean, we could -- I don't think it will  
3 take long to review the trivalent actinides  
4 report and the fission products report.

5 There is actually a fair amount of  
6 data for curium, californium and americium,  
7 but we don't think this is a major issue sort  
8 of off the bat.

9 The exotic radionuclides is really  
10 -- the biggest issue is, do we have a  
11 definitive account of when they were produced?  
12 Now, I think NIOSH has taken that research  
13 much farther in the report that they actually  
14 sent. I think it was Report 53. I don't  
15 remember the number, but I think the new  
16 report contains a lot more information than  
17 prior work. But it will not be that hard to  
18 review.

19 I am not sure that we will be able  
20 to settle some of these questions or whether  
21 the data exists or paperwork exists to settle

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701



1                   And then, secondly, we acknowledge 36  
2                   that when you parse them more finely by job or  
3                   area, sometimes you run into sufficiency of  
4                   data to be able to come to statistically  
5                   sensible answers. And in many cases, it was  
6                   clear that there wasn't enough information  
7                   there.

8                   Now, the current NIOSH databases  
9                   may be bigger, but I think the general  
10                  question remains unaddressed by NIOSH so far  
11                  as we can see. There has not been a serious  
12                  attempt to parse these data by construction  
13                  worker job types. Maybe it has been done, but  
14                  we haven't seen it.

15                 CHAIRMAN GRIFFON: I mean, Tim, do  
16                 you have any response to that, not to put you  
17                 on the -- I mean, it has been out there for a  
18                 while. I am just curious whether you have  
19                 thought about this.

20                 DR. TAULBEE: Well, I think we  
21                 have been responsive to the Work Group in

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 comparing construction trades and 37

2 non-construction trades. I understand what  
3 Arjun is arguing, of certain construction  
4 trades, but that is not -- we didn't have any  
5 intention of doing that type of comparison.  
6 And we are really not prepared to try and  
7 address that right here on this call.

8 CHAIRMAN GRIFFON: Sure. Sure.  
9 Okay. Yes. I do know. I remember your  
10 response papers, Arjun, that you did raise  
11 that question.

12 I mean, the other thing I would be  
13 interested in is if those subgroups were  
14 monitored to a great extent. You know, they  
15 had a higher chance of exposure, but also were  
16 they monitored with a higher frequency? I  
17 don't know. Anyway, it's something we need to  
18 follow up on, I think.

19 DR. MAKHIJANI: Yes. If you would  
20 like, Mark, or if the Work Group likes, I  
21 mean, I can send you -- it will take me a

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 couple of days to do this, but I can send you 38  
2 the key reports where we raised the issues and  
3 where you can actually see why it is important  
4 to parse the data by area and job types  
5 because for most groups of construction  
6 workers or many groups of construction  
7 workers, what NIOSH is proposing is fine and  
8 is claimant-favorable, but it is clearly not  
9 so for some groups of construction workers.  
10 So we feel that it does need to be addressed.

11 And, if you like, I could take  
12 that as a to-do from this teleconference to  
13 send around some examples or do you want to  
14 just wait until NIOSH responds?

15 CHAIRMAN GRIFFON: No. I think  
16 it's fine. It might refresh our memories, too  
17 --

18 DR. MAKHIJANI: Okay.

19 CHAIRMAN GRIFFON: -- just to  
20 forward that paper again or anything you think  
21 that --

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 DR. MAKHIJANI: Basically I'll 39

2 white out the page numbers and figure numbers  
3 and so on for ease of reference so people can  
4 actually, you know, go directly into --

5 CHAIRMAN GRIFFON: That would be  
6 great.

7 DR. TAULBEE: One word of caution,  
8 Mark and to others, is that within these  
9 papers, I mean, there is a big difference in  
10 how we analyze the data versus what Arjun had  
11 done initially. We use a one-person,  
12 one-sample type of maximum possible mean  
13 methodology. So please pay attention to that  
14 within our reports.

15 And the reason for that is that  
16 when you have the construction trades worker  
17 or even an operator involved in a single  
18 incident, they can drive the entire bioassay  
19 model of what the doses are. So, really, the  
20 only way to compare this is to use the  
21 one-person, one-sample type of methodology.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1           Otherwise you can have individual incidents           40  
2           that are dominating your entire data set.  But  
3           I just caution you and please keep that in  
4           mind when you do the full reviews.  Thanks.

5                           CHAIRMAN GRIFFON:  Okay.

6                           DR. MAKHIJANI:  However, NIOSH has  
7           just proposed this one-person, one-sample  
8           model last year so far as I know.  I know they  
9           came up with it initially the year before  
10          last, but the first time we saw it proposed  
11          was last year.  And we definitely are taking  
12          a good hard look at the proposal.  And it will  
13          be part of our report.

14                          But obviously, you know, the data  
15          wasn't available in that format when we looked  
16          at it prior, but when we look at it in this  
17          round, we definitely will look at it from that  
18          point of view.

19                          CHAIRMAN GRIFFON:  Okay.  That  
20          sounds good, Arjun.

21                          DR. MAKHIJANI:  But yes.  The data

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 that you will post is in that format, right, 41

2 raw data plus one-person, one-sample? Tim?

3 DR. TAULBEE: I'm sorry. Could  
4 you repeat that, please?

5 DR. MAKHIJANI: The data that we  
6 talked about earlier for OTIB-81 that you are  
7 going to post contains the raw data as well as  
8 the aggregated data into one-person,  
9 one-sample approach?

10 DR. TAULBEE: I believe so, yes.  
11 I will have to verify that. Actually, I don't  
12 know the answer to that. I believe it might  
13 just be the one-person, one-sample compiled,  
14 but we do have the original. So we might be  
15 able to give you both.

16 DR. MAKHIJANI: Yes. It would be  
17 helpful to have both.

18 DR. TAULBEE: Okay.

19 DR. MAKHIJANI: So that is my  
20 report, Mark.

21 CHAIRMAN GRIFFON: Okay. That

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 sounds good. You know, I am worried a little 42  
2 bit about the -- we haven't discussed the  
3 other matrix items yet, but I am worried a  
4 little bit about timing. I mean, I know our  
5 next Board meeting is in Augusta. And it  
6 seems pretty obvious that we're not going to  
7 have -- I mean, we can give an update but  
8 we're not going to have any conclusion until  
9 the summer, probably the fall on any of these  
10 items, even the priority items. Is that  
11 accurate?

12 DR. MAKHIJANI: Yes. The main  
13 hangup from our side on the priority items is  
14 the site visit and what we will come up when  
15 we interview the site visits because it all  
16 takes place the end of March, early April. I  
17 can walk you through it, and we'll have  
18 interview notes that will go from  
19 classification review and then they will go to  
20 the interviewees. That always takes three or  
21 four weeks to come back. So by the time we're

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

[www.nealrgross.com](http://www.nealrgross.com)

1 in the middle of May and then we get to look 43

2 at them and work with them, we will try to --

3 CHAIRMAN GRIFFON: Yes.

4 DR. MAKHIJANI: We will try to do  
5 at least one report, one report by the summer.

6 Which month is the summer meeting?

7 MR. KATZ: Arjun, this is Ted.

8 Mark, I just want to join this conversation  
9 about this because I had the same concern that  
10 Mark has about timing.

11 The summer meeting is the third  
12 week in July, somewhere around the 17th of  
13 July. I don't recall exactly the date, but  
14 that is the ballpark. I can look it up while  
15 I'm talking.

16 I would be -- I mean, in this  
17 case, given the time that has already  
18 transpired, Mark, I don't think it's a bad  
19 idea to have SC&A apply more resources to get  
20 things done in parallel if that will help or  
21 increase the likelihood that we could actually

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 bring things to conclusion or major pieces of 44  
2 this to conclusion by July.

3 I think that would be money well  
4 spent. I mean, I guess it takes two to tango.  
5 So it also depends on whether the folks at  
6 DCAS can similarly bring what resources they  
7 need to bear to their side of the equation on  
8 matters that need to be resolved by the Work  
9 Group. But I think it's a worthy goal to put  
10 more resources on this to make major progress  
11 by July.

12 CHAIRMAN GRIFFON: Yes. I would  
13 agree. Just one question for Arjun, I mean,  
14 are all of the pieces out there for these  
15 other -- I am assuming that these other  
16 nuclides, a lot of them are covered in this  
17 OTIB-81, correct, the ones that you have in --

18 DR. MAKHIJANI: From Tim's  
19 description, it has the whole --

20 CHAIRMAN GRIFFON: Yes.

21 DR. MAKHIJANI: -- all of the

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 radionuclides in all of the coworker models. 45

2 Right, Tim?

3 DR. TAULBEE: That is correct.

4 DR. MAKHIJANI: I think we are  
5 currently looking at essentially all of the  
6 radionuclides because the reports that were  
7 put out on exotic radionuclides and trivalent  
8 and neptunium and thorium and so on and  
9 fission products covered that waterfront. So  
10 I think what OTIB-81 adds is the actual  
11 coworker model and the compiled data that we  
12 don't have as yet except maybe for tritium and  
13 because we don't have that compiled data.

14 CHAIRMAN GRIFFON: Okay. So I  
15 think Ted is probably right that at this  
16 point, it looks like most of the actions are  
17 in your hands.

18 DR. MAKHIJANI: Yes.

19 CHAIRMAN GRIFFON: And maybe  
20 putting more resources would -- of course, I  
21 understand if you have certain experts that

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 are doing -- you know, you can only have so 46

2 many experts in certain areas.

3 DR. MAKHIJANI: Yes.

4 CHAIRMAN GRIFFON: I think it

5 would be a good idea, yes.

6 DR. MAKHIJANI: Mark and Ted,

7 where I suggested putting more resources into

8 it was to put personnel to look at the reports

9 where we haven't started an intensive review.

10 I would not recommend putting more resources

11 in neptunium and thorium and tritium because

12 I think we have got very capable people

13 working on this. And for somebody new to

14 enter would just delay things.

15 CHAIRMAN GRIFFON: Yes, yes, yes.

16 No. That's --

17 DR. MAKHIJANI: The main hold-up

18 there is that what is going to be coming out

19 of the site visit and the interviews, and how

20 are we going to deal with it. We will

21 definitely put, you know, all of the effort

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 that we can to produce at least the neptunium 47  
2 and thorium reports by July.

3 CHAIRMAN GRIFFON: And can I ask  
4 just one thing on the site visits? What is  
5 your focus on the site visits? What do you  
6 hope to achieve with the interviews?

7 DR. MAKHIJANI: Well, we don't --  
8 you know, we don't have interviews, and we  
9 don't have all of the documentation about the  
10 production of neptunium and thorium and exotic  
11 nuclides in terms of the dates. And so, as I  
12 mentioned earlier, for instance, on exotic  
13 radionuclides, really, the one pesky item that  
14 is difficult to put to bed is these dates.  
15 And we are going to try to put it to bed as  
16 much as possible because exotic radionuclides  
17 covers such a wide array of radionuclides that  
18 we don't want to have questions dangling out  
19 there. We have done all the paper research we  
20 can through SRDB and other sources and haven't  
21 been able to put it to bed.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701



1 we'll certainly leave the management up to 49

2 you, but to the extent you can apply more  
3 resources and expedite the overall progress --

4 DR. MAKHIJANI: I hear you.

5 CHAIRMAN GRIFFON: -- I think we'd  
6 all appreciate that. Yes, yes.

7 DR. MAKHIJANI: The way we will do  
8 that is --

9 CHAIRMAN GRIFFON: Yes.

10 DR. MAKHIJANI: -- you know, John  
11 Stiver and I, who are co-managing this thing,  
12 will kind of assemble our team on a conference  
13 call and make sure everybody gets the message  
14 that this is a very high priority. We will at  
15 least try to finish neptunium and thorium by  
16 July. And maybe we would be able to give you  
17 some of the other stuff also.

18 CHAIRMAN GRIFFON: Okay. And now  
19 just --

20 DR. MAKHIJANI: One question I  
21 have for NIOSH is, are we going to get any

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 further response on refinement of, you know, 50  
2 parsing the construction workers into job  
3 types or are we kind of going to rest?

4 MR. HINNEFELD: This is Stu  
5 Hinnefeld. We are going to talk about that  
6 here in a little bit.

7 DR. MAKHIJANI: Okay.

8 CHAIRMAN GRIFFON: Okay. And I am  
9 on to the last agenda item, which is the Other  
10 Matrix Items. I don't know if, Arjun, would  
11 you feel comfortable taking the lead on this?

12 DR. MAKHIJANI: No problem. I  
13 have the matrix in front of me.

14 CHAIRMAN GRIFFON: Yes. Hit the  
15 main ones.

16 DR. MAKHIJANI: Yes. I'll just  
17 hit the main ones.

18 CHAIRMAN GRIFFON: Yes.

19 3. OTHER MATRIX ISSUES

20 DR. MAKHIJANI: This is a matrix  
21 update dated December 2011. Item 3 is

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 recycled uranium. And we had suspended this 51  
2 a couple of years ago. And we have restarted  
3 it. It is not a high priority right now. It  
4 is a memorandum that needs to be finished,  
5 some, basically, SRDB type of research that  
6 needs to be completed to finish this. We will  
7 try to accelerate this, but we haven't given  
8 it a high priority to complete it. This ball  
9 is definitely in our court.

10 CHAIRMAN GRIFFON: I'm sorry?  
11 What was that item?

12 DR. MAKHIJANI: Recycled uranium,  
13 item number 3.

14 CHAIRMAN GRIFFON: Okay. Okay.  
15 And we did give that a lower priority, given  
16 the other --

17 DR. MAKHIJANI: Right. It was a  
18 lower priority before. And then when NIOSH  
19 said they were providing new data and so on,  
20 we suspended work on this item. And then  
21 after the NIOSH reports were published and you

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

[www.nealrgross.com](http://www.nealrgross.com)

1 advised us to kind of restart work on all SEC 52  
2 issues, we restarted work on this but haven't  
3 given it a high priority.

4 CHAIRMAN GRIFFON: And refresh my  
5 memory. How -- has NIOSH had a model out  
6 there for dealing with assigning dose from  
7 recycled uranium?

8 DR. MAKHIJANI: Well, as I  
9 remember, NIOSH published a set of ratios for  
10 it.

11 CHAIRMAN GRIFFON: Okay. All  
12 right. So consider any of these that are --  
13 I would say use your judgment, too, but any of  
14 these that are potentially -- you know, not --  
15 there's going to be clearly a Site Profile  
16 issue, rather than an SEC issue.

17 DR. MAKHIJANI: Right.

18 CHAIRMAN GRIFFON: If it's going  
19 to be an SEC issue or has that potential, I  
20 would say try to put it on your radar again  
21 and move forward.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 DR. MAKHIJANI: Okay. 53

2 CHAIRMAN GRIFFON: Yes.

3 DR. MAKHIJANI: Our goals are what  
4 we did before. And if it looks like it might  
5 be an SEC issue, we'll give it a higher  
6 priority.

7 CHAIRMAN GRIFFON: Okay.

8 DR. MAKHIJANI: Then we have  
9 covered the various other issues: trivalent  
10 activation, fission products, neptunium,  
11 exotics, tritium. The next item that we have  
12 not covered is item 10, which is special  
13 tritium compounds. This ball is in NIOSH's  
14 court for some time in terms of providing us  
15 with information about solubilities and how  
16 they are going to approach it. I can read  
17 more details.

18 CHAIRMAN GRIFFON: Tim, do you  
19 recall this being -- it was an outstanding  
20 action for you.

21 DR. TAULBEE: No, but now that I

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 think about it, this was one of them that we 54  
2 put on the back burner due to a lower  
3 priority. And so it very well might be in our  
4 court and it dropped off my radar. And I  
5 apologize for that.

6 CHAIRMAN GRIFFON: No. That's  
7 okay. If we're asking SC&A to close out, I  
8 think you should probably hone in on this one.

9 DR. TAULBEE: Okay. Will do.

10 CHAIRMAN GRIFFON: Okay.

11 DR. MAKHIJANI: Okay, exotic  
12 nuclides, we have covered. Internal dose due  
13 to incidents, SC&A had prepared a report and  
14 it says here NIOSH will --

15 CHAIRMAN GRIFFON: Arjun, I'm  
16 sorry. Is that --

17 DR. MAKHIJANI: No dose due to  
18 incidence.

19 CHAIRMAN GRIFFON: Is that number  
20 12?

21 DR. MAKHIJANI: Number 12, yes.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 CHAIRMAN GRIFFON: Okay. 55

2 DR. MAKHIJANI: Sorry. And the  
3 issue description is special hazards  
4 investigation is incomplete. The tank farm  
5 data bank acknowledged incidents were not  
6 recorded. And workers have also said that  
7 incidents were not recorded. So the question  
8 of completeness of incidents in the DOE  
9 records has arisen. And SC&A prepared a  
10 report on this. And we haven't received a  
11 response from NIOSH.

12 DR. TAULBEE: Can you let me know  
13 what the date of that report is again, Arjun,  
14 please?

15 DR. MAKHIJANI: Hang on for a  
16 second. I will go to my records list. It's  
17 an incident record that Savannah River Site,  
18 discussion of Special Exposure Cohort issue  
19 number 12 related to incident, January 2011.  
20 I can send it to you again if you like.

21 DR. TAULBEE: Yes, please.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 DR. MAKHIJANI: I'll make a note 56

2 of that in my to-do list. Excuse me. Just a  
3 second. I'll send it to Ted. All right?

4 CHAIRMAN GRIFFON: I will list  
5 that as a NIOSH action to review that, that  
6 report.

7 DR. MAKHIJANI: I have noted to  
8 send it around.

9 CHAIRMAN GRIFFON: Okay.

10 DR. MAKHIJANI: Then item 13,  
11 construction worker versus non-construction  
12 workers, I've already mentioned. I don't know  
13 if you want to take that up more at this  
14 stage.

15 CHAIRMAN GRIFFON: No. I think we  
16 have that on record. And I guess the question  
17 is -- I think that's kind of -- I think we  
18 will leave that up to you, Arjun, for SC&A to  
19 look at the way the models are done now and  
20 see if it remains an issue, you know, that you  
21 still think is relevant or --

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 DR. MAKHIJANI: Yes. 57

2 CHAIRMAN GRIFFON: And if that's  
3 the case, then we can bring back the -- you  
4 know, that issue if we want.

5 DR. MAKHIJANI: This will  
6 definitely require significant effort. And as  
7 soon as, Tim, if you will, please, send me an  
8 email as soon as you have posted the data,  
9 then I can, you know, put a couple of people  
10 on this so we give it the due priority.  
11 Otherwise, we won't be able to complete that  
12 analysis.

13 DR. TAULBEE: I will let you know  
14 once we get it posted.

15 DR. MAKHIJANI: Okay. Thank you.

16 CHAIRMAN GRIFFON: Sounds good.

17 DR. MAKHIJANI: Next item. So a  
18 lot of these items are really subsumed now in  
19 this construction worker versus  
20 non-construction worker. And the next issue  
21 is tank farm exposure geometry. This is

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealgross.com

1 unlikely to be an SEC issue, but, again, I 58  
2 don't want to prejudge anything. It's up to  
3 you, Mark.

4 NIOSH was supposed to prepare a  
5 model of adjustment factors for external  
6 exposure geometry in the tank farm. And we  
7 were supposed to review it when it was  
8 published. I don't believe it has been  
9 published.

10 DR. TAULBEE: This is something  
11 that is still on our to-do list. And we are  
12 making some progress on that. It has again  
13 taken a lower priority. But this is something  
14 that we are cognizant of that we do still owe  
15 the Work Group.

16 DR. MAKHIJANI: Mark, in the past,  
17 as you know, exposure geometry issues have  
18 generally not been SEC issues. I don't want  
19 to prejudge anything in this case, but --

20 CHAIRMAN GRIFFON: Right, right,  
21 right.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 DR. MAKHIJANI: Just from 59  
2 experience, as you know, NIOSH generally has  
3 been able to come up with models, I think,  
4 starting with Mallinckrodt, if I'm remembering  
5 correctly.

6 CHAIRMAN GRIFFON: Yes. I think  
7 it would be good, Tim, if you can come back to  
8 the Work Group maybe with a proposed approach,  
9 even if it's not -- you know, you don't have  
10 all the particulars, we might realize quickly  
11 in a discussion whether it's not an SEC issue.

12 DR. TAULBEE: Mark, this is Tim.  
13 I can give you a rough idea of what it is now.  
14 We are currently modeling, through MCNP, a  
15 worker standing on top of the tank farm and so  
16 the difference in dose from organs in the  
17 lower portion of the body to the upper  
18 portion. And then also a worker would be  
19 crouching over one of the sampling holes and  
20 looking at that exposure as well. Those are  
21 the two models that we are currently modeling

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealgross.com

1 in MCNP. So that is our approach to coming up 60  
2 with the correction factors for this.

3 CHAIRMAN GRIFFON: And is there a  
4 question of the source term in that  
5 circumstance?

6 DR. TAULBEE: That's actually  
7 what's been a little bit of our delay of  
8 modeling what is in the tanks based upon time  
9 and, over time, the mixture of fission  
10 products for that. And that's been what the  
11 largest part of the delay is. It has been  
12 tied to OTIB-54.

13 CHAIRMAN GRIFFON: Okay.

14 MEMBER CLAWSON: Mark, this is  
15 Brad. I just wanted to remind Tim one other  
16 thing. If you remember, when we were talking  
17 about these waste tanks, one of the processes  
18 was and what brought a lot of this up was  
19 because of the workers explaining about  
20 pulling those pumps out of there, too,  
21 because, remember, you know, we had all the

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 different radionuclides and the change in the 61  
2 field. So I know these two scenarios are  
3 there, but one of the ones that brought it up  
4 was because of the removal of some of the  
5 pumps that went out in those tanks.

6 DR. TAULBEE: Okay. I really  
7 don't remember. I mean, I remember them  
8 talking about those particular tanks. I don't  
9 remember what your concern was, though, Brad,  
10 with that because when they come out of the  
11 area, for most people, you are kind of facing  
12 the tank or if you're back to it or you're  
13 turning, you're kind of rotational geometry.  
14 And so we have got correction factors already  
15 for that in the OCAS-IG-0001 type of  
16 methodology. So this is why we weren't  
17 approaching this as part of the exposure  
18 geometry.

19 The two scenarios where we didn't  
20 have those types of corrections is kind of a  
21 fixed source with people walk in on top of

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

[www.nealrgross.com](http://www.nealrgross.com)

1 kind of high-level waste tanks. Once the pump 62  
2 comes out, it's kind of rotational and AP  
3 geometry.

4 MEMBER CLAWSON: Okay. I guess it  
5 really stands out to me because I remember in  
6 one of the interviews that we were involved  
7 down there, it basically got into the  
8 construction trades. And that geometry is  
9 fine, but once you start to pull the pumps,  
10 which they -- the operations people assisted  
11 with, but it was usually the trades that did  
12 it, those pumps that came out of there were  
13 streaming. And this is a process because of  
14 some of the product that was going in there  
15 readily took those pumps out. I didn't know  
16 how you were going to model for that. And I  
17 just wanted to make sure we addressed the  
18 concerns of what the claimants had brought up  
19 with that.

20 DR. TAULBEE: We can add a  
21 discussion to this exposure geometry report

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 that will address that and show how our 63  
2 current methodology would take that into  
3 consideration.

4 MEMBER CLAWSON: Okay. Thank you.  
5 I appreciate it.

6 DR. TAULBEE: Okay.

7 CHAIRMAN GRIFFON: Sounds good.  
8 Thanks, Tim.

9 Arjun, are there other items on  
10 the matrix?

11 DR. MAKHIJANI: Yes. One of the  
12 scenarios I brought from memory now, having  
13 looked at tank farm data, is the diversion  
14 boxes and so on, where the workers actually  
15 entered closer. And I don't know exactly what  
16 kind of procedures they used. I don't recall  
17 that. But I am not sure there is a scenario  
18 there to consider, but you might think about  
19 where they are actually approaching the pipes  
20 and junction boxes, diversion boxes, and so  
21 on, to see whether there is an appropriate

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 scenario. It is basically a source term 64  
2 difference with somebody standing on top of  
3 the tanks. But they may be a significant  
4 source term. That's it.

5 CHAIRMAN GRIFFON: Okay. And that  
6 is it on the matrix items?

7 DR. MAKHIJANI: Well, there are  
8 two others which we have put together, items  
9 22 and 23, badges not capturing dose and  
10 external dose recording accuracy and  
11 completeness. This was, you know, basically  
12 issues raised by workers and worker  
13 representatives and came up repeatedly in  
14 interviews. And we have prepared a report  
15 addressing this.

16 This is from some time back. I  
17 don't remember what exactly is in the report,  
18 but I can send this one around to -- the  
19 report was done in -- and so we await a NIOSH  
20 response on this. It was done also in January  
21 of 2011. It says, Matrix issues 22 and 23

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 regarding petitioner external dose issues. 65

2 And so basically we tried to  
3 comprehend the petitioner-raised issues and  
4 put them into a report as to how they might  
5 relate to our examination. And NIOSH hasn't  
6 responded as of yet.

7 I can send that report over.

8 DR. TAULBEE: Yes. Please do,  
9 Arjun. This is Tim.

10 CHAIRMAN GRIFFON: Okay. Thanks  
11 for the update.

12 And then I wasn't sure. Stu, you  
13 had some things to say. You said we would  
14 address it later in the meeting.

15 MR. HINNEFELD: No. I meant NIOSH  
16 internally would address that question when  
17 this call was over.

18 CHAIRMAN GRIFFON: Oh, when the  
19 call was over. Okay. Okay. All right.

20 DR. MAKHIJANI: Sorry. There is  
21 one other item, which was 26, which is in the

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 same vein as 22 and 23, which was another set 66  
2 of issues raised later on by petitioners,  
3 which SC&A also did a report about in February  
4 2011. I'll send that around, too. That's it.

5 CHAIRMAN GRIFFON: Okay. And yes.  
6 Again, I think the primary issues are in  
7 SC&A's court right now and adding more  
8 resources I think makes a lot of sense. I  
9 really would like to be able to be in a  
10 position to possibly, you know, vote on at  
11 least a further portion of the SEC in that  
12 summer meeting. So I hope we can strive  
13 toward that.

14 If we need to do another Work  
15 Group meeting, we can do that, you know,  
16 albeit phone or in Cincinnati. I think this  
17 has to be put the resources in now so we can  
18 come to a close on this.

19 DR. MAKHIJANI: I definitely got  
20 that message, Mark. And as soon as I have a  
21 chance to meet with John and kind of regroup

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 with our team, I will send you an email and 67  
2 copy Ted.

3 CHAIRMAN GRIFFON: And I think at  
4 this point, if there is nothing else, I would  
5 offer the petitioner an opportunity or  
6 petitioners' representatives to say a word if  
7 they would like.

8 MR. ANDERSON: Thank you, Mark.  
9 You know, obviously we are disappointed.

10 CHAIRMAN GRIFFON: I am sorry.  
11 Just maybe for the court reporter, your name?

12 MR. ANDERSON: David Anderson,  
13 Administrative Manager with the law offices of  
14 Bob Warren.

15 I have really appreciated all the  
16 work you all are putting into this today. We  
17 are disappointed in the timing. I think you  
18 all are disappointed in the timing. But I do  
19 appreciate the fact that SC&A is going to go  
20 down to the site and actually do these  
21 interviews and look at some of the data

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 because we have serious questions about the 68  
2 source materials. And we have not been able  
3 to have a look at those, even though we have  
4 filed FOIA requests.

5 So I am glad you all are moving  
6 forward. I am sorry for the claimants, who,  
7 as you all know, are aging and dying as we  
8 speak. But you're doing the best you can, and  
9 we appreciate it. Thank you.

10 CHAIRMAN GRIFFON: Thank you. And  
11 I think we all agree that we need to move and  
12 try to come to closure on this.

13 Any other --

14 DR. RINGEN: Mark, this is Knut  
15 Ringen. First of all, when SC&A does the  
16 reviews down there, I think it is very  
17 important to get more input also from the  
18 regular workers who have been out at the site.

19 The report, Addendum number 3 is  
20 heavily skewed, it seems to me, by the four  
21 identified experts that NIOSH has relied on

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 from the site that they have interviewed and 69  
2 that are listed in the addendum. It doesn't  
3 seem to me to be balanced with the views that  
4 other workers, ordinary workers have given.

5 I think all of this still comes  
6 down to two things. One, are the  
7 extrapolation models that have been proposed  
8 valid? We have very big doubts about it,  
9 including the one-person, one-sample model.  
10 And we'll make some comments about that in  
11 March.

12 The second issue, which is also  
13 very important, is, even if that model might  
14 be valid, how do you identify those workers  
15 that it applies to? NIOSH still has not  
16 presented in this addendum a valid approach or  
17 any approach, for that matter, as to how it  
18 will place a construction worker in a  
19 particular area of the site. It's the same  
20 problem that we had when the last SEC  
21 Evaluation Report was reviewed by the Board.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 And it is going to be the same problem that 70  
2 comes up again now. So it has to be dealt  
3 with, in one form or another, by SC&A.

4 CHAIRMAN GRIFFON: Thank you,  
5 Knut, and look forward to your other comments  
6 at the meeting in Augusta.

7 DR. MAKHIJANI: Mark, could I ask  
8 Dr. Ringen a question?

9 CHAIRMAN GRIFFON: Yes.

10 DR. MAKHIJANI: Knut, do you have  
11 names of workers that you would especially  
12 like us to interview? We have sent some  
13 names, a list of about a dozen -- right, Joe?

14 MR. FITZGERALD: About that.

15 DR. MAKHIJANI: -- to DOE so we  
16 can interview them. If you have particular  
17 people who have special knowledge on any of  
18 these areas, but especially neptunium and  
19 thorium, we would be happy to interview them.  
20 If you could send, you know, Mark or me or  
21 John Stiver or any of us an email, we would

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 share that, you know, with the Work Group. 71

2 And, Joe, you know, there are  
3 three of us, three people from our team, with  
4 clearances who are going down there. So if we  
5 could have that as soon as possible, it would  
6 be appreciated.

7 DR. RINGEN: Sure. We'll work on  
8 that, and thank you for the opportunity.

9 MEMBER CLAWSON: Hey, Mark, this  
10 is Brad. I've got one question, if I could.

11 CHAIRMAN GRIFFON: Go ahead, Brad.

12 MEMBER CLAWSON: Well, my question  
13 is for Tim. This OTIB, I believe it was, 81  
14 that we really haven't been able to look at,  
15 this basically gives the methodology of how  
16 you're going to do this coworker data. Is  
17 that correct?

18 DR. TAULBEE: OTIB-81 provides the  
19 basis of how we develop the coworker models.  
20 That is the data, the data analysis associated  
21 with it, how we came up with the intakes that

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 we would be assigning to an unmonitored worker 72  
2 who we feel should have been monitored.

3 MEMBER CLAWSON: This is part of  
4 my question. What guidelines are the people  
5 going to have to meet to have this OTIB-81  
6 used? I was just wondering how these people  
7 are going to be chosen or what lack of  
8 information they need to have. Is there any  
9 kind of guidance of telling us which people?  
10 This kind of comes back to a little bit of  
11 what Knut just said of who these people are  
12 going to be and who are going to fall into  
13 this category. What criteria do they meet to  
14 have to have OTIB-81 used? Do we have any  
15 guidance for that?

16 DR. TAULBEE: Let me get back to  
17 you on that, Brad. I am not sure if it's in  
18 the TBD. Actually, I know it is not in the  
19 TBD because we didn't have coworker models  
20 back then. But I believe there are some other  
21 OTIBs where we have this particular guidance

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 as to who it would be assigned to. But I need 73  
2 to research that a little and get back to you  
3 on that, Brad.

4 MEMBER CLAWSON: Okay. Well, what  
5 I was just going to say in the -- I didn't  
6 mean to put you in a predicament there, but  
7 the thing is, once we know how this is going  
8 to be applied, I think it's a question. And  
9 if you wouldn't mind kind of taking that as an  
10 action item to get back to the Work Group on  
11 how this will be applied and who it would  
12 apply to, I would greatly appreciate it.

13 DR. TAULBEE: Will do.

14 CHAIRMAN GRIFFON: Okay. Are  
15 there any more -- before I close out, any more  
16 people who wish to speak on behalf of the  
17 petitioner?

18 (No response.)

19 CHAIRMAN GRIFFON: All right. So,  
20 not hearing any, I think we can close this  
21 meeting out. You know, I think we got a lot

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 of action items, the weight of which are on 74  
2 SC&A, but look forward to you moving ahead on  
3 this. And we'll at least do an update in  
4 Augusta for the local community. And we'll  
5 just move ahead as quickly as we can.

6 Any other thoughts before we  
7 close?

8 MR. KATZ: This is Ted. Just one.  
9 Once we get better information from SC&A as to  
10 what they can do when, and more information  
11 about the site visits, I think, sometime in  
12 early March, middle March, we should book  
13 another Work Group meeting, in the May, early  
14 June time frame. I think it is always helpful  
15 to have, actually, a target to shoot at first.  
16 And at that point, we may be only ready to  
17 sort of get reconnaissance of how close we are  
18 with documents, but we probably should do  
19 that.

20 CHAIRMAN GRIFFON: Okay. Okay.  
21 And I'll keep in touch with Tim and Arjun.

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

This transcript of the Advisory Board on Radiation and Worker Health, Savannah River Site Work Group, has been reviewed for concerns under the Privacy Act (5 U.S.C. § 552a) and personally identifiable information has been redacted as necessary. The transcript, however, has not been reviewed and certified by the Chair of the Savannah River Site Work Group for accuracy at this time. The reader should be cautioned that this transcript is for information only and is subject to change.

1 And we can kind of pick a date. I think it is 75  
2 a good idea, but we should pick a date that is  
3 going to be useful for all parties. We should  
4 do that.

5 All right. I think that should  
6 close it out. And thanks to everyone for  
7 attending.

8 MR. KATZ: Thanks, everybody.

9 CHAIRMAN GRIFFON: And we'll see  
10 you soon.

11 MEMBER CLAWSON: We will see you  
12 all later. Bye.

13 CHAIRMAN GRIFFON: Bye.

14 (Whereupon, the above-entitled  
15 matter went off the record at 2:09 p.m.)

16

17

18

19

20

21

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

[www.nealrgross.com](http://www.nealrgross.com)

This transcript of the Advisory Board on Radiation and Worker Health, Savannah River Site Work Group, has been reviewed for concerns under the Privacy Act (5 U.S.C. § 552a) and personally identifiable information has been redacted as necessary. The transcript, however, has not been reviewed and certified by the Chair of the Savannah River Site Work Group for accuracy at this time. The reader should be cautioned that this transcript is for information only and is subject to change.

1

76

2

3

4

5

6

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

[www.nealrgross.com](http://www.nealrgross.com)