

UNITED STATES OF AMERICA  
CENTERS FOR DISEASE CONTROL

+ + + + +

NATIONAL INSTITUTE FOR OCCUPATIONAL  
SAFETY AND HEALTH

+ + + + +

ADVISORY BOARD ON RADIATION AND  
WORKER HEALTH

+ + + + +

102nd MEETING

+ + + + +

THURSDAY, NOVEMBER 6, 2014

The meeting convened at 8:30 a.m., Pacific Standard Time, in Hilton Garden Inn Los Angeles/Redondo Beach 2410 Marine Avenue, Redondo Beach, CA, James M. Melius, Chairman, presiding.

PRESENT:

JAMES M. MELIUS, Chairman  
HENRY ANDERSON, Member  
BRADLEY P. CLAWSON, Member  
R. WILLIAM FIELD, Member\*  
DAVID KOTELCHUCK, Member  
RICHARD LEMEN, Member  
WANDA I. MUNN, Member  
DAVID B. RICHARDSON, Member  
GENEVIEVE S. ROESSLER, Member  
PHILLIP SCHOFIELD, Member  
LORETTA R. VALERIO, Member  
PAUL L. ZIEMER, Member  
TED KATZ, Designated Federal Official  
REGISTERED AND/OR PUBLIC COMMENT PARTICIPANTS

**NEAL R. GROSS**

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

AL-NABULSI, ISAF, DOE  
ADAMS, NANCY, NIOSH Contractor  
BARRIE, TERRIE\*  
BLAZE, D=LANIE  
BURGOS, ZAIDA, NIOSH  
CRAWFORD, CHRIS A FRANK, DOL  
FITZGERALD, JOE, SC&A  
HARTSFIELD, DEKEELY, HHS  
HINNEFELD, STU, DCAS  
HUGHES, LARA, DCAS  
KINMAN, JOSH, DCAS  
KLEA, BONNIE  
KUROWSKY, LORRAINE  
LEWIS, GREG, DOE  
LIN, JENNY, HHS  
MCKEEL, DAN\*  
MCFEE, MATT, ORAU Team  
NETON, JIM, DCAS  
PACE, JOHN\*  
ROESCH, CHARLEEN  
ROESCH, DANIEL  
RUTHERFORD, LAVON, DCAS  
SCHULTZ, JEFF\*  
STIVER, JOHN, SC&A  
WORTHINGTON, PATRICIA, DOE  
ZEITOUN, ABE, SC&A

**NEAL R. GROSS**

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

## T-A-B-L-E O-F C-O-N-T-E-N-T-S

Welcome and Introduction	
Dr. James Melius.....	4
NIOSH Program Update	
Stuart Hinnefeld.....	6
DOL Program Update	
Frank Crawford.....	23
DOE Program Update	
Greg Lewis.....	35
Procedures Subcommittee report on Completed Review of Program Evaluation Report 14: Construction Trade Workers	
Wanda Munn.....	50
Sufficient Accuracy/Coworker Dose Modeling	
Dr. James Melius.....	83
Dr. James Neton.....	87
SEC Petitions Status Update	
by LaVon Rutherford.....	179
Board Work Session	
by James Melius.....	201
Subcommittee and Work Group Reports	
by James Melius.....	206
Santa Susana Special Exposure Cohort Site Profile Update	
by Lara Hughes.....	258
SC&A Site Profile and SEC Updates	
by John Stiver.....	277
Public Comment .....	313

**NEAL R. GROSS**

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

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23

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

(8:29 a.m.)

CHAIRMAN MELIUS: -- Radiation and Worker Health, call to order. And I'll turn it over to Ted.

MR. KATZ: So welcome everyone to the meeting. For everyone listening on the phone too, the materials for the meeting today, for people in the room -- I don't see any public members yet, the materials are outside on the table.

For people on the line, the materials are on the Internet, on the NIOSH website, under the Board section for Meetings, today's date. And you'll find -- you should find all of the presentations that are being given today there for your perusal.

And there is also Live Meeting. You can -- so you can follow along while people are giving presentations on Live Meeting. And that link for Live Meeting is on the agenda, which is on the NIOSH website.

Roll call. We have no topics for

**NEAL R. GROSS**

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

(202) 234-4433

www.nealrgross.com

1 which there are conflicts, so I'm not going to  
2 address conflicts for Board Members. So we're  
3 just going to run through roll call. And let's  
4 just go alphabetically from the top. There are  
5 a few Members that -- we're having feedback  
6 here, I think -- who I know are going to be  
7 absent.

8 (Roll call.)

9 MR. KATZ: Very good. Okay. And a  
10 few other things just to note, there's a public  
11 comment session that begins at 4:30 today, 4:30  
12 to 5:30.

13 So people on the line, we don't have  
14 members of the public in the room right now, but  
15 people on the line, we will be taking people in  
16 the room first, addressing Santa Susana, but  
17 then we'll get to you folks on the line.

18 And we have a number of people in the  
19 public who have already signed up, by send --  
20 sent me emails, but you don't -- the rest of you  
21 don't need to send emails or what have you.  
22 We'll get to you after we finish with people in  
23 the room.

**NEAL R. GROSS**

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

1           And then just let me note, for  
2 everyone on the line, please mute your phone,  
3 except when you're addressing the group. And  
4 if you don't have a mute button, press \*6 to mute  
5 your phone. Press \*6 again to take your phone  
6 off of mute. But please keep your phones muted  
7 while you're just listening. Thank you. Dr.  
8 Melius, this is your meeting.

9           CHAIRMAN MELIUS: Okay. Thank you,  
10 Ted. And we'll start, as usual, with a NIOSH  
11 update. Stu Hinnefeld.

12           MR. HINNEFELD: Okay. Now we'll try  
13 it. Okay. Thank you, Dr. Melius. And I'm  
14 here for my normal program update. Okay, good.

15           I always -- I try to start with program  
16 news on these updates, and sometimes I don't  
17 think of very much news, probably because it's  
18 not news to me, because it happens to me every  
19 day. But since our last meeting, we have  
20 mainly outreach activities to talk about.  
21 We've done a number of them, either -- well,  
22 really in conjunction, mostly in conjunction  
23 with the other agencies.

**NEAL R. GROSS**

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

1           The first one, though, was one that we  
2           did with our outreach contractor, ATL, and that  
3           is the Dose Reconstruction and Special Exposure  
4           Cohort workshop that we offer once a year --  
5           it's been in September the last couple of years,  
6           where we invite interested parties, a few  
7           advocates, mainly a lot of labor  
8           representatives, some retiree organizations,  
9           to -- representatives of those folks to  
10          Cincinnati, and we conduct a two-day workshop  
11          about the program, dose reconstruction,  
12          various aspects of it.

13                 So certain members of our staff  
14                 present certain sections or certain topics.  
15                 Staff from ATL present other topics, and then  
16                 there's some working sessions for people to  
17                 become more familiar with our website and where  
18                 to find information.

19                 The idea behind this is that these  
20                 people then can be resources for their  
21                 constituencies back at home, and can be sources  
22                 of information for those folks back at the  
23                 facilities.

**NEAL R. GROSS**

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

1           So it went pretty well. ATL does a  
2 nice job of setting that up, and we've --  
3 typically get very positive comments. They do  
4 an attendee assessment, essentially a course  
5 assessment thing at the end.

6           Pretty consistently, we get pretty  
7 high marks about the usefulness, people, you  
8 know, really happy to be there and they thought  
9 the information was presented well and they  
10 enjoyed it.

11           So we did go through that in  
12 September. And then there were several Joint  
13 Outreach Task Group meetings in the months  
14 since the last Board meeting, in Richland and  
15 Spokane -- that was one trip for the two  
16 locations, Rochester and in Paducah, just a --  
17 I guess it's about three weeks ago now.

18           So those are most -- that's most of the  
19 news that I thought of to put on the slide.  
20 Getting into the claim, or the statistics, I  
21 won't get into -- spend a whole lot of time on  
22 these. They're on the handouts, and I think  
23 they were probably in information you received.

**NEAL R. GROSS**

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

1           The claims are, continue to go up at  
2           about -- we continue to get about 200 a month,  
3           new -- maybe slightly less than 200 a month of  
4           new claims. We have a kind of a constant flow  
5           of reworked claims.

6           Typically when people get an  
7           additional cancer, they're sent back for  
8           rework. So in combination of the new and  
9           reworks, we're probably around 250 a month that  
10          we get.

11          And we continue to send cases back.  
12          These are the various categories. The 1,200  
13          cases still with us, I believe, a number of  
14          those are cases where the initial draft is in  
15          the hands of the claimants, and we're waiting  
16          for the close, either doing a close-out  
17          interview or going to get the OCAS-1 form back.

18          So it's really, the number we have is  
19          somewhere around, well 9 -- it looks like about  
20          970 based on this accounting here.

21          So those are -- that's how the game's  
22          -- you know, we've -- that's kind of been our  
23          sort of inbox for a while now. We're not -- we

**NEAL R. GROSS**

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

1 have certainly timeliness objectives, in terms  
2 of getting cases done, I think 90 percent of the  
3 cases within five months of getting all the  
4 information we need to do it.

5 And so we're not making -- we don't  
6 really have an objective to reduce the number  
7 in the inbox. We just want to make sure we're  
8 timely in the response to the claims, as timely  
9 as we can be.

10 Here is the breakdown of Probability  
11 of Causation, how the -- these are ones done  
12 from DRs. This is just the DR statistic. It  
13 doesn't take into account cases that were  
14 compensated through the SEC process.

15 As I recall, that's either 28 or 29  
16 percent. I did the arithmetic and -- but I  
17 didn't write it down. Or I don't -- I wrote it  
18 down, but not with something I have with me. I  
19 think it's like 28 or 29 percent have been  
20 successful through dose reconstruction.

21 Again, a lot of the -- a number of the  
22 cancers that tend to be successful with,  
23 through dose reconstruction, like lung cancer

**NEAL R. GROSS**

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

1 in particular is an SEC cancer, and so as you  
2 add additional SEC Classes, you don't have  
3 those, you know, those don't come to dose  
4 reconstruction so you don't get those  
5 successful dose reconstructions when they're  
6 paid through the SEC.

7 This is our chart, our long-term chart  
8 of submittals versus production. It doesn't  
9 change much. The last data point really  
10 shouldn't be on there. That's a partial  
11 quarter.

12 These are quarterly data, and there is  
13 -- there was no precipitous drop in claims  
14 recently. That's just a partial quarter, and  
15 we were close enough to the meeting and getting  
16 the meeting materials ready that it was a little  
17 hard to re-run.

18 So we said, well what the heck, I'll  
19 just explain it. That's a, that's only a  
20 partial quarter. There's no, there was no  
21 precipitous drop in claims recently.

22 Here's status of the first 5,000  
23 claims and how they break out. Nothing's much

**NEAL R. GROSS**

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

1 different there. This slide caught my  
2 attention because -- and if you look at the  
3 claims at NIOSH, in the first 10,000, there are  
4 20 DRs in process, and three are initials.

5 And that bothered me a little bit,  
6 because I knew that we had, a while ago, we had  
7 a number of claims that were initial even though  
8 they had low numbers because they were CLL  
9 claims, that CLL originally referred to us.  
10 And so we gave them a claim number, even though  
11 DOL shouldn't have referred them to us, because  
12 CLL wasn't -- you know, chronic lymphocytic  
13 leukemia wasn't covered.

14 So, and then when the regulation  
15 changed, we -- the DOL returned those to us.  
16 And so they came back to us, and they still had  
17 their low numbers. So I was pretty confident,  
18 for a while, that we, when we'd have these low  
19 numbered initial cases, it was because they  
20 were a CLL case.

21 And I saw this slide and I said, you  
22 know, that was quite a while ago. That seems  
23 like we shouldn't have those. So I looked

**NEAL R. GROSS**

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

1 those up. Excuse me a minute.

2 Two of the cases were pulled before  
3 being completed. Either the claimant opted  
4 out of the process or died, unfortunately,  
5 before the claim was submitted. And it was  
6 closed for years, seven, eight, nine years,  
7 until a survivor either was identified or  
8 decided to pursue the claim.

9 And so it was reinitiated then, with  
10 the survivor's action, and that happened just  
11 very recently. And so those claims are now  
12 active. They never had a final dose  
13 reconstruction done. And so it's still in the  
14 initial category, but they were just recently  
15 renewed and reinstated because the survivor  
16 picked up the claim.

17 The other -- the third one was a CLL  
18 case that was activated with the rest of the CLL  
19 cases, and then it, because it was at a site  
20 where -- well it was the Fernald site. It was  
21 a claim from the Fernald site.

22 The Fernald site, we had SEC decision  
23 debate. We -- typically we don't pend claims

**NEAL R. GROSS**

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

1 when we have an SEC claim, you know, petition  
2 in front of us. But when we get close to the  
3 -- when we think we're close to the end, we'll  
4 pend the cases, and so that we're just going to  
5 finish up this SEC, we're going to finish up all  
6 the DR, or the TBD issues, and so we'll pend the  
7 claim so we just do them once.

8 Well, with Fernald, there's still  
9 some Site Profile issues still hanging on, and  
10 it was getting longer and longer, and we said,  
11 the heck with it. Let's do them the way we  
12 would do them now. When we finish the DR  
13 issues, if we have to, we'll do a Program  
14 Evaluation Report and we'll do them, rather  
15 than just have them sitting there waiting then.

16 So that's what the third one is, an  
17 initial one. So, I am -- I did -- at least for  
18 this meeting, I did pay attention to that slide.

19 Okay. These are our DOE response  
20 numbers. I do not have the comparison to last  
21 month but I could probably find them if I need  
22 to. These really look pretty good to me. We  
23 don't have any sites, I don't think, that are

**NEAL R. GROSS**

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

1 particularly problematic. And the 256 is, I  
2 think, a really pretty low number, considering  
3 how many claims we get all the time.

4 And our SEC summary table, I won't  
5 move too far into this, because LaVon has a  
6 presentation all about SECs at some point today  
7 or tonight. So we'll -- I'll let him go through  
8 that, but as -- while at one time, let's see,  
9 yes, while at one time the breakdown between 83s  
10 and -- 13s and 83.14s was pretty even.

11 That was the time when we were  
12 finishing our research on the various AWE  
13 facilities where we didn't have very many  
14 claims. We went through that and we ended up  
15 getting, adding a lot of SECs for that. And so  
16 we kind of caught up with .13s.

17 Well, we're pretty much through that  
18 process now. So the petitions from now on will  
19 probably be, for the most part, 83.13  
20 petitions. So, I think that was it. Yes, I  
21 guess it's not going to take me out of it, but  
22 I can get out of it over there.

23 So, are there any questions?

**NEAL R. GROSS**

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

1 CHAIRMAN MELIUS: Any questions for  
2 Stu? We'll let LaVon explain some of the --

3 MR. HINNEFELD: Yes, the --

4 CHAIRMAN MELIUS: -- SEC issues.  
5 Dave?

6 MEMBER KOTELCHUCK: I was just  
7 curious. I mean, you -- for administrative  
8 reasons you separate out the DR and SEC cases.

9 MR. KATZ: David, would you speak  
10 right into your mic, so that --

11 MEMBER KOTELCHUCK: Right. Is the  
12 mic on? Okay. For administrative reasons,  
13 you separate SEC and DR cases, but I've tried  
14 to look at the numbers and see, of all the cases  
15 that are submitted, of all the individuals  
16 submitting claims, whether they end up in DR or  
17 SEC, if they are accepted by DOL as having been  
18 employed over 250 days, that is that they are  
19 potential, what fraction of them are, in fact,  
20 compensated?

21 MR. HINNEFELD: Well, there might be  
22 some statistics on the DOL website that might  
23 answer that. I'm not familiar with them. The

**NEAL R. GROSS**

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

1 information that we have, I think I have a slide  
2 back here, you can see in the second major side  
3 where you have all the sub-bullets, there are  
4 some 3,351 cases for SEC Cohort, Special  
5 Exposure Cohort.

6 Those are claims that were referred to  
7 us by DOL. And while the claims were with us,  
8 an SEC was added that included, probably, those  
9 cases. I say probably because when DOL first  
10 refers the case to us we'll have a particular  
11 cancer diagnosis on it. And we will pull it  
12 based on the cancer diagnosis that they had when  
13 they sent it to us.

14 It has happened that when they go to  
15 final adjudication they take another look at  
16 the case and they have a different diagnosis.  
17 And so it may, essentially, fall off the SEC.  
18 So that is a pretty good approximation. So if  
19 you would add that number, the 3,351 to -- oh,  
20 I'm sorry, to the 10,073 --

21 MEMBER KOTELCHUCK: Oh, okay.

22 MR. HINNEFELD: -- you would have an  
23 approximation of -- but then you've got to add

**NEAL R. GROSS**

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

1 the same -- got to add it to the 35,667 also.

2 MEMBER KOTELCHUCK: Right.

3 MR. HINNEFELD: So you'd have an  
4 approximation of the fraction, the ones that  
5 got to us. Now, once an SEC Class is added, we  
6 never see any more claims from that site because  
7 the Department -- and it's an SEC cancer, the  
8 Department of Labor just pays them.

9 MEMBER KOTELCHUCK: I see.

10 MR. HINNEFELD: So the best  
11 information about how they're -- I think would  
12 be on the DOL website. I think they have some  
13 statistics about site-specific outcomes there.

14 MEMBER KOTELCHUCK: Oh, very good.  
15 I will do that. I will check that.

16 MR. HINNEFELD: Okay, my handy  
17 assistant Kato has just sent -- that was  
18 probably inappropriate, wasn't it? In Part B,  
19 according to the DOL -- let me see what I'm  
20 looking at, there have been 92,609 cases filed.  
21 And it looks like there are 42,000 cases that  
22 were paid. So that's a little less than 50  
23 percent.

**NEAL R. GROSS**

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

1 MEMBER KOTELCHUCK: Well, it's close  
2 to 50 percent, just --

3 MR. HINNEFELD: Yes. And, now that  
4 -- well Part B, though includes silicosis and  
5 --

6 MEMBER KOTELCHUCK: Beryllium.

7 MR. HINNEFELD: -- berylliosis.

8 MEMBER KOTELCHUCK: Right.

9 MR. HINNEFELD: Beryllium disease.  
10 So --

11 MEMBER KOTELCHUCK: Nevertheless,  
12 it's much larger than the number you had, than  
13 the DR number.

14 MR. HINNEFELD: It's much larger than  
15 the 28 percent that is done through dose  
16 reconstruction, yes.

17 MEMBER KOTELCHUCK: Okay, thank you.

18 CHAIRMAN MELIUS: Yes, Paul?

19 MEMBER ZIEMER: Stu, my question is  
20 on the workshop that you held, and you described  
21 the types of individuals who participated.  
22 Can you give us an idea of the actual numbers  
23 of people who participated in the --

**NEAL R. GROSS**

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

1 MR. HINNEFELD: It was about 30.

2 MEMBER ZIEMER: About 30?

3 MR. HINNEFELD: Yes. Slightly less,  
4 I think.

5 MEMBER ZIEMER: And is that covered  
6 by your budget, in terms of their travel and so  
7 on, or do --

8 MR. HINNEFELD: Yes, yes.

9 MEMBER ZIEMER: Okay.

10 MR. HINNEFELD: Yes. We pay their  
11 travel, and for certain attendees, we provide  
12 wage replacement.

13 CHAIRMAN MELIUS: Any other  
14 questions for Stu? Any of the Board Members on  
15 the phone wish to ask questions?

16 MEMBER FIELD: No, not at this time.  
17 Bill.

18 CHAIRMAN MELIUS: Okay. Yes, Henry  
19 has a question though, here.

20 MEMBER ANDERSON: Yes. Stu, you  
21 have here that you've completed 131 of the SEC,  
22 and ten of them are with the Board. Are there  
23 any that you've completed that aren't with the

**NEAL R. GROSS**

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

1 Board?

2 MR. HINNEFELD: No. Anything that  
3 we've completed has either had action taken --

4 MEMBER ANDERSON: Yes, okay.

5 MR. HINNEFELD: -- or is with the  
6 Board. There are two that we are working on --

7 MEMBER ANDERSON: Yes, right. Okay.

8 MR. HINNEFELD: -- that we have not  
9 presented to the Board yet, I think. Bomber  
10 will give the numbers later on --

11 MEMBER ANDERSON: Okay, yes.

12 MR. HINNEFELD: -- but there are some  
13 we are working on now that we've not presented  
14 to the Board, but --

15 MEMBER ANDERSON: Right.

16 MR. HINNEFELD: -- everything where  
17 we've finished an Evaluation Report, it's  
18 either in the Board or it's been -- it's with  
19 the Board or it's been dispositioned by the  
20 Board.

21 MEMBER ANDERSON: Okay. Thank you.

22 CHAIRMAN MELIUS: We'll reveal that  
23 in greater detail some time between now and

**NEAL R. GROSS**

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

1 midnight tonight. Okay. No further  
2 questions? Okay, thank you, Stu. We'll work  
3 on coming up with some more to that.

4 Okay. We'll now get an update from  
5 the Department of Labor. Frank Crawford.

6 MR. CRAWFORD: Good morning. I'm  
7 Frank Crawford, a health physicist with the  
8 Department of Labor. And let's see if we can  
9 get -- yes. Sorry.

10 Just parenthetically, it's hard to  
11 tease out the exact effect of SECs, in answer  
12 to your question. I have some slides here that  
13 give you a slightly different view of the thing,  
14 but between the CBD cases and the silicosis  
15 cases, there are so many factors floating  
16 around -- I'm sorry, that it's difficult to say  
17 exactly how many cases have been paid because  
18 of the existence of an SEC alone.

19 MEMBER KOTELCHUCK: Yes, I know. I  
20 know. And often people ask, well what fraction  
21 of the cases submitted are compensated? And I  
22 never have been able to say, other than the DR,  
23 which is about 30 percent, right? I think it's

**NEAL R. GROSS**

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

1 about 30 percent.

2 MR. CRAWFORD: Yes.

3 MEMBER KOTELCHUCK: Yes.

4 MR. CRAWFORD: Yes. Also, before we  
5 get started, you'll notice there's a  
6 discrepancy between the numbers that I am  
7 presenting and the numbers that Stu presents.  
8 There are various reasons for that. Part, it  
9 is different reporting periods, and part is  
10 definitional, in that we have a different view  
11 because Stu never sees SEC claims that are  
12 simply disposed of by DOL alone. All right.

13 Okay, we'll go to the first slide. As  
14 Ted mentioned, this is all on the website, so  
15 I'm going to hurry through some of the slides,  
16 and there are also slides that we will not see  
17 in the presentation but are generally  
18 informational, about what kinds of claims are  
19 permitted under Parts B and E and so forth, who  
20 are the survivors under both cases. But  
21 there's no point in presenting that here.

22 By our count, then, that is DOL, we  
23 have about 175,000 cases filed, and almost 11

**NEAL R. GROSS**

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

1 billion in total compensation paid to date.  
2 This is where the numbers start differing a  
3 little.

4 We show that 43,000 cases,  
5 approximately, have been referred to NIOSH for  
6 dose reconstruction, and approximately 41,000  
7 have come back, leaving NIOSH with about 2,000  
8 cases. As Stu has told you, really, it's  
9 probably 1200 cases, but we'll have to live with  
10 those discrepancies.

11 We show a slightly higher fraction  
12 approved with DRs, just a little bit over a  
13 third, and I don't know how to account for that  
14 except perhaps, again, reporting periods. And  
15 also, we're only talking about final decisions,  
16 which is a distinction, perhaps, that may not  
17 be in Stu's statistics. I don't know.

18 So we have 35,000 cases returned with  
19 a DR, and 28,000 now have a final decision as  
20 well, and that's where we get, under that, our  
21 35 percent approval rate. This pie chart is  
22 maybe a little hard to read, but I'm sure on the  
23 website it'll be much clearer.

**NEAL R. GROSS**

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

1           The only thing I'd like to point out  
2 here is that the other category probably does  
3 include silicosis and CBD, and it's -- there may  
4 be other kinds of failed claims, where they  
5 weren't federal workers as it turned out, or  
6 didn't qualify for some other reason, I'm not  
7 sure. And that's a little bit opaque for us.

8           In terms of SEC cases, we see that it's  
9 almost 50/50 between cases not referred to  
10 NIOSH and cases referred to NIOSH. It's 12  
11 percent versus 14. So with that, we have some  
12 evidence of what's going on, but again, it's  
13 very hard to tease out exact numbers. Here we  
14 go.

15           In this slide, we show slightly over  
16 50 percent, what you might call a total approval  
17 rate, that is, with SEC cases taken into account  
18 with simply dose reconstruction cases.

19           Now, in this next slide, we see that  
20 the accepted SEC cases far outnumber the  
21 accepted DR cases by more than 2 to 1. That's  
22 21,700 versus about 9,200 DR cases.

23           There's also one other interesting

**NEAL R. GROSS**

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

1 stat here, which is the third bullet point,  
2 cases accepted based on SEC status, and with a  
3 PoC greater than 50 percent. That's a  
4 relatively small number, 700 cases.

5 And remember, on a previous slide, we  
6 saw that 12 percent of cases were referred to  
7 NIOSH and had an SEC. So of those cases, which  
8 must be a substantial number, only 700 returned  
9 with a positive result, you might say.

10 Hard to interpret, but my best guess  
11 is that SECs sweep up everybody at a site, of  
12 course, I mean typically -- not all sites, but  
13 typically, and many of those people would not  
14 have had significant exposure.

15 So if they're accepted first by an SEC  
16 and then ask for medical benefits, and  
17 therefore a dose reconstruction, they're less  
18 likely to be approved than somebody who has gone  
19 the other way, through the dose reconstruction  
20 process and has had significant exposure. So  
21 I think that's what's going on there, but --

22 MEMBER RICHARDSON: I'm sorry. I'm  
23 a little confused.

**NEAL R. GROSS**

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

1 MR. CRAWFORD: Right.

2 MEMBER RICHARDSON: You're saying  
3 that half the claimants who are covered under  
4 an SEC are nonetheless having a dose  
5 reconstruction by NIOSH?

6 MR. CRAWFORD: Yes, but that could be  
7 because they had the dose reconstruction first  
8 and then the SEC was approved second, or it  
9 could be because they're SEC Class members and  
10 they requested a dose reconstruction in order  
11 to get medical benefits. Stu, you can help me  
12 out.

13 MR. HINNEFELD: Just one other point,  
14 the medical benefits is for a cancer that's not  
15 an SEC cancer. So in other words, the claimant  
16 would have more than one cancer. One would be  
17 an SEC cancer, and that would put them into the  
18 SEC and they'd be compensated through SEC.

19 With another non-SEC cancer, their  
20 successful claim for the SEC cancer will not pay  
21 for medical benefits for that other cancer. So  
22 they have to have a successful dose  
23 reconstruction to have medical benefits paid

**NEAL R. GROSS**

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

1 for the non-SEC cancer.

2 MEMBER RICHARDSON: So in this case,  
3 that number refers to the Probability of  
4 Causation under a calculation where the target  
5 organ may not have been the primary -- may not  
6 have been an SEC cancer?

7 MR. HINNEFELD: Correct. It would  
8 not have been an SEC cancer.

9 MR. CRAWFORD: But both are evaluated  
10 for the PoC. In other words, if a person had  
11 a lung cancer and a prostate cancer, they  
12 qualify for the SEC solely on the lung cancer,  
13 of course. But if they ask for medical  
14 benefits for the prostate cancer, then when the  
15 case goes back to NIOSH for a DR, both cancers  
16 are evaluated de novo, as if there had been no  
17 SEC.

18 MEMBER RICHARDSON: I'm still  
19 confused why you would do that. Isn't that  
20 just a lot of time spent by NIOSH to do a dose  
21 reconstruction for something which is going to  
22 be compensated regardless?

23 MR. CRAWFORD: Well compensated

**NEAL R. GROSS**

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

1 monetarily, but if the prostate cancer, for  
2 instance, was treated at great expense --

3 MEMBER RICHARDSON: No, but the lung  
4 cancer.

5 MR. CRAWFORD: Oh, the lung cancer is  
6 covered by the SEC, and that's --

7 MEMBER RICHARDSON: Yes.

8 MR. CRAWFORD: Yes.

9 MEMBER RICHARDSON: But you're  
10 saying that the calculation is done,  
11 nonetheless?

12 MR. CRAWFORD: Using both cancers to  
13 be -- I mean, it's only fair, essentially. If  
14 there were no SEC, that person would be  
15 evaluated on the basis of both cancers.

16 MR. KATZ: The reason for that is  
17 because multiple cancers, there's a  
18 statistical treatment that's given -- it's  
19 advantageous, if you have multiple cancers, to  
20 have all those considered when they do the PoC.

21 So that's why they reconstruct the  
22 doses for all the cancers, including the one  
23 that's covered by the SEC. Because for each

**NEAL R. GROSS**

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

1 primary cancer, there's a statistical  
2 treatment that combines those in giving you a  
3 total PoC.

4 MEMBER RICHARDSON: And that's going  
5 to help them with medical compensation?

6 MR. KATZ: That'll help them with the  
7 cancer that's not covered.

8 MEMBER RICHARDSON: For the medical  
9 compensation of the --

10 MR. KATZ: Exactly. Exactly.

11 MEMBER RICHARDSON: -- non-covered  
12 cancer.

13 MR. KATZ: Exactly. So that's just  
14 beneficial for them.

15 MR. CRAWFORD: Then I think we can  
16 leave this slide. No surprises here. Our top  
17 four work sites still generating new Part B  
18 cases are Savannah River, Hanford, Y-12 and  
19 K-25.

20 This slide, which is perhaps a little  
21 difficult to read, but shows basically two  
22 things of interest, I think. One is that DOE  
23 site cases are slowly declining, in general,

**NEAL R. GROSS**

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

1 and that AWE cases are slowly increasing.

2 Part of that is an artifact, I think,  
3 because we started with the DOE sites, and it  
4 took a long time to gather in all the AWE site  
5 information and act upon it.

6 Stu has already mentioned outreach  
7 events, which DOL, of course, participates in  
8 and sponsors, through the Joint Outreach Task  
9 Group. This slide is rather small, but -- has  
10 small text, but these are some of our recent  
11 meetings. I don't think there's any point in  
12 going through them unless a Board Member cares  
13 to ask. They're all on the website. And as  
14 you can see, there are quite a few meetings.

15 And we're now into FY15 of course, and  
16 here's the combined slide for both 14 and 15.  
17 We had three meetings in October alone. And  
18 our next outreach meetings, we see one in Los  
19 Alamos. Well, one, but it's on three dates in  
20 November. And the IBEW Union Hall meeting in  
21 Albuquerque on November 13th and 20th.

22 Now on the Santa Susana site, which is  
23 being discussed later today, just as some

**NEAL R. GROSS**

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

1 background information, we already have  
2 combined B and E claims -- or cases, rather,  
3 1,000, approximately, of which NIOSH has  
4 already completed a DR of 240 of them.

5 We have final decisions on 500 such  
6 cases, which is an interesting thing, but I'm  
7 not sure of the discrepancy between those two  
8 numbers. But as it -- okay, earlier SECs,  
9 right. And then we have 200 Part B approvals,  
10 and 200 Part E approvals.

11 And that's the last slide, I think,  
12 that needs to be presented. The rest is, as I  
13 said, general information about claim-filing  
14 and qualifications. Any questions?

15 CHAIRMAN MELIUS: Any questions for  
16 Frank? Anybody on the phone have questions?  
17 Okay. Thank you. We'll now get an update from  
18 Department of Energy. I'm not sure -- just  
19 you, Greg, or how are we doing this?

20 MR. LEWIS: It's got to be me.

21 CHAIRMAN MELIUS: Oh, okay.

22 MR. LEWIS: You're stuck with me.

23 CHAIRMAN MELIUS: Put him on the

**NEAL R. GROSS**

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

1 spot, huh?

2 MR. LEWIS: Yes. All right, good  
3 morning, everyone. I'm Greg Lewis with the  
4 Department of Energy. And of course, Pat  
5 Worthington and Isaf Al-Nabulsi are also here  
6 with me. I guess while Stu is getting the  
7 slides up -- I was going to -- oh, I guess there  
8 again. Thank you.

9 All right. So the DOE mission is to  
10 work on behalf of program claimants to ensure  
11 that all available worker and facility records  
12 and data are provided to DOL, NIOSH and the  
13 Board. So basically we provide records.  
14 That's our role in the program.

15 We do that in primarily three ways.  
16 The first is with respect to individual records  
17 request. So we respond to employment  
18 verification requests from the Department of  
19 Labor, we -- and then I guess the second is to  
20 respond to large-scale records requests, like  
21 the Special Exposure Cohort projects. And  
22 then the third is to research covered  
23 facilities, particularly with respect to AWEs,

**NEAL R. GROSS**

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

1 are primarily where we do the research.

2 So the most important, you know, front  
3 lines that we have in terms of responding to  
4 these records requests are, you know, with the  
5 POCs. You know, some of you all who took the  
6 tour at the ETEC facility yesterday yet Phil  
7 Rutherford who was our primary POC.

8 He's still involved, but the  
9 contract, of course, has transferred over to  
10 North Wind, so those folks are going to be  
11 stepping up and doing the new remediation  
12 responses, where Phil and his team are still  
13 going to be handling, you know, the legacy  
14 workers, so the Rocketdyne, the Atomics  
15 International, those folks, they're going to  
16 still be handling.

17 So as you saw yesterday, Phil has been  
18 on-site for 25 years. So, you know, although  
19 the site goes back to the 50s, you know, he's  
20 been there for, not the whole the time but, you  
21 know, 25 years. He's been there quite a while.  
22 He understands the site. He knows the history,  
23 you know, as well as anyone does.

**NEAL R. GROSS**

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

1           He knows what was done, where it was  
2 done, what these folks might have been exposed  
3 to, and where the records are, most  
4 importantly. So he's -- him and his team are  
5 the ones that pull those responses together.

6           So with the individual records  
7 requests, we do about 16,000 per year. As  
8 Chris Crawford alluded to, it has gone down  
9 slightly over recent years, but it's still  
10 roughly about 16,000. And it's split between  
11 the employment verifications, the NIOSH  
12 requests and the Department of Labor document  
13 acquisition requests, or DARs.

14           And as you know, you know, claimants  
15 often worked at multiple sites. They worked in  
16 multiple departments, divisions, held multiple  
17 job titles, particularly if they were career  
18 employees over 30 years. They might have been  
19 in a number of different locations around the  
20 site, job titles, things like that.

21           So often we have to go to a number of  
22 different locations to pull together those  
23 records, both -- you know, particularly for

**NEAL R. GROSS**

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

1 historical workers, we might have microfilm,  
2 microfiche. We might have to go to multiple  
3 databases, you know, because on some of these  
4 sites as different contractors came in, they  
5 brought their own systems, their own databases,  
6 their own ways of doing things.

7 So, you know, at any given site, we  
8 might have to go to 20 to 30 different locations  
9 to pull together an employee's records. You  
10 know, and of course, these would be for the  
11 long-term career employees.

12 You know, again, we might have to go  
13 to 20 to 30 places, of many different types of  
14 records. You know, and unfortunately, this is  
15 not always true for the subcontractors. For  
16 the subcontractors, we check everywhere that we  
17 can but, you know, for a short-term  
18 construction contractor, you know, we might not  
19 have anything. So we try to be as creative as  
20 possible finding those records.

21 So we will look at gate logs when we  
22 have them, sign-in sheets, badging records.  
23 If they were on-site and went to medical, or

**NEAL R. GROSS**

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

1 happened to be badged for dosimetry, we'll  
2 check those type of locations. But often times  
3 we won't have a formal employee, you know, human  
4 resources employment record for those folks, so  
5 we have to be as creative as we can.

6 So for the large-scale records  
7 research projects, you know, those are  
8 incredibly time consuming, as you know, and can  
9 be very difficult. They can take years. They  
10 can cost us quite a bit of money. You know, and  
11 we work with you all and with NIOSH and SC&A to  
12 try to make sure that our resources are in place  
13 to be able to support these records research  
14 efforts.

15 Currently, we're -- these are some of  
16 the sites that we're working on, although we're  
17 getting requests for many more, whether it be  
18 for an SEC project or for a Site Profile update,  
19 you know.

20 And those listed there, some are, you  
21 know, just starting. Most are kind of in the  
22 tail end, or we're kind of doing the final stage  
23 of the research but we are supporting NIOSH and

**NEAL R. GROSS**

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

1 the contractors on those sites.

2 Then of course, I already mentioned  
3 that we provide site tours when requested. So  
4 yesterday we took Members of the Board, NIOSH  
5 and the contractors over to the Santa Susana  
6 field lab up by the Simi Valley and drove them  
7 around the site, took them into quite a few  
8 buildings, and for more of the buildings,  
9 showed where they used to be and what used to  
10 happen.

11 I think the numbers, there used to be  
12 200 and something buildings there, and I think  
13 they mentioned there's somewhere around 20  
14 buildings there that used to do DOE work.

15 So there's very little left compared  
16 to what they used to do, but we were able to show  
17 the group the layout, how the site is  
18 configured, the difference between Area IV,  
19 which is the facility that's covered by this  
20 program, and then Areas I, II and III, which  
21 were NASA and Air Force sites, which are not  
22 covered.

23 So we were kind of able to show the

**NEAL R. GROSS**

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

1 layout, some of the buildings, what different  
2 processes were done and what's there now. So  
3 hopefully it was helpful to you all.

4 And then of course, document reviews,  
5 due to, you know, security and classification  
6 concerns, there are, you know, certain sets of  
7 documents that we have to review.

8 We've committed to do this. We have  
9 a security plan that kind of lays out what we  
10 do and how we do it. The average turnaround  
11 time for documents reviewed by headquarters is  
12 about eight working days.

13 It's not always that quick out at the  
14 sites because they're not always able to juggle  
15 their resources and their staff to accommodate  
16 the reviews, and also because the headquarters  
17 reviews are typically NIOSH-drafted reports or  
18 Board-drafted reports and they're shorter,  
19 whereas out at the sites we could be talking  
20 about hundreds of documents that are thousands  
21 of pages so it can be quite a workload for the  
22 sites.

23 We -- you know, when we get a

**NEAL R. GROSS**

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

1 large-scale request, we will try to work with,  
2 you know, the requester or NIOSH, the Board,  
3 whoever it is, to determine at least a path  
4 forward to completion, what the priorities are,  
5 what we should work on first.

6 And we'll provide a time frame. And  
7 if that time frame is not workable for the Board  
8 or NIOSH, we can bring in assistance from  
9 headquarters sometimes, or try to work out  
10 alternate pathways.

11 And in fact, with -- recently with  
12 Savannah River, there was a very large request  
13 for declassification, and given the staff and  
14 resources at Savannah River, they were going to  
15 struggle to do that in the time frame that was  
16 needed on your end, so we've sent a large group  
17 of those documents up to DOE headquarters in  
18 Germantown.

19 And so folks can come in and work on  
20 them there. So as they're being reviewed and  
21 declassified, there will be a collection at  
22 headquarters that can be used to help draft the  
23 reports. So things like that, we do try to come

**NEAL R. GROSS**

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

1 up with solutions that meet your all's needs.

2 And then facility research, you know,  
3 and that's kind of the smallest of our  
4 responsibilities in terms of workload, but it  
5 is extremely important, particularly with  
6 respect to the AWEs.

7 When questions are raised, and often  
8 those questions can come from NIOSH research  
9 into either a Site Profile or SEC, they might,  
10 you know, come across documents that suggest  
11 the facility should be covered for an  
12 additional time period, or they can't find  
13 evidence that work was done during some parts  
14 of the covered time period. We'll work  
15 together with DOL to pull together documents  
16 and do some research into those facilities.

17 And then I just want to mention the  
18 SERT. I think I've mentioned it before, but  
19 again, this was our big accomplishment last  
20 year, bringing this on line. SERT is the  
21 Secure Electronic Records Transfer System.

22 It's an electronic system that DOL,  
23 NIOSH and DOE are all a part of. It allows us

**NEAL R. GROSS**

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

1 to send requests for documents, and then, you  
2 know, upload the responses and send them back  
3 instantaneously.

4 So it's two-factor authentication,  
5 which is basically a complicated way of saying  
6 it's the highest standard in terms of the  
7 protection of private information. I know  
8 that, you know, there's been many high-profile  
9 hacking incidents and data releases and things  
10 like that, so two-factor authentication is the,  
11 you know, is sort of the gold standard for  
12 protecting information.

13 So it allows us to quickly and  
14 efficiently send and receive information with  
15 these groups. It has cut down the time to  
16 respond by probably about ten days or so for  
17 each claim. And it also allows all of the  
18 different agencies to track and manage their  
19 responses and requests, you know, cohesively,  
20 so everyone has the same numbers.

21 And then both Chris and Stu have  
22 mentioned outreach. Again, we do participate  
23 in the Joint Outreach Task Group meetings. And

**NEAL R. GROSS**

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

1 we've had quite a few meetings this fall and  
2 we'll be having a few more in the winter and  
3 spring.

4 And then I also want to mention the  
5 other program that we work on at DOE that isn't  
6 directly tied to EEOICPA, but it, you know, I  
7 kind of consider it a sister program. It's our  
8 Former Worker Medical Screening Program.

9 We provide free screenings to all  
10 federal contractor and subcontractor workers  
11 at DOE sites. Again, that's not the AWEs, but  
12 at all DOE sites, you're eligible for a free  
13 screening. We work to provide you with that  
14 screening close to your house.

15 And we have specially trained  
16 occupational medical physicians that are  
17 familiar with the DOE sites, that know the  
18 hazards that you might have been exposed to and  
19 are able to custom tailor a screening to your  
20 particular situation. And I've got the  
21 website up on there for anyone who wants more  
22 information.

23 And then, of course, for this area,

**NEAL R. GROSS**

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

1 the two programs that would cover the Los  
2 Angeles area are our Supplemental Screening  
3 Program for all production workers and our  
4 Building Trades National Medical Screening  
5 Program for the construction workers.

6 And with that, questions?

7 CHAIRMAN MELIUS: Paul, go ahead.

8 MEMBER ZIEMER: This is not really a  
9 question, but I just wanted to highlight the  
10 tour that DOE hosted of the Santa Susana Field  
11 Lab yesterday. Excellent tour, and I think we  
12 owe Dr. Worthington and Greg and the staff a  
13 word of thanks for really an excellent tour, one  
14 of the best ones we've had.

15 MR. LEWIS: Thank you. And we know  
16 these tours are important, so any time -- you  
17 know, we're always happy to work with our sites  
18 to facilitate these tours for you.

19 MEMBER ZIEMER: And Isaf, too, is  
20 here. So include all of the DOE folks that are  
21 here.

22 CHAIRMAN MELIUS: Any other -- Brad,  
23 you don't have a -- usually you have something

**NEAL R. GROSS**

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

1 you want to pin Greg down for.

2 MR. LEWIS: Taking it easy on us.

3 CHAIRMAN MELIUS: We're doing fine  
4 now. We do appreciate, both the tour -- I  
5 heard, as Paul said, rave reviews this morning  
6 while eating breakfast, from people that were  
7 on the tour, but also I think everything's been  
8 going well with the sites.

9 I think the -- at least my impression  
10 of it seems to be that we have a number of sort  
11 of special focus now. That list you put up,  
12 somehow I feel that I'm not sure we're really  
13 fading away in terms of the records requests  
14 from some of those sites, Savannah River and  
15 Idaho and --

16 MR. LEWIS: No, well they seem to be  
17 coming fast and furious.

18 CHAIRMAN MELIUS: -- Hanford to do  
19 things, get turned over. But I think, again,  
20 that's good. We need to get caught up on  
21 everything, so good. But we appreciate the  
22 assistance and cooperation and so forth with  
23 the, just that. Anybody else -- any of the

**NEAL R. GROSS**

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

1 Board Members on the phone have questions?

2 Okay.

3 MR. LEWIS: Thank you.

4 CHAIRMAN MELIUS: Yes. We have a  
5 mellow Board today. Yes. It's the barbed  
6 wire surrounding us. Right. Oh I see, we're  
7 saving it all up for the last presentation here.

8 Okay. We'll now get an update from  
9 our Procedures Subcommittee, and their review  
10 activities, and particularly one Program  
11 Evaluation Report, Construction Trades  
12 Workers. So I'm not quite sure how this is  
13 going to work, but --

14 MEMBER MUNN: I'm not sure either.

15 CHAIRMAN MELIUS: Okay.

16 MEMBER MUNN: But all right. Thank  
17 you. You're all very familiar, I think, with  
18 this material. We've certainly talked at  
19 length, both here and in Procedures  
20 Subcommittee, with respect to the construction  
21 trade workers and how we view their dose  
22 reconstructions.

23 We start with the first slide, which

**NEAL R. GROSS**

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

1 is one you're quite familiar with. I don't  
2 think we need to go over this in great detail.  
3 This is just your update with respect to what  
4 the audit process for the DERs actually is.

5 It consists of five different  
6 subtasks, and the first of which is having our  
7 contractor evaluate NIOSH's assessment of what  
8 the issues are. They take a look at specific  
9 methods that NIOSH has used, and they take a  
10 look at the stated approach.

11 Generally we see those three subtasks  
12 in the first initial report, and Subtasks 4 and  
13 5, which are fairly time-consuming, not  
14 unexpectedly, sometimes come afterward.

15 We started this process for the  
16 construction trade workers back in 2004. At  
17 that time, NIOSH brought to the fore the fact  
18 that there might be some construction trade  
19 workers at various DOE sites that hadn't been  
20 monitored but had been exposed.

21 At that time there was a considerable  
22 discussion with respect to who would be covered  
23 by the designation construction trade workers.

**NEAL R. GROSS**

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

1 We specifically included laborers and  
2 mechanics, masons, carpenters, electricians,  
3 painters, pipefitters, boiler-makers,  
4 millwrights, sheetmetal workers, iron workers,  
5 insulators. And that's just a partial list.  
6 That's not all-inclusive.

7 In order to make sure that we had the  
8 appropriate process in addressing these  
9 issues, we were very pleased to have NIOSH  
10 provide for us OTIB-52, their first OTIB with  
11 respect to the parameters that needed to be  
12 handled when we were going to look at  
13 construction trade worker issues.

14 That was issued on 2006, and that was  
15 the founding document which we have used since  
16 then in order to address these issues  
17 surrounding this particular group of workers.

18 I think I went too far. No, I didn't.  
19 All right. At the time that this model was  
20 provided for us, PER-14 was issued to  
21 reevaluate the claims that had already been  
22 done at ten sites, where external coworker  
23 models had already been looked at.

**NEAL R. GROSS**

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

1           Those are the ten sites; they are  
2 Hanford, PNNL, Kansas City, LANL, Pantex,  
3 Portsmouth, Savannah River, Weldon Spring and  
4 Oak Ridge Labs, Y-12.

5           Those were not the only sites, of  
6 course. There were four other sites for whom  
7 coworker studies had been published prior to  
8 the issuance of OTIB-52 in 2006. Those claims  
9 had already been reevaluated, however, under  
10 other PERs.

11           You see the sites: Paducah, PER-13,  
12 Rocky Flats, PER-21, Mallinckrodt, PER-15 and  
13 K-12, PER-11. So because those had already  
14 been evaluated by PERs, those were not included  
15 in the ten that were covered by PER-14.

16           The timeline is fairly  
17 straightforward. I think we covered that  
18 reasonably well. In 2007 was when PER-14 was  
19 issued first, and it's been under evaluation of  
20 one sort or another since then. In 2012, SC&A  
21 had its draft review of the entire PER, and in  
22 July of that year their six findings were  
23 discussed at length, and eventually, just

**NEAL R. GROSS**

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

1 recently this year, all were resolved.

2 Our Subtask 1 issues, assessing the  
3 circumstances that necessitated the need for  
4 the PER to begin with. You'll recall that's  
5 the basis for Subtask 1 from our first slide.

6 During facility modifications, we  
7 might have had exposed construction trade  
8 workers who hadn't been monitored. The  
9 exposures might be different from other  
10 radiation workers, and the assignment of  
11 coworkers to unmonitored construction trade  
12 workers needed to be claimant-favorable.

13 The empirical data ratios were  
14 developed from both external and internal  
15 doses, by monitored workers to all monitored  
16 workers, using data from seven major DOE sites,  
17 which are listed there. The results were the  
18 basis for the OTIB-52 guidance.

19 Subtask 1 focused on both external  
20 dose, using -- deriving deep-dose coworker  
21 adjustment factors of 1.4 from the empirical  
22 data that was available. A shallow dose was  
23 bounded by the workers' doses, by the AM

**NEAL R. GROSS**

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

1 workers' doses, and the 95th percentile of  
2 coworker data could be used without having to  
3 apply an adjustment factor, for the shallow  
4 dose only.

5 In the internal dose, only the Hanford  
6 coworker intakes need be multiplied by a factor  
7 of 2. For all the other sites, the internal  
8 dose was going to be assessed using the same  
9 method that's applied to all other workers.

10 I apologize for these slides where we  
11 give you the finding information. You know, we  
12 always have the same process when we are  
13 presenting PER information to you.

14 We want you to be able to see the  
15 finding and the approximate solution -- and  
16 resolution to that finding at the same time, but  
17 if we put each one of these on a different slide,  
18 then I end up having 75 slides here, and I don't  
19 think you want that any more than I do.

20 So I'm going to have to ask you to bear  
21 with us with respect to the way we present these  
22 findings. It seems to have worked well in the  
23 past. If you don't find that amenable to your

**NEAL R. GROSS**

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

1 needs now, please let us know.

2 We're hoping that providing these  
3 slides to you in advance gives you an  
4 opportunity to read through this at your  
5 leisure, and making them available to the  
6 public makes it possible, we hope, for them to  
7 be able to address that in the same way.

8 But if you find this onerous for any  
9 reason, please let me know what your desires are  
10 with respect to presentation to you.

11 That being said, Subtask 1 findings,  
12 of which we have four shown here. One, two and  
13 three were conditional. Number 4 is a true  
14 finding. These have to do with the deep-dose  
15 adjustment factor of 1.4.

16 The inclusion of the construction  
17 trade workers with all monitored workers might  
18 obscure the dose differences, and a shallow  
19 dose adjustment factor may be required if NIOSH  
20 failed to adjust for the construction trade  
21 workers' shallow doses.

22 And DR guidance in OTIB-52 for  
23 internal dose says the internal dose should be

**NEAL R. GROSS**

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

1 determined using the same method as is used for  
2 all the other workers in the absence of internal  
3 monitoring data and coworker data. It's  
4 unclear what was meant by that recommendation.

5 So these are the types of things that  
6 we debate at considerable length in the  
7 Subcommittee proceedings. If you have any  
8 question about these that we can't answer for  
9 you, please do -- I refer you to the  
10 Subcommittee's transcripts, which give you the  
11 detailed information about the discussions  
12 that were had with regard to them.

13 A conditional finding, as the  
14 footnote indicates, it's just indicating that  
15 SC&A didn't have access to the original dose  
16 data, and would -- didn't know if the data that  
17 they had was all completely accurate. And it  
18 was established for efficiency purposes, so  
19 that we could have the issue in front of us, even  
20 though there was some question about whether it  
21 was really an issue or not.

22 CHAIRMAN MELIUS: Excuse me, Wanda.

23 MEMBER MUNN: Yes.

**NEAL R. GROSS**

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

1                   CHAIRMAN MELIUS:     I think David  
2 Richardson had a question.

3                   MEMBER MUNN:    Yes, David?

4                   MEMBER RICHARDSON:   Wanda, if -- just  
5 help me understand the first Subtask 1, the  
6 problem was laid out that the construction  
7 trade workers might have been exposed but not  
8 monitored, and their exposures might have been  
9 different from monitored radiation workers.

10                  MEMBER MUNN:    Yes.

11                  MEMBER RICHARDSON:   And I thought it  
12 was useful, what -- you took one step towards  
13 that which was to say that there was some  
14 monitored construction trade workers, and you  
15 compared them to the monitored radiation  
16 workers.

17                  MEMBER MUNN:    Yes.

18                  MEMBER RICHARDSON:   But then it opens  
19 the question, are the unmonitored construction  
20 trade workers like the monitored construction  
21 trade workers?    How did you answer that  
22 question?

23                  MEMBER MUNN:    Do we have one of our DR

**NEAL R. GROSS**

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

1 experts who had addressed this issue for us?

2 DR. NETON: We have the expert.

3 MEMBER MUNN: There he is.

4 DR. NETON: I'm sorry. That wasn't  
5 done. That comparison was taken at the face  
6 value. If construction trade workers had a  
7 higher, on average, dose than the regular  
8 workers, the adjustment was applied without any  
9 correction at all, or any evaluation of what the  
10 status of the unmonitored workers actually was.

11 MEMBER RICHARDSON: Because that --  
12 it's -- I mean, I -- to me, I mean, I've felt  
13 some kind of struggle with the same problem, and  
14 I think what you've done is extremely valuable.

15 It's -- the counter-argument that  
16 I've made in my head is that there are people  
17 who -- I guess part of this gets to the  
18 definition of a construction worker, there are  
19 people at many of these sites who hold jobs with  
20 titles like painter or pipefitter, who were  
21 monitored. And yet they may have been  
22 employees of the prime contractor, and they  
23 were monitored for that reason.

**NEAL R. GROSS**

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

1           And then there were a lot of people who  
2 we often conceptualize as construction  
3 workers, who were employed as subcontractors  
4 doing construction work, and they were not  
5 monitored.

6           And whether somebody who has a job  
7 title of painter or pipefitter or so on, who  
8 worked for these subcontractors and falls into  
9 this large group of unmonitored workers who  
10 were doing the same sort of tasks and facing the  
11 same sort of occupational hazards as the  
12 monitored workers has been an open question in  
13 my mind.

14           DR. NETON: Yes. That's a really  
15 tough question. I think we're maybe going to  
16 get into that a little bit later when we deal  
17 with the coworker model and sufficient accuracy  
18 and how that all plays out. There's an  
19 implementation guide that we have in draft form  
20 that we're going to discuss at a later session  
21 this morning.

22           This TIB-52 was our very, very early  
23 attempt -- I think this document was issued in

**NEAL R. GROSS**

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

1 2006, of trying to address these types of issues  
2 that you're bringing up. And I admit that it's  
3 somewhat -- crude's probably not the right word  
4 but, you know --

5 MEMBER RICHARDSON: But it's --

6 DR. NETON: -- used the data that we  
7 had available.

8 MEMBER RICHARDSON: So it's  
9 leveraging the assumption that the  
10 construction workers who were monitored are a  
11 simple random sample of all construction  
12 workers --

13 DR. NETON: Right.

14 MEMBER RICHARDSON: -- and that you  
15 can make the extrapolation from these data to  
16 the unmonitored --

17 DR. NETON: Yes.

18 MEMBER RICHARDSON: I guess that's  
19 the only thing. It's just to be explicit on  
20 that.

21 DR. NETON: Yes, exactly. Yes.

22 CHAIRMAN MELIUS: Can I just add -- I  
23 think we're going to be coming back to this

**NEAL R. GROSS**

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

1 issue, as Jim described in his presentation,  
2 later today, because I think we're sort of  
3 re-looking at the whole coworker issue.

4 And plus, I think we better  
5 understand, maybe, the -- how the variability  
6 between sites and these issues and also the lack  
7 of good information on which construction  
8 worker fell into which category, because they  
9 all come out of the same union, they often could  
10 have been an employee of the prime contractor  
11 and then also, before or after that worked for  
12 other subcontractors.

13 I mean, it's just a very complicated  
14 picture to do, and I think we're going to have  
15 to look at what information's available and  
16 what's the best way to do that.

17 And I suspect it's going to be on a  
18 site by site basis, but I think we're going to  
19 have to sort of -- I think if we can come to grips  
20 with the, sort of the coworker model issue and  
21 what the criteria ought to be for evaluating  
22 that, I think we'll make progress on this.

23 Wanda and I went back and forth a

**NEAL R. GROSS**

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

1 little bit on what would -- what to present  
2 today, in terms of this, and I think the focus  
3 is going to be, you know, what I'm presenting  
4 is, there were a number of other specific  
5 findings as part of this review, that I think  
6 are relevant, aside from the coworker issue,  
7 which we'll be coming back to.

8 MEMBER MUNN: Subtask 2 was assessing  
9 methods and corrective actions. The OTIB  
10 requires multiplying external coworker dose by  
11 1.4 for the construction trade workers and at  
12 Hanford, multiplying by 2. But the claims at  
13 other sites where the coworker studies  
14 externally were issued prior to 2006 had to be  
15 reevaluated.

16 Identifying all the workers that had  
17 been exposed as a member of the construction  
18 trades, NIOSH went through NOCTS and all the  
19 original DR reports. They used a 31 word key  
20 search, and they identified 977 claims that  
21 might be potentially affected.

22 They reviewed the list of sites when  
23 they established the coworker models, and used

**NEAL R. GROSS**

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

1 the key word list, determining that their  
2 screening methods were going to be adequately  
3 inclusive and complete.

4 SC&A didn't have any findings under  
5 our Subtask 2 review, so we'll take a look at  
6 Subtask 3, evaluating the approach for  
7 identifying the number of DRs that were going  
8 to require reevaluation.

9 To check to see if the 977 potentially  
10 affected claimants were going to need a  
11 reworked DR, NIOSH had applied the screening  
12 criteria of confirming that a claim was a  
13 construction trade worker, because the key word  
14 search doesn't always do that appropriately, to  
15 verify that the external coworker dose, or in  
16 the Hanford case, the internal dose, was  
17 assigned in the original dose reconstruction.  
18 To screen the claims based on the ability to  
19 raise a PoC that was equal or greater than 45  
20 percent, to ensure that 30 IREPs were  
21 performed, and that would automatically be  
22 triggered by an original PoC of 36.8 or 29.0  
23 from Hanford, any claims with PoCs less than the

**NEAL R. GROSS**

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

1 trigger value, to determine whether any other  
2 PERs might increase that dose.

3 So under Subtask 3, we had two  
4 findings, one of which was conditional. The  
5 first of those findings, which was Number 5 for  
6 these purposes -- remember, we had four under  
7 Subtask 1, Number 5 was the assertion that the  
8 PER was incomplete and that the extent of the  
9 screening and evaluation of the universe of  
10 those 977 claims was not fully discussed in the  
11 PER.

12 So they asked -- indicated they didn't  
13 feel NIOSH had identified the actual number  
14 that were eligible for PER dose adjustment  
15 factors. We did resolve that. We looked at it  
16 closely, and the criteria that would -- they'd  
17 used to request, that NIOSH would use to  
18 request, was shown there with the 977 totals,  
19 and how those were broken down.

20 It was acceptable with the  
21 explanation that was given. And the  
22 conditional, which we had indicated was Number  
23 6, would -- may be highly restrictive in

**NEAL R. GROSS**

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

1 addressing the problems of these unmonitored  
2 workers and the uncertainty of the fate of the  
3 claims that had been adjudicated before the  
4 issuance of a coworker model.

5 I read that badly, but you recognize,  
6 I trust, what the conditional finding was  
7 concerned with. It's one of the issues that  
8 we, again, discussed at considerable length but  
9 were able to resolve satisfactorily.

10 Subtask 4 gets to be the sticky wicket  
11 where you get into real audits. Referencing a  
12 finding that we discussed earlier, Finding 5,  
13 in respect to the possible, potential failure  
14 to identify that adequate number of claims out  
15 of the 977, it was determined that regardless  
16 of what the number was, SC&A felt that they  
17 should have one case from each one of the ten  
18 sites that had been impacted by the PER.

19 And again, those sites are listed  
20 there. They're the same, I believe, as the  
21 ones you saw listed in Subtask 1.

22 Timeline for this crucial Subtask 4  
23 began in 2012 when SC&A was asked to review one

**NEAL R. GROSS**

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

1 case from each of those 10. In addition to  
2 that, we also asked them to evaluate the site  
3 TBDs and workbooks that were applicable to what  
4 we were doing here, to make sure that they had  
5 been properly updated and that they fit the  
6 recommendations for construction trade  
7 workers.

8 So during their review, the  
9 contractor determined that there were no  
10 reworked cases at four of the ten sites, and so  
11 for those ten -- for those four sites, Kansas  
12 City, Pantex, PNNL and Weldon Spring, they were  
13 going to need to be limited to just verification  
14 that the TBDs and workbooks had been updated.  
15 They didn't actually have cases to look at.

16 In 2013 we received SC&A's draft of  
17 their subtask for review, and later that year,  
18 we had, at Subcommittee meetings, discussed  
19 their findings and were able to resolve all of  
20 the findings from them.

21 Here is Subtask 4's review of the  
22 sample sets, the DRs that were looked at by the  
23 PER. Out of the 977, as you can see in the first

**NEAL R. GROSS**

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

1 table there, the selection criteria that were  
2 applied, the first of those items was NIOSH  
3 requesting that the case not be returned for a  
4 new DR. There were 620 of those.

5 The cases that were requested to be  
6 returned based on some other PER other than 14  
7 that we were working with, there were 221 such  
8 cases out of those 977. The cases that were  
9 requested to be returned for a new  
10 reconstruction were 52 in number, and there  
11 were 84 cases that had been returned to NIOSH  
12 prior to completing the PER evaluations.

13 Underneath, the selection criteria  
14 for the site are listed for you for each of those  
15 ten sites, so that you get the breakdown two  
16 different directions, if you read the criteria  
17 and the breakdown shown by site.

18 The findings that we had, Findings 7,  
19 8, all the way to 21, but because of the number  
20 of sites that were involved, many of these  
21 findings were applicable to more than one site,  
22 and so some of them were grouped together.  
23 We've done that grouping as we go through here

**NEAL R. GROSS**

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

1 in this presentation, and you'll see them.

2 Finding Number 7 -- and remember,  
3 we're under Subtask 4 here, this is the actual  
4 audit process that we're looking at, SC&A found  
5 many of the cases identified as requiring  
6 rework didn't meet all the requirements of the  
7 selection criteria.

8 NIOSH indicated they'd reviewed all  
9 the potential cases of less than 50 percent to  
10 determine if they were affected by another PER.  
11 SC&A, in Finding 8, noted that some of the cases  
12 had been returned as a result of this PER, but  
13 those cases were not revised.

14 And NIOSH indicated that not all cases  
15 had been returned by Labor, and since some of  
16 those are contained in an SEC, or the claimant  
17 has died and there's no survivor. But each  
18 case had to be individually verified in order  
19 to be included in the cases that were going to  
20 be -- come forward for review for the PER.

21 Subtask 4, case reviews, involved an  
22 audit of six reworked cases from -- one each  
23 from Savannah River, X-10, Portsmouth, LANL,

**NEAL R. GROSS**

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

1 Hanford and Y-12.

2 That review focused just on the doses  
3 that were impacted by this PER, and they were  
4 concerned solely with assessing the accuracy  
5 and correction -- correctness of the coworker  
6 external doses. For Hanford, both coworker  
7 external and internal doses had been evaluated.

8 Continuing with the case review  
9 findings, this next finding, as you see, is a  
10 group of actually four findings lumped  
11 together. As I indicated to you earlier, many  
12 of these findings were repeated because the  
13 same finding was applicable to more than one  
14 case, but we lumped them all together when we  
15 were looking at them.

16 This one has to do with the 1.4  
17 adjustment factor being applied to the measured  
18 coworker data at each site. And after  
19 discussing them and looking at them at  
20 considerable length, the contractor and NIOSH  
21 agreed that we had adequate empirical evidence  
22 to indicate that the 1.4 adjustment factor had  
23 been appropriately applied, so this finding

**NEAL R. GROSS**

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

1 resolved.

2 Finding Number 12 had to do with  
3 whether NIOSH is planning to revisit the one  
4 returned case for a construction trade worker  
5 coworker dose at LANL. And as it turned out,  
6 DOL did not return that case to NIOSH, so --  
7 because the worker had qualified under an SEC.

8 Finding Number 13 had to do with the  
9 correction factor not being applied to a LANL  
10 coworker dose, and it turned out that in this  
11 case, the worker had a job title on the list,  
12 but, after looking at the CATI looking pretty  
13 closely, it was shown that the claimant  
14 actually was an in-house employee and not a  
15 construction trade worker.

16 Finding Number 14 had to do with  
17 application of the construction dose factor for  
18 -- dosimeter correction factor in coworker  
19 dose, and there was agreement that the dose  
20 correction factor of 1.244 hadn't been applied  
21 to an unmonitored photon dose.

22 The correction factor was one during  
23 this period and wouldn't impact the dose. And

**NEAL R. GROSS**

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

1 we had a file indicating that the impact of the  
2 finding on the case outcome didn't change the  
3 level of compensation, so that was resolved.

4 And Finding Number 15 was another  
5 dosimetry uncertainty, it hadn't been applied  
6 to a Y-12 coworker. And NIOSH didn't do that.  
7 Their explanation was, the value would be  
8 entered into IREP as a mean of the normal  
9 distribution with a 30 percent uncertainty.  
10 So the TBD was re-evaluated by the contractor,  
11 and they recommended the finding be closed.  
12 The Subcommittee agreed.

13 Finding Number 17, again, a  
14 construction trade worker correction  
15 adjustment factor, failure to do that to an  
16 unmonitored internal dose at Hanford. And  
17 that was adequately explained with the  
18 employment in 1944, intakes being based on air  
19 monitoring.

20 And when the case was reassessed by  
21 the contractor, the technical documentation,  
22 and recommended that -- they recommended the  
23 case be closed. We agreed it was appropriately

**NEAL R. GROSS**

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

1 resolved.

2 Finding Number 18, the contractor  
3 felt that there didn't appear to be any  
4 Hanford-specific technical guidance documents  
5 that required implementing OTIB-52 for  
6 internal coworker doses. But NIOSH indicated  
7 that the OTIB-52 requirements were built into  
8 the reconstruction tool, which was used by all  
9 the dose reconstructors. And that was found to  
10 be the case, so we closed the finding.

11 Again, one of those group findings  
12 from three different sites, Kansas City, Pantex  
13 and Weldon Spring, Findings 19, 20 and 21, was  
14 a concern about whether there were guidance  
15 documents or workbooks for implementing the  
16 dose adjustments that had been listed in  
17 OTIB-52.

18 And the response indicated that the  
19 requirements had been built in through the tool  
20 which was used by the dose reconstructors, and  
21 that was found to be the case and it was closed.

22 That's a full review of what we've  
23 done with PER-14 and where we are right now.

**NEAL R. GROSS**

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

1 Questions?

2 CHAIRMAN MELIUS: Gen?

3 MEMBER ROESSLER: This was a lot to  
4 absorb, but I do have one question on Slide 8,  
5 and it appears on other slides too. It seems  
6 that Hanford internal doses are different than  
7 some of the other sites.

8 On Slide 8, you talk about -- you say  
9 only Hanford coworker intake rates needed to be  
10 multiplied by a factor of 2. What's the  
11 difference at Hanford? What makes that site  
12 different? Is it because they started  
13 employment earlier and --

14 MEMBER MUNN: No, not entirely.  
15 It's the scope of the activities at Hanford more  
16 than anything else. The level of -- I should  
17 say the scope, also, of the type of materials  
18 that were handled. If anything was going to be  
19 handled at all, it was undoubtedly passed  
20 through the workforce at Hanford.

21 And because of the types of materials,  
22 because of the level of activity, as well as the  
23 periods of activity, this decision was made

**NEAL R. GROSS**

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

1 relatively early that a dose correction factor  
2 of 2 was going to be implemented at the Hanford  
3 site. I believe that has been done across the  
4 board.

5 CHAIRMAN MELIUS: There's some  
6 others here. Yes, Jim, do you want to -- yes.

7 DR. NETON: I could just elaborate a  
8 little bit on that. These were, you know, just  
9 empirical data sets that we had, you know,  
10 construction trades versus regular workers,  
11 and using the available data, it just came out  
12 that way. We really made no judgment as to why  
13 that was particularly true.

14 Hanford was the only one of the sites  
15 we evaluated, though, that did have that  
16 difference. I'm not sure I really understand  
17 why it existed there, but that's the way we  
18 treated it. It was just purely based on  
19 empirical evaluation.

20 CHAIRMAN MELIUS: Any other  
21 questions? If not, I have a -- it's more of a  
22 comment than a question. Findings 9, 10, 11  
23 and 16, and then later on in -- towards the end

**NEAL R. GROSS**

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

1 in Findings Number 19, 20 and 21, the -- it seems  
2 that we're referring findings back to the other  
3 site, individual site documents, or to  
4 individual Site Reviews to be addressed.

5 And I think -- again, it's not a fault  
6 of the Procedures Committee but, you know, we  
7 do these reviews on multiple levels, and we've  
8 always had problems with when things get  
9 referred, or assuming that, you know, another  
10 Work Group or that NIOSH will address it, or  
11 someone will address the site-specific  
12 finding.

13 And I think we -- in this case, we have  
14 a number of these sites that are currently under  
15 active review. We have some that are under  
16 inactive review. I mean, Brad's doing, I  
17 think, still working on some stuff at Pantex.  
18 We have Hanford, which we're actually mostly  
19 focusing on SEC issues still, and I won't go  
20 through the whole list, Kansas City, and so on.  
21 And I think we just need to make sure that this  
22 all gets communicated and that NIOSH also be  
23 aware of these issues and SC&A also.

**NEAL R. GROSS**

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

1           It's not clear to me that these,  
2           either in the case where there's been a problem  
3           found or where it's been the construction  
4           worker adjustment is subsumed under  
5           instructions for doing individual dose  
6           reconstruction, that these get, you know,  
7           properly evaluated and reviewed.

8           They may be, they may not, and I think  
9           we just sort of need to formalize that process  
10          and make sure there is some follow-up on these  
11          issues. Dave?

12          MEMBER KOTELCHUCK: Okay. If I can  
13          get through, I can do this.

14          So, I'm not quite sure where this  
15          leaves us. Have -- would you say that the PER  
16          audit process has been completed for the  
17          construction workers, or are there next steps,  
18          and what are they?

19          MEMBER MUNN: You would not have me  
20          here giving this review for you if we had not  
21          fully completed our review of the PER. The  
22          Subcommittee is done with PER-14. And what we  
23          have is now history, and you have it.

**NEAL R. GROSS**

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

1 MEMBER KOTELCHUCK: Thank you.

2 MEMBER MUNN: You bet.

3 CHAIRMAN MELIUS: And I think my  
4 comment was saying that, you know, the PER has  
5 been -- review has been completed but we --  
6 there are findings that still need to be  
7 addressed in other venues or other groups and  
8 so forth. And so we should not lose track of  
9 that.

10 MEMBER MUNN: Yes, our Chair says yes  
11 but.

12 CHAIRMAN MELIUS: I mean, we have a  
13 similar problem with individual, you know, dose  
14 reconstruction reviews where we find a Site  
15 Profile issue or something, and we just need to  
16 make sure we connect back rather than coming,  
17 you know, ten years later finding --

18 MEMBER LEMEN: Right.

19 CHAIRMAN MELIUS: -- discovering the  
20 problem again.

21 MEMBER LEMEN: So in addressing your  
22 question, who has that responsibility?

23 CHAIRMAN MELIUS: We do.

**NEAL R. GROSS**

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

1 MEMBER MUNN: Yes.

2 MEMBER LEMEN: I mean, how are we  
3 going to keep track of it is what I'm asking.  
4 I mean --

5 CHAIRMAN MELIUS: Well, we --

6 MEMBER LEMEN: -- is somebody going  
7 to follow this?

8 CHAIRMAN MELIUS: I think all the  
9 Board Members have some responsibility for all  
10 the sites here. And I certainly took note of  
11 Hanford.

12 MEMBER LEMEN: Should it be a  
13 continuing agenda item or?

14 CHAIRMAN MELIUS: And I would hope  
15 that SC&A and -- does that, and NIOSH also.

16 MEMBER LEMEN: Yes.

17 MR. KATZ: Let me just add to what Dr.  
18 Melius is saying. So I generally, when one of  
19 these findings comes up, that we're going to  
20 refer, from whatever Subcommittee or Work Group  
21 to somewhere else, generally either I or the  
22 Chair will send an email to the Chair of the  
23 group it's being referred to, saying this

**NEAL R. GROSS**

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

1 finding, and provide -- I'll provide a  
2 transcript for the discussion as well.

3 This finding is being transferred to  
4 your Work Group to resolve. So that's part of  
5 the process that goes on here. I think one  
6 thing that'll help, though, it doesn't -- that  
7 doesn't necessarily make it easy to track. So,  
8 because then that Chair has it, but that doesn't  
9 mean it's easy to track.

10 So what we have in -- we're trying to  
11 put in place, but it's difficult because a  
12 number of these Work Groups are longstanding,  
13 and we're putting into place a system, you know,  
14 midstream for those, but as Stu has discussed  
15 at a number of these Board meetings, we have  
16 this tracking system that we started off using  
17 just for Procedures.

18 Now we've expanded it and we're using  
19 it for Dose Reconstruction Subcommittee, and we  
20 want to use it -- and for new Work Groups, and  
21 we want to use it, ultimately, for everyone.

22 That tracking system, actually, is  
23 great for just this problem, because that

**NEAL R. GROSS**

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

1 finding sits there unresolved for all to see  
2 until it is resolved. And that way we won't  
3 lose anything.

4 So to the extent we can move towards  
5 using that system, I think we'll be better off  
6 for just this problem. Because it is tough.  
7 It is tough for everyone to keep track of these  
8 items. A number of these chairs are chairs of  
9 a number of Work Groups and Subcommittees, and  
10 it's a lot to mind.

11 MEMBER MUNN: And it was an extremely  
12 painful process for us to get that database up  
13 and running. We spent a disproportionate  
14 amount of the Board's time giving you reports  
15 on our blow-by-blow, step-by-step process to do  
16 that. But we -- our IT folks have been very  
17 diligent in helping with this.

18 And in the cases that we have in front  
19 of us right now, in almost all cases -- I do  
20 believe I can safely state in all cases, these  
21 dose reconstruction factors, the correction  
22 factors that we were talking about, have been  
23 very carefully applied in all of the tools that

**NEAL R. GROSS**

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

1 are used by the dose reconstructors.

2 So as long as the claim is identified  
3 as a CTW, it's -- I personally have, am well  
4 reassured that the tools that are available to  
5 the dose reconstructor will be adequate for  
6 that purpose, will catch that. Any other  
7 questions?

8 CHAIRMAN MELIUS: Any Board Members  
9 on the phone have questions? I don't want you  
10 to be forgotten. Okay, if not, it's almost 10  
11 o'clock. Why don't we take a break and we'll  
12 reconvene at 10:30.

13 (Whereupon, the above-entitled  
14 matter went off the record at 9:59 a.m. and  
15 resumed at 10:36 a.m.)

16 CHAIRMAN MELIUS: Okay.  
17 Before this deteriorates any more we'd better  
18 reconvene. So between now and lunch we're  
19 going to be talking about sufficient accuracy  
20 and coworker modeling, and do that.

21 I think, as we've talked at the last  
22 Board meeting and a little bit on the last Board  
23 meeting call, we've been working -- the SEC

**NEAL R. GROSS**

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

1 Review Group's been working with Jim Neton,  
2 NIOSH, and SC&A on addressing both sufficient  
3 accuracy issues but with more of a focus,  
4 recently, on coworker modeling issues.

5 And we've gone through, well one  
6 meeting just before the, our Idaho meeting, you  
7 know, the day before, and we had another  
8 conference call a few weeks -- a couple of weeks  
9 ago on this, to do that.

10 And Jim has -- Jim Neton's been  
11 working through a document describing sort of  
12 an approach to developing coworker models, and  
13 a sort of set of guidelines, I guess we will call  
14 them, similar to sort of the guidelines we have  
15 for reviewing surrogate data, reviewing SEC  
16 Evaluation Reports.

17 So that's all. It's not totally  
18 prescriptive, but the idea is to try to get what  
19 are the key factors that will be used in  
20 developing and therefore the key factors that  
21 would be used in evaluating the coworker  
22 models.

23 So as I said, we had a meeting, what

**NEAL R. GROSS**

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

1 two weeks ago, something like that, and Jim's  
2 done some updating then. The plan is that Jim  
3 will do a presentation, go through sort of the  
4 key points in the document. We'd like to get  
5 your, all the Board Members' comments here  
6 today. And then we'll ask everyone on the  
7 Board to also, you know, when you have time to  
8 review the document, some time in the next  
9 couple of weeks get comments in to Jim. And  
10 we'll do another revision, and hopefully some  
11 time in the near future we'll get this  
12 finalized.

13 I'm hoping, certainly by the March  
14 meeting, I think we'll be able to do that. So  
15 that's sort of our target, but there'll be some  
16 other iterations as we go along. So let me turn  
17 it over to Jim Neton.

18 DR. NETON: Thank you Dr. Melius. As  
19 Dr. Melius said, this is something that's been  
20 going on for quite some time now. It started  
21 shortly after the release of ORAU Report 53,  
22 which was a report that described how to analyze  
23 stratified data sets.

**NEAL R. GROSS**

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

1           And SC&A had a number of findings on  
2           the statistics and such, and going through that  
3           it became apparent that, well let's first get  
4           an idea of how we evaluate data to see if it's  
5           stratified in the first place, and sort of, not  
6           bypass the statistics but talk about in  
7           general, how you look at, how you approach  
8           coworker data sets.

9           And so we -- I volunteered, and we've  
10          been working hard on putting together an  
11          implementation guide, we're calling it -- right  
12          now it's a draft, on exactly that. What  
13          criteria are used to evaluate these data sets  
14          that go into coworker models. And we're up to  
15          Rev 3 now, and I will go over that in a second.

16          But before I get into that, I thought  
17          it might be useful for me to go over sort of a  
18          case study, if you will, of what -- how a  
19          coworker model is developed. We use them a  
20          lot.

21          We -- almost -- many, many sites have  
22          them, and it became sort of obvious to me, or  
23          apparent to me, at our Working Group meeting in

**NEAL R. GROSS**

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

1 Idaho that there wasn't a general, you know,  
2 general understanding of what we mean, how we  
3 go about establishing a coworker.

4 So I'm going to briefly go over -- I  
5 have like six or seven slides, and just sort of  
6 go over, you know, what -- how is a coworker  
7 model developed. I'm going to use the internal  
8 dose example because they tend to be the most  
9 complicated. External is a little less  
10 troublesome.

11 So here goes. So you've seen this  
12 before, and this is right out of Report 53.  
13 This is the -- these are the, this summary of  
14 the steps that go into an internal coworker  
15 model calculation.

16 You start with Box 1 on the upper left,  
17 which is the urine data, just a database you get  
18 from the site that has all the urine data over,  
19 let's say, the history of the plant, from '57  
20 to 2007 in this case, is what we're going over  
21 today.

22 But we need to do something with that,  
23 to apply to workers that didn't have any

**NEAL R. GROSS**

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

1 monitoring data. And we start that by doing  
2 this OPOS analysis, this one person, one  
3 statistic analysis.

4 We're going to talk about that a  
5 little later, but what that means is if you have  
6 multiple data points in one time interval, in  
7 one year, you need to somehow account for that,  
8 group them together so you have one value in  
9 that one monitoring period. We'll talk about  
10 it a little later.

11 There was some disagreement between  
12 SC&A and NIOSH and the Working Group on that.  
13 I think we've come to some agreement.

14 The third step is to take those OPOS  
15 data, the one person, one statistics data, and  
16 generate these distributions. You take the  
17 log of the data and you do a cumulative  
18 probability plot, and then you look at how they  
19 fall on a normal distribution.

20 And from that you can generate the  
21 50th and 84th percentile of the data. So that  
22 can characterize the data for that one  
23 particular time interval, one year, three

**NEAL R. GROSS**

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

1 months, whatever data set you have.

2 The fourth step is where you really  
3 start getting more detailed. You take the 50th  
4 and 84th percentile excretion rates, what the  
5 person was excreting, and you convert that into  
6 what they were actually inhaling. That's  
7 where the IMBA program comes in. That's Step  
8 4.

9 IMBA, Integrated Modules for Bioassay  
10 is a very sophisticated computer program that  
11 can take urinary excretion data and say, what  
12 were these people actually breathing in over  
13 this time period if the exposure was chronic.  
14 A key to these coworker models for internal is  
15 that, for all the models we've developed so far  
16 have been chronic intake models.

17 You use that to generate the 50th and  
18 84th percentile intakes, what these people were  
19 breathing in, and then you can use that for  
20 workers, an unmonitored worker, to calculate  
21 what their internal dose was over a certain  
22 period of time. I've got some examples.

23 And then, of course, the sixth step is

**NEAL R. GROSS**

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

1 you'd use the dose calculated to the organ to  
2 generate some Probability of Causation result.  
3 So this would all be -- we take monitored worker  
4 data and try to apply it to unmonitored workers.

5 This is what I was talking about.  
6 Let's see, Step 3 here is generate the 50th and  
7 84th percentile urine data. I just have an  
8 example here of what one of those distributions  
9 might look like, where you see the geometric  
10 mean and the 84th percentile. You've got 196  
11 individual workers represented here that left  
12 332 samples in a single year.

13 So you'll have one of these for every  
14 single year in this particular case. It could  
15 be three months. If we had -- if urine samples  
16 were taken every three months, we would have,  
17 every three month, a graph like this. But  
18 typically, a year seems to be about the most  
19 common monitoring period.

20 So you have a graph for each  
21 monitoring period, and you generate graphs, in  
22 this case for Savannah River, from 1955 through  
23 2007. These are the distributions of urine --

**NEAL R. GROSS**

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

1 urinary excretion over the entire monitoring  
2 history that we have.

3 And this is Table A-3 right out of the  
4 Savannah River Site. I think it's in the Site  
5 Profile. I don't think they have a separate --  
6 I think it's a TIB. This is a TIB.

7 Anyway, these are the data that were  
8 generated. This is the real data. So you can  
9 see, from the middle of the year, July 1st, '50  
10 -- actually '55. I've only presented here  
11 through 1965, or '84, but it continues on  
12 through 2007. I didn't give you the entire  
13 sheet.

14 But you can see that you can generate  
15 the 50th percentile, the 84th percentile for  
16 every particular year. And now these are the  
17 data that are going to go into IMBA, the  
18 Integrated Modules for Bioassay Analysis, to  
19 estimate what the people actually breathed in  
20 during these periods with these data sets.

21 And this is where it gets a little  
22 tricky to explain, but the blue dots, in this  
23 particular case, are the 50th percentile data

**NEAL R. GROSS**

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

1 points from that graph. So that second column  
2 there from the left, these are the 50th  
3 percentile data points presented over the  
4 monitoring period that we have, for which we  
5 have data.

6 Now you can see that there's two  
7 separate type, two separate sort of collections  
8 of data, the blue dots and the red dots. The  
9 idea here is that as long as you have a  
10 monitoring period where the data appear to be  
11 similar, where the exposure -- the excretion  
12 patterns were similar, that represents what we  
13 call one intake regime.

14 And then, so you would have Intake  
15 Regime 1, the blue dots, and Intake Regime 2,  
16 the red dots. So we will fit a chronic exposure  
17 model through the blue dots up through where the  
18 red dots start.

19 And so you can see that increasing  
20 black solid line. It starts down by zero  
21 because when you first start work, you start --  
22 it starts going up because you start inhaling  
23 material. And then it stops at the

**NEAL R. GROSS**

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

1 intersection of the blue and red dots, and  
2 starts to decrease.

3 That's because once the intake regime  
4 stops, we're saying there's no more exposure,  
5 but the person will still continue to excrete  
6 uranium that they had -- or plutonium, in this  
7 case, that they had inhaled in the earlier  
8 period.

9 So that's Intake Regime 1. Now you go  
10 to the bottom one where you say Intake Regime  
11 2, and there's another chronic model fit to  
12 that. So here is an example of where we fit  
13 data, those 50th percentile data points, to the  
14 data. There is some subjectivity involved in  
15 this, but I'm not sure there's any way around  
16 that. Okay.

17 So this is the complete data set, so  
18 you can see all the data including the first and  
19 second regimes. And what's interesting, you  
20 really can't see it very well, but there's a  
21 green line there, the solid line.

22 That's what the excretion would be if  
23 the person inhaled plutonium from day one of the

**NEAL R. GROSS**

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

1 plant operations all the way through 2007.  
2 That's the combination of an intake from Period  
3 1 and Period 2.

4 And here is, taken right out of the  
5 TIB, the values for those intake amounts. So  
6 between '55 and '90, the person would receive  
7 -- would get about 1.8 picocuries per day  
8 intake. The 84th percentile is 5.1. You fit  
9 the same curve at the 84th percentile to get  
10 that value. And the GSD on this particular fit  
11 is 2.88.

12 You see the value that says adjusted  
13 GSD? That is the minimum geometric standard  
14 deviation that we will allow for an internal  
15 exposure, because there is a lot of uncertainty  
16 involved in internal dosimetry, and based on  
17 some references that we've obtained from the  
18 literature, it seemed to be 3 is about as low  
19 as you can go.

20 So we won't assign any GSD less than  
21 3 for internal exposures. So everyone will  
22 have that uncertainty associated with it.

23 And then you see the second period,

**NEAL R. GROSS**

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

1 1991 to 2007, it's a little lower, 0.9  
2 picocuries per day. Interesting, what you see  
3 here is the change in the out -- in the urinary  
4 output really is more of a function of the  
5 detection limit of the measurement system  
6 rather than changes in work -- necessarily  
7 changes in working conditions.

8 I think they probably went to alpha  
9 spectrometry back then, in 1991. Detection  
10 limits went down, and so you have a much lower  
11 median value, because many of the 50th  
12 percentile values that we calculate are usually  
13 right around the detection limit of the  
14 measurement system. And that's pretty much  
15 true in this case.

16 So, that's just a sort of a quick  
17 run-through of how a coworker model is  
18 established, just so everybody has a feel for  
19 what we've been doing for a long time now, at  
20 least in the internal dosimetry world. Is  
21 there any questions on that before I move on to  
22 the implementation guide?

23 CHAIRMAN MELIUS: Yes, Brad?

**NEAL R. GROSS**

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

1           MEMBER CLAWSON: I just -- all the  
2 dots, they represent the whole spectrum of  
3 workers, or --

4           DR. NETON: In this particular case,  
5 this would be all the workers. Now it could be,  
6 if you decide to have some sort of a strata, it  
7 would represent the 50th percentile of all the  
8 urine values for that particular strata.

9           This is a general model for all the  
10 workers, you're right. And we're going to talk  
11 about how we might make some decisions about how  
12 to partition or stratify these in the different  
13 data sets. That's the, sort of the point.

14          MEMBER RICHARDSON: Can I ask you  
15 just a follow-up question.

16          DR. NETON: Yes.

17          MEMBER RICHARDSON: A dot is not a  
18 worker but is --

19          DR. NETON: It's the 50th percentile  
20 of the urinary excretion of the workers in that  
21 year.

22          MEMBER RICHARDSON: A dot represents  
23 a year?

**NEAL R. GROSS**

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

1 DR. NETON: Right.

2 MEMBER RICHARDSON: And it's --

3 DR. NETON: In this case --

4 MEMBER RICHARDSON: -- median value  
5 of excretion in a year.

6 DR. NETON: Right.

7 MEMBER RICHARDSON: And you had --  
8 one slide back you had two colored dots.

9 DR. NETON: Right.

10 MEMBER RICHARDSON: And could you  
11 tell me once more the transition?

12 DR. NETON: Well, when you fit  
13 chronic exposure models, you like to fit intake  
14 regimes, as we call them, with -- that have  
15 similar excretion patterns. So the blue dots  
16 is Excretion Pattern 1, the red dots are  
17 Excretion Pattern 2. Those were fit as  
18 separate chronic intake exposure scenarios.

19 So the blue dots were fit all the way  
20 through whatever that number is, 12,000 days  
21 post start of the site, through 1990 -- I can't  
22 read it from here, 1990 it looks like. So the  
23 blue --

**NEAL R. GROSS**

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

1                   MEMBER RICHARDSON:    Yes.    So the  
2                   origin was 1955?

3                   DR. NETON:    Right.

4                   MEMBER RICHARDSON:    And you've got, I  
5                   think, 60 years of data, 20,000 --

6                   DR. NETON:    Right.

7                   MEMBER RICHARDSON:    -- days or  
8                   something like that.

9                   DR. NETON:    Right.

10                  MEMBER RICHARDSON:    So you're going  
11                  up.  And so that the red, the transition from  
12                  blue to red is not related to the two rows of  
13                  your summary table, 1955 to 1990 and 1991 to  
14                  2007?  That's something different?

15                  DR. NETON:        No.        Well,  the  
16                  transition in 1990 was because you can see there  
17                  was a -- there's a distinct, an abrupt decrease  
18                  in the urinary output in 1990.  So to fit a  
19                  continuous chronic exposure model through all  
20                  of those dots just doesn't seem reasonable.

21                  MEMBER RICHARDSON:    So, okay.  So  
22                  the -- again, the transition from blue dots to  
23                  red dots is because of a change in monitoring

**NEAL R. GROSS**

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

1 practice. It's not -- because I thought you  
2 were describing it as an assumption about a  
3 particular exposure scenario.

4 DR. NETON: Well, it's not a change in  
5 monitoring. It's a change in the qualitative  
6 look of the plots. I mean, you can see there  
7 that there's a fairly abrupt change in the  
8 output of the urine. And so --

9 MEMBER RICHARDSON: Well, I mean, you  
10 might, or one might look at it and see that  
11 there's two dots, perhaps, that look like  
12 outliers and everything else looks like --

13 DR. NETON: Wait, wait. I'm -- now,  
14 I --

15 MEMBER RICHARDSON: Or two or three,  
16 yes, but I mean, they're -- but, you know, you  
17 see that in a lot of --

18 DR. NETON: Yes.

19 MEMBER RICHARDSON: -- quirky things  
20 in --

21 DR. NETON: But I'm saying, if you  
22 look at the red dots themselves, they are about  
23 an order of magnitude lower or about a factor

**NEAL R. GROSS**

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

1 of five, I can't tell from here, than the dot,  
2 the blue dots. So something happened there.  
3 Something is inherently different about the  
4 urinary excretion pattern in that second  
5 period.

6 This was a qualitative judgment here.  
7 This is not quantitative.

8 MEMBER RICHARDSON: No, I know. I'm  
9 just trying -- I was just trying to understand  
10 the interpretation.

11 DR. NETON: Right.

12 MEMBER RICHARDSON: That was a  
13 post-hoc color coding. And then you assume  
14 that there's two different chronic intake  
15 patterns --

16 DR. NETON: Correct.

17 MEMBER RICHARDSON: -- in, among, on  
18 average, among the workers at the site.

19 DR. NETON: Right.

20 MEMBER RICHARDSON: Commencing --  
21 one commencing in 1955 and the other commencing  
22 in 19 --

23 DR. NETON: 91.

**NEAL R. GROSS**

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

1 MEMBER RICHARDSON: -- 91.

2 DR. NETON: Correct.

3 MEMBER RICHARDSON: Okay. How does  
4 that happen? I guess, you know, I think about  
5 an exposure pattern as happening for a worker  
6 but not for the median population.

7 DR. NETON: Yes, well this raises  
8 some issues with the model. Now remember, the  
9 50th percentile is not the same person in every  
10 particular year.

11 MEMBER RICHARDSON: Right.

12 DR. NETON: So in some ways, I think  
13 it's fairly -- it's somewhat favorable, in a  
14 way, to pick the 50th percentile for every year.  
15 It's probably not the same person. You're  
16 picking the median value for every particular  
17 year.

18 Yes, it's -- this is the way we've been  
19 doing it. I'm not saying it's perfect. But  
20 again, you are applying this to unmonitored  
21 workers, not -- this is the experience of the  
22 monitored population. Now you're trying to  
23 apply this to people who had no monitoring data

**NEAL R. GROSS**

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

1 at all, and what is their exposure experience.

2 And if you think of the excretion dots  
3 as sort of representative of the air  
4 concentrations in the plant, I think you can see  
5 that -- in this case, it's a little different  
6 because I do believe that the red dots are lower  
7 because of a change in the technology.

8 They had a lower -- ability to measure  
9 lower levels of plutonium, therefore you're  
10 seeing lower values. It's very possible that  
11 some of these chronic exposure models, the 50th  
12 percentile is actually equal to the MDA or the  
13 detection limit.

14 MEMBER RICHARDSON: So some things, I  
15 mean, sometimes it's easier to see changes in  
16 monitoring by following an individual. And  
17 you would have workers who maybe were -- you  
18 would see the transition easier on an  
19 individual basis.

20 DR. NETON: Yes. That's -- but then,  
21 over this long period of time I'm not sure we  
22 can do that. You know, you're talking  
23 thousands and thousands of samples here. To

**NEAL R. GROSS**

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

1 find that individual thread that you can -- and  
2 then you have one individual for the whole site.  
3 Yes, I'm not sure that's possible.

4 MEMBER RICHARDSON: Okay.

5 MEMBER ZIEMER: Well, just a couple  
6 of comments. One, there is some subjectivity  
7 in looking at plots and saying these are two  
8 different ones.

9 DR. NETON: Right.

10 MEMBER ZIEMER: That's one comment.  
11 Number two, I think this could reflect either  
12 a change in work practices or change in  
13 detection abilities. There's several  
14 possibilities.

15 DR. NETON: Correct.

16 MEMBER ZIEMER: But --

17 DR. NETON: Yes.

18 MEMBER RICHARDSON: I've seen, at  
19 Savannah River, changes in recording just  
20 because recording practices of -- or, you know,  
21 data issues as well. I mean, so you could see  
22 the median dropped to zero because --

23 DR. NETON: Right.

**NEAL R. GROSS**

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

1 MEMBER RICHARDSON: -- zeros are  
2 recorded for detection limits.

3 DR. NETON: Well, yes. And that's  
4 another issue.

5 MEMBER ZIEMER: There=s some  
6 statistical analysis issues that we'll be  
7 getting into.

8 DR. NETON: Yes, and that's another  
9 issue.

10 MEMBER ZIEMER: I think it's  
11 important. You can't just take one individual  
12 and talk about the work practice change for --

13 DR. NETON: Right.

14 MEMBER ZIEMER: I think you're taking  
15 a large amount of data in these things, and  
16 looking at an overall effect.

17 DR. NETON: Yes.

18 CHAIRMAN MELIUS: But doesn't that  
19 sort of -- that sort of begs the question of  
20 well, should there be stratification within  
21 that large population --

22 DR. NETON: Well, and that's --

23 CHAIRMAN MELIUS: -- which I think is

**NEAL R. GROSS**

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

1 what, sort of what David was getting at, maybe  
2 not on an individual --

3 DR. NETON: Yes.

4 CHAIRMAN MELIUS: -- but that's one  
5 way you'd want to, you know, sort of examine  
6 that. But by group, there could be, and again,  
7 you got to sort of define what the plot is plus  
8 what you see in, you know, as the mix of workers  
9 or what -- I mean, there's lots of possibility.

10 And so I don't think you can look at  
11 any of this without sort of a pretty thorough  
12 knowledge of the site and --

13 DR. NETON: Right.

14 CHAIRMAN MELIUS: -- you know.

15 DR. NETON: I'm not trying to imply  
16 that this is the right way to go, or one size  
17 fits all here. I was just trying to say, if  
18 this were a stratified subset, and we knew, for  
19 instance, that these were maintenance workers,  
20 and they were stratified out, this is how we  
21 would go about trying to establish what their  
22 unmonitored colleagues' exposure experience  
23 was. I don't want to belabor this too much.

**NEAL R. GROSS**

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

1 MEMBER KOTELCHUCK: Dave Kotelchuck.  
2 Let me ask you, this -- these data points are,  
3 of course, coming out from the IMBA program,  
4 right? These are --

5 DR. NETON: No. These are actually  
6 excretion data points that we received from the  
7 DOE, or AWE in some cases.

8 MEMBER KOTELCHUCK: Oh okay. So  
9 these are the excretion points?

10 DR. NETON: These are urinary  
11 excretion values we have in a database.

12 MEMBER KOTELCHUCK: Okay.

13 DR. NETON: Of the actual exposed  
14 workers, sorry.

15 MEMBER KOTELCHUCK: Suppose -- but  
16 suppose you were to follow, not one worker as  
17 a representative, but --

18 DR. NETON: All worker?

19 MEMBER KOTELCHUCK: Well, it could be  
20 a -- but just a few dozen, you should be able  
21 to, if you will, visually see that there is  
22 really a transition going on. There should be  
23 some kind of tailing off.

**NEAL R. GROSS**

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

1 DR. NETON: It may be, but those would  
2 be more demonstrable in the higher exposure  
3 levels. And we're trying to get the 50th  
4 percentile established here, and those tend to  
5 be down into the weeds.

6 They'll monitor 300, 400 workers in a  
7 year, and you'll see that the 50th percentile  
8 worker, who was monitored, is already bouncing  
9 around the detection limit.

10 Yes, there's going to be workers up in  
11 the 95th percentile that were more heavily  
12 exposed, and you could do individual dose  
13 reconstructions, but in this particular case  
14 are going to be dose reconstructions using  
15 missed dose, for the most part.

16 We've been down this path before about  
17 --

18 MEMBER KOTELCHUCK: Yes.

19 DR. NETON: -- can we really use  
20 individual workers, and I'm pretty convinced,  
21 at least, that it's -- it would be almost  
22 impossible.

23 MEMBER KOTELCHUCK: Individual

**NEAL R. GROSS**

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

1 workers OPOS.

2 DR. NETON: Well to take OPOS data as  
3 an individual worker and reconstruct  
4 everybody's dose, individually, would be  
5 really, really difficult.

6 MEMBER KOTELCHUCK: Okay.

7 DR. NETON: Oftentimes you only have  
8 one sample a year on these people, and now  
9 you're saying well, I can do more with that than  
10 I really can.

11 You know, there's some substance  
12 here. Chronic exposure, the annual values  
13 that were taken can be used to bound those  
14 chronic exposure scenarios. I mean, you know,  
15 those are inherent assumptions but I think that  
16 we've sort of gotten through that in the past,  
17 and that part, I think, is okay.

18 What I'm going to talk about next is  
19 really, you know, how we determine which data  
20 points are used for which sets of workers.  
21 That's sort of the thrust of the talk. Maybe  
22 I complicated things a little more here than I  
23 expected to. But I just wanted people to be

**NEAL R. GROSS**

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

1 aware of, this is what we're talking about, how  
2 -- so. Okay. Any other questions? Henry?

3 MEMBER ANDERSON: Are you using the  
4 median value or are you using the mean value?

5 DR. NETON: Median.

6 MEMBER ANDERSON: Median?

7 DR. NETON: Median value.

8 MEMBER ANDERSON: Got it. Because  
9 that would help you adjust for the change of the  
10 limit of detection. Because although -- I  
11 mean, what I was going to say is if you have a  
12 change in the limit of detection, you could  
13 apply the same limit of detection from the  
14 earlier years to the later years.

15 You'd lose some data, but you'd see,  
16 does that change? Is this level that's going  
17 down that, starting in 1991, is that an artifact  
18 of detection? But if you're using medians --

19 DR. NETON: Yes. Well --

20 MEMBER ANDERSON: It -- as long as  
21 that median is above the limit of detection, I  
22 mean, if in a given --

23 DR. NETON: If it is, yes. Yes.

**NEAL R. GROSS**

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

1           MEMBER ANDERSON:    Is it?    Is it  
2 typically, in the earlier years, also --

3           DR. NETON:    In the very, very early  
4 years, it's above the detection limit.  As you  
5 get more contemporary, maybe 1970s, 80s, it's  
6 almost very often about the detection limit,  
7 sometimes even below the detection limit.

8           MEMBER ANDERSON:  So you artificially  
9 assign the limit of detection to the value?  Or  
10 a square root of --

11          DR. NETON:    Yes.  We have techniques  
12 for accommodating for what we call a missed  
13 dose, right.

14          MEMBER ANDERSON:  Because that --

15          DR. NETON:    But remember, each of  
16 these values is going to have a geometric  
17 standard deviation of 3 associated with it  
18 anyways, so.

19          CHAIRMAN MELIUS:  Okay.  Any Board  
20 Members on the phone have questions, before we  
21 move on?

22          MEMBER FIELD:  No, this is Bill.  I  
23 thought this was a very helpful presentation.

**NEAL R. GROSS**

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

1 Appreciate it.

2 DR. NETON: Thanks.

3 CHAIRMAN MELIUS: Okay.

4 DR. NETON: Okay.

5 CHAIRMAN MELIUS: Next.

6 DR. NETON: All right. That being  
7 said, now we'll switch gears a little bit and  
8 talk about how we ended up with this coworker  
9 model draft -- again, I emphasize draft  
10 implementation guide.

11 It doesn't say even implementation  
12 guide yet, but the idea is that this will end  
13 up becoming NIOSH Implementation Guide, I  
14 think, 006. You know, we have one for covered  
15 exposure, we have one for surrogate data. So  
16 this will be the latest in our collection.

17 So I thought the best way, maybe, to  
18 go over --

19 MR. HINNEFELD: Excuse me just a  
20 minute, Jim. I just wanted to make sure people  
21 who are on the phone, we have just left Live  
22 Meeting on the presentations. So if you're  
23 following on Live Meeting on the phone, you

**NEAL R. GROSS**

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

1 won't see what's on the screen here in the room,  
2 but it is on the website.

3 It's called Draft Criteria for  
4 Evaluation of Coworker Data. I think it's Rev  
5 3. I think there's a rev -- it's coworker data  
6 and Rev 3 is in the title of the file. And  
7 that's what's on the screen here.

8 DR. NETON: I'm reasonably certain  
9 that it's on the website. At least I requested  
10 that it be put there, so. So yes, and the idea  
11 is, here, we're just going to scroll through,  
12 because I find it more comfortable to talk from  
13 something rather than speak in generalities.

14 So the idea was, we're up to Rev 3. We  
15 started off saying okay, we didn't have any such  
16 guidance in the past. I mean, we've built a lot  
17 of coworker models, and our approach, from the  
18 very beginning, has been, let's just take all  
19 the data, rank it and apply it, and not spend  
20 a lot of time thinking about where these little  
21 subsets may have been.

22 I mean, we've done some of that. We  
23 talked earlier about Report 52, or TIB-52. So

**NEAL R. GROSS**

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

1 we went back to the drawing board, said what  
2 really do we need to think about when we're  
3 doing these coworker models?

4 So there's four sections to this  
5 documents. I think it's up to about eight  
6 pages now. The first section is the  
7 introduction, which sort of gives us the basis  
8 of why we have coworker models in the first  
9 place.

10 The second section talks about, if you  
11 have a set of data, you need to look at it for  
12 data adequacy and completeness, and also the  
13 type of program that they were trying to  
14 implement with that data. So that's a data  
15 adequacy type thing.

16 The third section talks about if you  
17 -- once you decide that you can really use the  
18 data to establish coworkers, how do you  
19 analyze it. And that kind of gets into this  
20 50th percentile, 84th percentile situation.

21 Then the fourth set, which is still  
22 sort of a little bit soft in my mind, is how you  
23 actually do a statistical analysis for

**NEAL R. GROSS**

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

1 stratification. And it'll become obvious as I  
2 talk why that's sort of still out there.

3 So if we could scroll through just the  
4 first section, and maybe stop at that quote  
5 there. It talks about individuals. The dose  
6 reconstruction regulation is directly out of  
7 that.

8 It says, "If individual monitoring  
9 data are not available or adequate, dose  
10 reconstructions may use monitoring results for  
11 groups of workers with" -- and this is where it  
12 gets tricky, for "comparable activities and  
13 relationships to the radiation environment."

14 That's right out of the regulation, so  
15 that's what we're obligated to do. Now  
16 oftentimes, you know, the level of granularity,  
17 though, how much you can get in the weeds about  
18 who that monitoring data was taken from and that  
19 sort of thing is not always as good as you'd like  
20 it to be.

21 And so we have, in the past, generated  
22 coworker models that pretty much are one size  
23 fits all, you know, a full distribution of data.

**NEAL R. GROSS**

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

1 I'm going to go into some descriptions  
2 here, though, about what we should be  
3 considering up front, before we go, before we  
4 make that leap of faith. Okay.

5 So this next section, criteria for the  
6 evaluation adequacy and completeness -- go down  
7 a little further, Stu -- yes, just this section  
8 here. The data adequacy really speaks to the  
9 technical ability of the monitoring methods  
10 that were employed.

11 I mean, we have a lot of data that are  
12 taken all the way back from the 1940s to the  
13 current time. Clearly the technology has  
14 changed. And so you have to take the data set  
15 that you have in hand and establish, is this --  
16 can this data really, reliably -- can it be  
17 reliably used to determine what the person's  
18 value was, excretion-wise or on their  
19 dosimeter? Is the technology there?

20 I always use the example of  
21 measurement of neutrons in the early days using  
22 film. The film couldn't see neutrons,  
23 energies probably below say 500 keV.

**NEAL R. GROSS**

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

1           So you've got to be aware of that and  
2           say well, these data -- we have these data but  
3           we need to consider what the heck was going on  
4           with the technology, and either adjust it or say  
5           it can't be used.

6           So this sets the stage for what type  
7           of data could be used in coworker models. We  
8           talk about using a bioassay, which we often,  
9           very often use. And bioassay, in our mind,  
10          also includes in vivo analyses, although we  
11          don't do that particularly often. But it can  
12          be a valid technique for a coworker model.  
13          We've done this.

14          And I also included as a footnote in  
15          there, it talks about you can use breathing zone  
16          air samples. We've never done that yet, I  
17          don't think, but it certainly would be a viable  
18          option if you could show the breathing zone data  
19          were pretty good, I mean, they were really lapel  
20          air sampling, that sort of thing.

21          And then of course, you need to talk  
22          about external dosimetry type measurements,  
23          that measure beta, gamma, neutron, that sort of

**NEAL R. GROSS**

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

1 thing.

2 So it outlines here sort of the  
3 criteria to look at, not all inclusive of what  
4 should be evaluated when you have in vitro  
5 measurements, in vivo measurements, that sort  
6 of thing. I won't read all the criteria, but  
7 they're in there. And then the last section  
8 talks about external.

9 So here we're just trying to vet the  
10 quality of the data. Is the data useful? The  
11 next step goes into the completeness of the  
12 data.

13 MEMBER LEMEN: Can I ask --

14 CHAIRMAN MELIUS: Yes, sure.

15 DR. NETON: Yes, maybe I should stop  
16 after each section.

17 MEMBER LEMEN: Is there --

18 MEMBER MUNN: Microphone.

19 MR. KATZ: Use the microphone please.

20 MEMBER LEMEN: Sorry. Is there good  
21 compatibility between the time frames the  
22 samples are taken? In other words, does the  
23 methodology of sampling techniques change from

**NEAL R. GROSS**

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

1 one decade to the next decade?

2 DR. NETON: It can, yes.  
3 Definitely.

4 MEMBER LEMEN: And how do you adjust  
5 for that?

6 DR. NETON: Yes, well that needs to be  
7 taken into consideration, the temporal nature  
8 of the quality of the data. And I think it's  
9 somewhere in here. Dr. Melius raised that same  
10 issue the last time. And you're right, you  
11 can't take a 1950s technology -- or,  
12 conversely, take a 1980s technology and say  
13 that applies all the way back.

14 MEMBER LEMEN: Well, what I wanted to  
15 see was how you adjusted to that, and what you  
16 did, and if that's later on, why we --

17 DR. NETON: Well, actually, this is a  
18 --

19 CHAIRMAN MELIUS: I was going to say,  
20 it's always going to be applied case by case or  
21 site by site. So I think it -- we're just  
22 trying to get the general areas of  
23 consideration that need to be taken into

**NEAL R. GROSS**

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

1 account when developing the model.

2 But it's going to be a -- and certainly  
3 there's lots of examples that I can think of  
4 where we've taken -- we've either had an SEC  
5 because of a problem with an older monitoring  
6 method, from a lot of the early ones. There  
7 weren't monitoring methods available or they  
8 were very crude relative to what would be needed  
9 for dose reconstruction.

10 So I think we have a fairly -- a fair  
11 amount of experience with that. You know, if  
12 I remember, specifically with Fernald, but I  
13 think recently the partial -- the SEC was based  
14 on a problem with the --

15 DR. NETON: I think that was the in  
16 vivo data at Fernald.

17 CHAIRMAN MELIUS: Yes, right. In  
18 vivo data, right.

19 DR. NETON: So yes, this document, I  
20 think, it tends to talk about what you need to  
21 look at, and why, not necessarily exactly how  
22 to evaluate. It's a sort of a general  
23 guidance.

**NEAL R. GROSS**

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

1           There is a section here at the end of  
2           that, that does talk about looking at the  
3           detection limit of the system. For example,  
4           oftentimes with thorium measurements you --  
5           thorium urinalysis is a very poor measure of how  
6           much you expose. It has a very poor detection  
7           limit. And so you could inhale a lot of thorium  
8           and not be excreting much in your urine.

9           So in those cases, even if you have a  
10          lot of data, you might say well, does my  
11          coworker model provide me plausible values? I  
12          mean, you could say well it's less than X, which  
13          is a very high number, but is that really a  
14          reasonably accurate value?

15          So you need to take that into  
16          consideration as well. So that's the sort of  
17          -- it's sort of scripted out here. The in vivo  
18          section does talk about using the progeny, the  
19          -- not measuring the radionuclide directly  
20          because sometimes, like thorium doesn't have  
21          any usable photons, so you start using some of  
22          the daughter progenies.

23          And you have to think about the

**NEAL R. GROSS**

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

1 implications of that, and are they in  
2 equilibrium or are they not, and if they aren't,  
3 how do you adjust it, that sort of thing. So  
4 there's a lot of things that need to be  
5 considered.

6 And I wouldn't want to begin to cover  
7 each and every one of those in this document.  
8 So this is sort of a general road map. Okay.  
9 Any more questions on data adequacy?

10 Okay, data completeness, this is  
11 where you need to look at to see if the data  
12 actually measured -- had a reasonable handle on  
13 the measure -- on the exposed population. Did  
14 they monitor enough people, and enough people  
15 by job category, for example, of the people that  
16 were exposed?

17 I think I called this a gap analysis,  
18 looking for, you know, first temporally by  
19 years. Do you have data for every year? If  
20 not, there are years missing, you need to figure  
21 out why they're missing.

22 Maybe there's good reason for it, the  
23 plant was shut down. If not, maybe rethink

**NEAL R. GROSS**

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

1 about what you can do in those years. But then  
2 you need to go back and look and see, are the  
3 work categories that were represented in those  
4 facilities adequately monitored.

5 I have an example here that came out  
6 at one of the -- you have that table, I think,  
7 is down there. Yes. This is a good example I  
8 just threw in. I thought it was pretty  
9 appropriate. SC&A had mentioned this and I  
10 thought, yes, it makes some sense.

11 This is where an SEC was added at the  
12 Nevada Test Site. And we, you know, originally  
13 our contention was, well we have a lot of  
14 monitoring data. We have 290 samples here, of  
15 a lot of workers.

16 But when you really do an analysis of  
17 the job categories that were monitored, in this  
18 particular case more than 2/3 of the samples  
19 were taken on the rad safety staff, while the  
20 other workers were not very well represented.

21 Now, if one could argue, and make the  
22 case that the rad safety staff are the highest  
23 exposed, okay. But if that's not the case, now

**NEAL R. GROSS**

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

1 you got a problem.

2 And so that's all this section is  
3 trying to say, is you need to look at the data,  
4 and do so qualitatively and quantitatively and  
5 establish that, you know, you really can bound  
6 these different categories of exposed workers.

7 Okay. So that's pretty much that in  
8 a nutshell. I think the table does a good job,  
9 kind of driving that home. Of course, you  
10 know, there's language in there about looking  
11 at the magnitudes of the exposures.

12 Very small exposures, you might not  
13 see a lot of monitored workers, or if there  
14 were, you know, special considerations you need  
15 to consider. But in general, I think this is  
16 the way it should go. Okay Stu, you can keep  
17 moving down.

18 Yes, I kind of went over this, so you  
19 can read this again, but I just want to -- okay,  
20 the next section talks about, now that -- if we  
21 believe that we have enough monitored workers,  
22 and who were monitored in the different job  
23 categories, we also need to look and decide --

**NEAL R. GROSS**

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

1 oh, sorry.

2 CHAIRMAN MELIUS: Can we just stop  
3 for --

4 DR. NETON: Oh I'm sorry, yes.

5 CHAIRMAN MELIUS: -- comments or  
6 questions? Unfortunately some of us have been  
7 so close to this, and sort of, so I could  
8 recognize where you had updated it that --

9 DR. NETON: Yes.

10 CHAIRMAN MELIUS: -- so we could keep  
11 review. At least in my mind, this is sort of  
12 an important section that we need to be able to,  
13 you know, as part of our evaluation, sort of  
14 need to hear about when we're looking at a  
15 coworker model.

16 Because it -- by the time a coworker  
17 model comes out this is often hidden. I mean,  
18 this is hidden behind the model. And in terms  
19 of the judgment that goes into it, in -- I mean,  
20 and I think many of these factors have been  
21 evaluated and looked at.

22 I don't think, again, we've always  
23 looked at them ourselves during the process,

**NEAL R. GROSS**

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

1 and there have been problems. We've seen a  
2 number of SECs where, when we've sort of poked  
3 behind the model we've raised questions.

4 But it's -- you know, I think we need  
5 to urge the other Board Members to sort of look  
6 at this and sort of think about what other  
7 questions you might have if you were  
8 evaluating, you know, the presentation of a  
9 coworker model about the data.

10 I've got a few things I want to add  
11 here, and I think -- everybody to look at  
12 because again, I think it is an important part  
13 of this.

14 MEMBER RICHARDSON: Can I ask one  
15 question? That -- just a -- in that, in the  
16 table, the -- what's just an illustration of a  
17 problem, if you could scroll back up to that  
18 Table 1.

19 DR. NETON: Okay.

20 MEMBER RICHARDSON: Where just in the  
21 last period there are -- there's the bulk of the  
22 bioassay monitoring for people other than rad  
23 safety staff. It's the bottom right hand

**NEAL R. GROSS**

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

1 corner where all of a sudden 73 --

2 DR. NETON: Security?

3 MEMBER RICHARDSON: -- out of 74, is  
4 that all like exit bioassay? Is that -- or was  
5 it -- what drove that to happen, do you know?

6 DR. NETON: I honestly don't  
7 remember. I don't think it was exit bioassay,  
8 though. I think security just were added in  
9 the '81 to '92 period. I don't recall why, to  
10 be honest with you.

11 MEMBER RICHARDSON: Okay.

12 CHAIRMAN MELIUS: Yes. If you go  
13 back to the NTS report, there's a -- at least  
14 the SC&A review is a fairly extensive analysis  
15 of this. Because this took us a while to sort  
16 of get on top of and sort of understand, and  
17 there was a lot of back and forth as to, about  
18 the data set and was it appropriate.

19 But as I recall, a fairly good  
20 analysis that those, that the rad safety  
21 workers really didn't, really were not  
22 representative of the other people doing the  
23 site. And it was more than just sort of a

**NEAL R. GROSS**

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

1 qualitative assessment, it was also looking at  
2 the data from a --

3 DR. NETON: Yes, there were other  
4 issues with the Nevada Test Site. They tended  
5 to be episodic samples versus routine, and we  
6 had a -- you know, when you develop a chronic  
7 exposure coworker model and these are episodic,  
8 incident-driven samples, how does that chronic  
9 model really fit the picture?

10 And we're going to talk about that.  
11 That's a good segue into this next section.  
12 You know, so now that you have the technical  
13 adequacy of the data, and you feel like you've  
14 got a fairly complete picture of who was  
15 monitored and why, and it seems okay, you still  
16 need to consider the type of monitoring  
17 programs that were applied to these workers.

18 We outline the three types that we can  
19 think of, which are the routine representative  
20 sampling of the workers, routine measurements  
21 of the workers with the highest exposure, or  
22 incident samples.

23 Those are the three major ways that

**NEAL R. GROSS**

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

1 monitoring programs sort of come about, and you  
2 need to look at each of those populations and  
3 say, were they all -- if you want to combine it  
4 into one coworker model, first of all, were they  
5 all routine samples, yes or no?

6 If, for example -- and this comes up  
7 very frequently, and right now we're discussing  
8 this at the Savannah River Site, where building  
9 trades workers only monitored on an incident  
10 basis whereas everyone else in the plant who  
11 were doing routine ops were monitored on a  
12 routine basis.

13 Well, it's hard to convince myself  
14 right now that you can actually combine those  
15 two into one general coworker model. That's  
16 what we're saying. So this section goes into  
17 that in some detail about how one needs to look  
18 at that.

19 A good way to, of course, reevaluate  
20 if there's a routine program is to go look at  
21 the radiological control program  
22 documentation. It should spell out who was  
23 monitored under what frequency and that sort of

**NEAL R. GROSS**

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

1 thing.

2 But then it's -- you have to do a  
3 little more than that. You also have to go and  
4 make sure that they actually did that. Some  
5 sites had very -- well, documents with very good  
6 intentions, because of funding or whatever,  
7 didn't actually end up following up and  
8 collecting the samples that they thought they  
9 were. So you need to get some indication that  
10 that occurred.

11 So that's all kind of spelled out  
12 here. There's a special category that we put  
13 in there, which I think is a special category  
14 of routine, although maybe not really, which is  
15 people that worked on very short duration  
16 campaigns or projects, where it was short  
17 enough where they would just take maybe a  
18 beginning and an end sample.

19 And those are probably routine in a  
20 way because the project was short enough you  
21 could use those data for that specific group of  
22 workers to reconstruct their exposures. So  
23 that's discussed in here to some extent.

**NEAL R. GROSS**

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

1           And the last piece of this,  
2 applicability of the monitoring data, I think  
3 Stu, if you scroll down to the end, maybe I'm  
4 wrong. What else is in here? No, that's not  
5 -- I think I covered all that.

6           I meant to say, in the last section  
7 under completeness, you also needed to go and  
8 look -- we need to look at if you're using data  
9 sets provided by the site or epi studies or  
10 whatever, you need to kind of make sure that you  
11 have -- the data set has all the monitoring data  
12 in it.

13           I mean, if for some reason there are  
14 gaps, the computer program didn't collect all  
15 the data or it got lost, that needs to be  
16 evaluated. And that can be done by going back  
17 and looking at some of the original records, if  
18 you have them, or some reports that said, in  
19 1955 we took 10,000 samples, or by month, it was  
20 this.

21           You go in your data base and get  
22 yourself a good feeling that you have those,  
23 that many samples in there, or the fact that

**NEAL R. GROSS**

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

1 incident samples were always collected  
2 separately and aren't in this data base. Well,  
3 you need to know that. So that's something  
4 that needs to be considered.

5 Okay, any questions on that? I think  
6 we're okay. The third section here is the  
7 analysis of the data, and this is basically what  
8 we just talked about, how one can generate these  
9 distributions using the 50th and 84th  
10 percentile to analyze the data. And we would  
11 use the 95th percentile of the data.

12 If you had coworker models, all  
13 routine, and you had construction workers in  
14 there that were routinely monitored, they would  
15 be given the 95th percentile of the exposure  
16 because they are presumably a much higher, more  
17 highly exposed than say a person who was  
18 intermittently present in the plant, during  
19 things like walk-arounds, security guards,  
20 clerks, that sort of thing. They would get the  
21 50th percentile.

22 So that's -- this just speaks to that  
23 type of a scenario, how you -- what do you do

**NEAL R. GROSS**

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

1 with the data once it's all good to go, so to  
2 speak.

3 It talks about this OPOS scenario,  
4 where one person, one statistic for monitoring  
5 interval, and it refers, actually to Report 53,  
6 which is out there, that discusses this OPOS,  
7 has been updated to include this one person, one  
8 sample, and the fact that it's a time-weighted  
9 average that goes backwards in time, averaging,  
10 rather than forward in time, and a little bit  
11 about how to deal with negative values.

12 We don't -- we won't use negative  
13 values in doing these time-weighted averages.  
14 We've come to that conclusion. So that's what  
15 this section deals with. It's fairly  
16 straightforward.

17 Okay, the final section -- oh well,  
18 just one -- the time interval of the modeled  
19 data, we talked about this at some length during  
20 the Working Group meetings.

21 Oftentimes we have an annual sample on  
22 workers, and we'll be using that. But in some  
23 cases, when the data are sparse, can you lump

**NEAL R. GROSS**

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

1 some data together? And we feel that you need  
2 at least 30 samples in a monitored interval,  
3 that one monitored period for good statistical  
4 considerations.

5 And if you're going to do that, you may  
6 be able to group years together, several years,  
7 as long as you can demonstrate that the work  
8 practices and processes remain the same over  
9 that time period.

10 This says here at the end that those  
11 intervals should not exceed a three year  
12 period, unless there's stringent justification  
13 for doing so, and that's where it remains.

14 I originally had five years, but I  
15 went and back and checked our original Report  
16 53 and it did say three years. So that's -- at  
17 least we're now consistent with our own  
18 internal documentation. I can't remember all  
19 these numbers.

20 Okay. So any questions on that, the  
21 analysis section?

22 So now we get to Section 4, which I  
23 said is still a little soft. I'm not -- we're

**NEAL R. GROSS**

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

1 not done with this yet, at least in my opinion.  
2 You could tell by what I just described that  
3 there's a pretty good process of what needs to  
4 be considered on how to stratify the data.

5 And if any of those conditions are  
6 met, I think you just need to stratify. I mean,  
7 if you can show that trades workers were  
8 incident-driven samples and bioassay, and they  
9 were different than the routine process  
10 workers, you know, I think one needs to stratify  
11 no matter what statistic.

12 You know, you don't need a statistical  
13 analysis to do that, because you've decided, a  
14 priori, that these are different populations to  
15 begin with. So that leaves the question in my  
16 mind open about when one would actually go about  
17 doing statistical tests on these data sets.

18 And we left it at the Working Group  
19 discussion level that we would -- we're going  
20 to go back and do some example analyses to see.  
21 I think it's best accomplished looking at some  
22 examples.

23 I -- right, in my mind right now I'm

**NEAL R. GROSS**

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

1 not really sure how that's going to play out.  
2 So right now, this is written very much in line  
3 with what Report 53 says, which is this Monte  
4 Carlo permutation test or the Peto-Prentice  
5 test, it is a statistical test that can be used.

6 I'm 100 percent certain when this  
7 would actually, in fact, be appropriate. And  
8 so this section is sort of on hold right now  
9 until I -- we get some examples together and can  
10 talk a little more concretely about it.

11 I think that concludes my quick  
12 perusal through the document.

13 CHAIRMAN MELIUS: Are there comments  
14 or questions? Brad, Gen, Loretta?

15 MEMBER CLAWSON: Jim, I understand  
16 where you're getting at to this, but to me, this  
17 all comes back to the data that we have, and how  
18 good it is. This is correct, right?

19 DR. NETON: Yes.

20 MEMBER CLAWSON: I'm looking at that  
21 30 percent there, and -- or 30 samples. And  
22 when you're looking at a workforce of maybe a  
23 thousand people there, that's -- I'm not the

**NEAL R. GROSS**

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

1 sharpest tool in the shed here, but it looks  
2 like there's some pretty big gaps in there.

3 DR. NETON: Well, and I think there's  
4 some caveats in there, that says 30 samples is  
5 a minimum but you need to look at the population  
6 of monitored --

7 MEMBER CLAWSON: Population, okay.

8 DR. NETON: -- workers and that sort  
9 of stuff. Yes, it wasn't the intent that no  
10 matter what you could use 30 samples. I agree  
11 with you. But again, 30 samples -- if you had  
12 50 people working on a glovebox operation for  
13 a year, and you had 30 samples, and they were  
14 the highest exposed workers on the glovebox  
15 line and you could establish that somehow,  
16 maybe that's okay.

17 MEMBER CLAWSON: Okay.

18 DR. NETON: So that's all we're  
19 trying to convey there.

20 CHAIRMAN MELIUS: Again, just -- I  
21 think I said this a little bit before, but I  
22 think what we've been trying to do is what do  
23 we need to look at up front before we get into

**NEAL R. GROSS**

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

1 stratification? What information do we need  
2 to have, and have evaluated, probably more  
3 qualitatively than quantitatively?

4 But -- and with, you know, a fair  
5 amount of judgment and a fair amount of  
6 information about the site. It's always going  
7 to be specific to the site.

8 But then I think if the -- when I was  
9 reviewing one of the earlier back-and-forth  
10 reviews from SC&A and, I think, NIOSH's  
11 response to it and so forth, I mean, I could come  
12 up -- I think they were both right and they were  
13 both wrong in the sense that you could come up  
14 with scenarios or situations where, you know,  
15 whether you could stratify and how you would  
16 handle that stratification would be quite  
17 different depending on the circumstances at a  
18 particular site.

19 And so I think if we can sort of  
20 systematize and get a better set of guidelines  
21 on what we need to look at, I think it becomes  
22 then easier to decide, is 30 the right number  
23 or, you know, and some of these other sort of

**NEAL R. GROSS**

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

1 more statistical issues.

2 At least we have sort of a --

3 MEMBER ROESSLER: You need a  
4 threshold.

5 CHAIRMAN MELIUS: You have a  
6 threshold but you also have sort of a factual  
7 background that you understand what's going on  
8 at that site. So that's what we're trying to  
9 do, and it's probably why we've more heavily  
10 weighted the beginning of this thing, report,  
11 and got the implementation guidelines.

12 And I think the other will follow from  
13 that. And I actually think, as the results of  
14 our Work Group discussions, some of those  
15 issues that we were going back and forth on, on  
16 OPOS and so forth have become less troublesome,  
17 so to speak, or less of an issue.

18 So I think it's the, sort of the right  
19 way to go. And again, many of these factors  
20 probably were considered in developing  
21 coworker models, they just weren't made  
22 explicit in terms of how it was presented to us.

23 Gen?

**NEAL R. GROSS**

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

1           MEMBER ROESSLER: We have a Board  
2 with a wide range of perspectives and  
3 background knowledge on this subject, and I  
4 think it's really important at this point to  
5 help move this forward, that Board Members do  
6 submit written comments to Jim in the next  
7 couple of weeks. I think that's the most  
8 important step in moving this forward.

9           CHAIRMAN MELIUS: Loretta?

10          MEMBER VALERIO: I guess my question  
11 is, the coworker models that we're looking at  
12 right now are based on chronic exposures,  
13 that's correct?

14          DR. NETON: Yes.

15          MEMBER VALERIO: I would assume all  
16 of these sites had projects that were short  
17 duration, which you did address. At any point  
18 do you anticipate that a coworker model for  
19 acute exposures would be established?

20          DR. NETON: I didn't cover it in my  
21 discussion, but the document does allow for it.  
22 Incident-driven coworker models may be  
23 appropriate, particularly in the more current

**NEAL R. GROSS**

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

1 era, when you have very good workplace controls  
2 that are -- that can be demonstrated, where  
3 there are, you know, continuous air monitors,  
4 people frisked in and out of the area, that sort  
5 of thing.

6 And so if you're comfortable that you  
7 can believe that there were no upset conditions  
8 that occurred that weren't caught somehow, and  
9 if that's true, then I think you could use an  
10 incident-type model.

11 But you -- and I think it says in  
12 there, you have to be very careful about that.  
13 You know, your documentation has to be almost  
14 impeccable to be able to do that, but I think  
15 it's a -- could be allowed for, particularly  
16 post 1990, where, you know, you have, almost  
17 everybody is supposed to be on a monitoring  
18 program if they had a 100 millirem potential  
19 exposure for internal, those sort of things.

20 And, you know, but you always have to  
21 allow for some gaps and technology shortfalls  
22 and stuff, so you may be able to do an  
23 incident-based model in that scenario.

**NEAL R. GROSS**

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

1 CHAIRMAN MELIUS: Other comments or  
2 questions? Any Board Members on the telephone  
3 have comments or questions at this point?

4 MEMBER FIELD: This is Bill. I don't  
5 have any questions. A lot of this is, has  
6 stayed relatively the same over the past year  
7 or so, hasn't it?

8 DR. NETON: What was that, Bill? I'm  
9 sorry.

10 MEMBER FIELD: I said, most of this is  
11 relatively constant. There's not a whole lot  
12 new here, is there?

13 DR. NETON: There's a whole lot new in  
14 the sense that it's in writing now.

15 MEMBER FIELD: Okay. But this is the  
16 same concept that you had discussed previously?

17 DR. NETON: Yes, yes. They've  
18 crystallized a little more, and there's some  
19 more caveats in there, and maybe some scenarios  
20 that I wake up at night and think about --

21 MEMBER FIELD: Yes.

22 DR. NETON: -- and put in there, but  
23 in general, it's the same.

**NEAL R. GROSS**

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

1                   MEMBER FIELD: But it's nice having  
2 it down on paper that we can provide comments.  
3 Thanks.

4                   DR. NETON: Yes, okay.

5                   CHAIRMAN MELIUS: Yes. I think the  
6 -- I mean, the example of, evolution has been  
7 on some of the stratification issues between  
8 incidence-based and routine monitoring and,  
9 you know, when is that appropriate, when do they  
10 need to be separated and so forth.

11                   So, but there's been some changes.  
12 But it's, again, getting it down in writing, I  
13 think, is what's -- you know, what, as Jim said,  
14 is what's most important.

15                   DR. NETON: I think what's changed,  
16 most significantly, is if you recall early on,  
17 we were trying to come to grips with some  
18 practical level of significance and difference  
19 between models.

20                   We were kind of approaching it from  
21 the backwards situation where we were looking  
22 at this 100 millirem dose, and then I proposed  
23 this model of using the full distribution

**NEAL R. GROSS**

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

1 versus the 95th.

2 That's all sort of by the wayside  
3 right now, because frankly, none of it seemed  
4 to work. And I like this approach better where  
5 you just identify, do you need to stratify, yay  
6 or nay, and then go ahead and do it if the  
7 conditions are such that it need be.

8 CHAIRMAN MELIUS: Any other Board  
9 Member comments and -- so the, I mean, I think  
10 the one thing I'd also mention is that, in terms  
11 of the, what do you call it, the rule of 30 or  
12 whatever is, it's also, I think we have to  
13 remember that when we have a situation where  
14 there's very low exposures, residual periods  
15 and so forth, I think those you sort of approach  
16 differently than you would a situation where  
17 you may have very high exposures within a site.

18 And so that has to be taken into  
19 account also. I think what -- as Jim was  
20 saying, we were -- we tried -- we started  
21 dealing with this on the sort of statistical  
22 level, so the problem we got hung up on was just,  
23 you know, and some of what we did on sufficient

**NEAL R. GROSS**

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

1 accuracy, what was helpful for us to  
2 understand, but it's just very hard to -- it  
3 gets very complicated.

4 And I'm not sure that the situations  
5 are comparable enough at each site that a very  
6 statistical approach is going to be practical.  
7 I think that's sort of what we found. Every  
8 site is different enough, has a different set  
9 of records.

10 And I think the other thing we have to  
11 remember, take into account, is that even if  
12 sort of theoretically we can identify, stratify  
13 groups and so forth, we got to be able to place  
14 people within those strata. And very often the  
15 records just don't exist.

16 You know, employment records aren't  
17 such that you can tell. And, I mean, that's  
18 sort of something we need to take into account.  
19 But that's often been the problem we've had with  
20 a number of the other coworker models in the  
21 past.

22 They're fine, theoretically, and in  
23 general the data supports it, but when you go

**NEAL R. GROSS**

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

1 to then apply it to individuals, it just, the  
2 information isn't there. And I think we have  
3 to think -- I mean, it doesn't say we can't apply  
4 some of these in those situations, but we have  
5 to really think carefully how we do that. Yes,  
6 Dave?

7 MEMBER RICHARDSON: You know, the  
8 rule of 30 is sort of, I think it's -- the way  
9 that the approach is developed, I think it makes  
10 sense. And on the other hand you could argue  
11 the opposite, that as the data become more  
12 finely stratified you may not need as many  
13 observations.

14 And it seems like they -- I guess the  
15 extreme would be if you imagined two workers set  
16 out to do a task and only one of them was  
17 monitored. And that would be sometimes how you  
18 would describe coworker settings, that there  
19 was --

20 DR. NETON: Yes, for example, six  
21 workers. Yes.

22 MEMBER RICHARDSON: Right, where  
23 it's -- there was a lot of knowledge that there

**NEAL R. GROSS**

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

1 was similarity of the task and the work  
2 experience and the environment that they were  
3 going into, and you would issue one badged. So  
4 you wouldn't say you need 30 workers to be  
5 badged to, you know, to kind of protect or  
6 monitor the 31st.

7 You might have -- they might work as  
8 a team, and then have one observation measured  
9 and the other one -- right. But I -- so I mean,  
10 it's -- but the problem, as you're saying is,  
11 that would be the extreme, where you had a lot  
12 of knowledge to place those people into the same  
13 time and area and task. You wouldn't need very  
14 much information to be sort of confident about  
15 understanding their exposure.

16 And I guess what we're describing is  
17 we're using coworker monitoring, not the way  
18 that some people do in radiation protection,  
19 that would issue a badge to a group of workers  
20 who are going to be doing things, but turning  
21 the world on its head.

22 MEMBER ANDERSON: Like we did  
23 yesterday, when we had one badge for five slots.

**NEAL R. GROSS**

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

1 But then we loaned our badges --

2 CHAIRMAN MELIUS: I -- okay. I  
3 wasn't aware of that.

4 MEMBER ANDERSON: So we have personal  
5 experience.

6 DR. NETON: In our part we call that  
7 cohort badging.

8 CHAIRMAN MELIUS: Yes. I think the  
9 other factor that I have some trouble thinking  
10 how -- I'm not sure how important it always is,  
11 but I think we sort of have to take into account  
12 is what is the gap we're trying to fill and how  
13 much data do we have?

14 If we have really good data for every  
15 year but one, and, you know, it's a sort of a  
16 production workforce that's, you know, going to  
17 be there for a long period of time that we're  
18 looking at, I think we're more comfortable with  
19 a coworker model and what data that that's based  
20 on.

21 If we have, you know, we're missing  
22 lots of years on everybody, and a very small  
23 percentage of the workforce has been monitored,

**NEAL R. GROSS**

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

1 and there's a lot of variability, and there's  
2 high exposures and so forth, then I think we  
3 have to have more stringent criteria in terms  
4 of whether we -- how good is the coworker model,  
5 because, you know, to do that.

6 And in some ways it's a statistical  
7 judgment, but I just don't think we can get  
8 there very easily. I think it's more going to  
9 be judgment, but we need to be able to look at  
10 that. Andy?

11 MEMBER ANDERSON: Yes, I was just  
12 looking at this and thinking in terms of, do you  
13 see us being able to, in a general sense,  
14 convert this into a bit of a checklist?

15 I mean, when we get your SEC and you  
16 say, well, you know, here's how much data there  
17 is there, and we believe we can only do this,  
18 you know, we're denying an SEC because we can  
19 use a coworker model, then we have to start to  
20 try to qualify -- is that useful?

21 Can you convert this, in a general  
22 sense, into, you know, a checklist like we've  
23 done with some of the -- I mean, you can't, I

**NEAL R. GROSS**

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

1 think --

2 DR. NETON: Yes. I would certainly  
3 entertain any suggestions to do so.

4 MEMBER ANDERSON: Well, that's -- I  
5 don't know. I was -- but that's what I was  
6 talking to the --

7 DR. NETON: But yes, we talked about  
8 that earlier, you know, a table or something  
9 like that to -- and that's possible. I mean,  
10 it would be a general checklist because again,  
11 we're not trying to cover this --

12 MEMBER ANDERSON: A descriptive  
13 checklist, yes --

14 DR. NETON: We're not trying to cover  
15 this --

16 MEMBER ANDERSON: -- like the  
17 30-number or what are the characteristics that  
18 you're hoping to fill here, rather than just  
19 saying we're going to -- and here's the model  
20 we're going to use, and we -- I mean, that's --

21 DR. NETON: Yes. It could be fairly  
22 easily converted to some sort of -- but it  
23 wouldn't be perfect, because again, it's a --

**NEAL R. GROSS**

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

1 MEMBER ANDERSON: No, no. It  
2 wouldn't be --

3 DR. NETON: -- qualitative judgment.

4 MEMBER ANDERSON: -- you have to meet  
5 these, but it would be helpful as a descriptive  
6 thing when we're looking at these, to say you're  
7 going to -- I was looking at and I'm trying to  
8 -- I don't know if I could do that, but I'm  
9 asking you to do it.

10 DR. NETON: I think I -- it could be  
11 done.

12 MEMBER ANDERSON: Yes, okay.

13 MEMBER ZIEMER: Yes, I don't think  
14 it's quite a checklist but we -- these are  
15 criteria, and I think we would expect NIOSH and  
16 SC&A both to look at data sets, and examine how  
17 each of these issues was addressed for a given  
18 situation or a given site. So if that's a  
19 checklist, it --

20 MEMBER ANDERSON: Well, that's what I  
21 meant.

22 DR. NETON: Follow -- yes.

23 MEMBER ZIEMER: We have other

**NEAL R. GROSS**

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

1 criteria that we use, like the surrogate data  
2 issue. And it's not quite a checklist, but you  
3 have to say, how did you evaluate against these  
4 criteria?

5 DR. NETON: That's true.

6 MEMBER ZIEMER: And then we have to  
7 examine whether or not we feel that that's met  
8 some sort of bar or a test level, you know.

9 DR. NETON: Not unlike what we do for  
10 surrogate data. I mean, there are four or five  
11 criteria, and we drill down through them and  
12 say, okay, this -- is this met, is this met, is  
13 that met, is --

14 MEMBER ANDERSON: I think your  
15 categories here fit that --

16 DR. NETON: They do.

17 MEMBER ANDERSON: -- process. So I  
18 don't think you're missing anything.

19 CHAIRMAN MELIUS: Okay. The  
20 heartburn question, or the one that'll keep Jim  
21 up at night, and Stu, is, well, we've come up  
22 with these criteria, guidelines, whatever we  
23 want to call them, what does this say about past

**NEAL R. GROSS**

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

1 coworker data sets?

2 DR. NETON: I've already thought  
3 about that.

4 CHAIRMAN MELIUS: Yes. And I think  
5 -- and again, it's -- you know, is it worth --  
6 you know, when should we go back? Do we need  
7 to go back and, you know -- can we then --  
8 because I suspect, as I'm pretty sure that a lot  
9 of these, you know, criteria or guidelines,  
10 whatever you want to call them, have been taken  
11 into account.

12 We may not have all -- may have been  
13 not documented to us, or the documentation may  
14 not be as explicit as we thought, but -- or might  
15 want now, but it's, it may still be there, and  
16 they may not. But we've changed, you know, the  
17 criteria on stratification, so to speak.

18 That may be more of an issue, but it  
19 may not. I don't know. I don't know what  
20 situations -- again, because often some of the  
21 practical issues about a site, particularly  
22 would the employment records support a  
23 differentiation between different types of

**NEAL R. GROSS**

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

1 workers, you know, may, you know, sort of have  
2 obviated stratification.

3 So, and they may already be SECs or  
4 whatever. But I think we can cross that  
5 bridge, and Jim will have a few sleepless  
6 nights.

7 DR. NETON: That's one thing that  
8 I've been thinking about. You just mentioned  
9 it, Dr. Melius, is that many of the coworker  
10 models that we developed early on, the sites  
11 have become SECs for very large portions of  
12 where the models apply.

13 CHAIRMAN MELIUS: Yes.

14 DR. NETON: And then what does that  
15 mean in terms of sufficient accuracy, you know,  
16 that kind of thing for the non-presumptive  
17 cancers that we're reconstructing. I'm  
18 wrestling with that right now.

19 CHAIRMAN MELIUS: Yes, yes.

20 MEMBER MUNN: But it's still unlikely  
21 that there are any salient criteria that  
22 haven't been a part of the conversation. The  
23 fact that they aren't a part of our written

**NEAL R. GROSS**

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

1 documentation doesn't mean that they haven't  
2 been considered and addressed in some way. But  
3 -- yes, we still don't know what they are.

4 CHAIRMAN MELIUS: Yes. Yes, that's  
5 what I was saying. I think the, maybe the more  
6 relevant question is have they been  
7 consistently applied.

8 MEMBER MUNN: Yes.

9 CHAIRMAN MELIUS: And I think that's  
10 -- I think that's what we found, for example,  
11 I think, with surrogate data, was that we -- and  
12 even with the SEC evaluations, we -- there was  
13 nothing new in either of those documents, in  
14 terms of what had been done, but there were, you  
15 know, a few sites that, where those that there  
16 had been, you know, some pretty significant  
17 inconsistencies in our approach.

18 And some of that's just time. Some of  
19 it's, you know, information, what was available  
20 at one time and not at another and, you know,  
21 over the 102 meetings, we -- the Advisory  
22 Board's decision-making has certainly changed  
23 or evolved. Evolved, that's a better word for

**NEAL R. GROSS**

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

1 it.

2 MEMBER MUNN: Absolutely.

3 CHAIRMAN MELIUS: Okay. Any other  
4 questions, comments? Okay. I saw you sitting  
5 on the edge of your seat there. We're in --  
6 we've been so much trouble recently or  
7 something that we have two lawyers here today  
8 to keep an eye on us.

9 MS. LIN: So if any Board Member felt  
10 compelled to submit a written comment  
11 addressing this document or this, the  
12 application of it, please coordinate with Ted  
13 Katz so we can preserve the Board's  
14 deliberative process.

15 CHAIRMAN MELIUS: Well, that was  
16 easy. Yes. We've got a few minutes. Any  
17 items we can do, or work items we can do quickly?  
18 Meeting times?

19 MR. KATZ: Meeting times? We can do  
20 that. Yes, sir. So, let me just remind you  
21 all of what we have already scheduled. Yes,  
22 I'm sorry. Thank you.

23 So what we already have scheduled is,

**NEAL R. GROSS**

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

1 looking forward, January 6th, we have a  
2 teleconference. Then March 25th and 26th we  
3 have a meeting, place to be determined today.

4 And the next day, 27th -- I mean, NIOSH  
5 has said there may be a lot on the plate for that  
6 meeting, so that actually is -- that's a  
7 Wednesday and Thursday, 25th and 26th of March.  
8 I don't know whether, if we need to eat into,  
9 halfway into Friday, that might be possible for  
10 Board Members. We didn't really check about  
11 that at the time, but we'll see.

12 Then the next teleconference is June  
13 9th, and then the next Board meeting July 23rd  
14 to 24th. So that's what we have --

15 MEMBER ANDERSON: What was your first  
16 meeting?

17 MR. KATZ: I'm sorry. January 6th is  
18 a teleconference, 11 a.m.

19 CHAIRMAN MELIUS: And the second  
20 teleconference?

21 MR. KATZ: The second is June 9th.

22 MEMBER ANDERSON: Okay.

23 MEMBER VALERIO: And July is the 23rd

**NEAL R. GROSS**

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

1 and 24th?

2 MR. KATZ: July 24th -- right, for  
3 now, yes, 23rd through 24th, that's a Thursday,  
4 Friday, I believe, so that's as far as it would  
5 go. So --

6 CHAIRMAN MELIUS: And both of those  
7 -- the next two in-person Board meetings we have  
8 to decide on a location that --

9 MEMBER ANDERSON: Exactly, yes.

10 MR. KATZ: Right. Well, for the one in  
11 March, we should decide today.

12 CHAIRMAN MELIUS: Yes, definitely.

13 MR. KATZ: Right. So we talked about  
14 Richland is a possibility, for Hanford. I  
15 mean, the other two sites that come to mind,  
16 well at least one that may be right, I'm not  
17 sure. I'm always a little unsure, but I  
18 thought -- last I heard, Rocky Flats might be  
19 ready by March. Has that changed?

20 MR. RUTHERFORD: I don't know that  
21 it's changed. We have four or five issues that  
22 are open, and we have papers out on three of  
23 those, with another paper coming out shortly,

**NEAL R. GROSS**

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

1 probably within a week or two weeks.

2 And the only issue that's outstanding  
3 is this data falsification issue, which we're  
4 waiting for formal release of documents by the  
5 FBI. And that's kind of up in the air, that  
6 one, you know, because I just don't know, you  
7 know, that's another agency, and how quickly  
8 they're going to get those released, so.

9 MR. KATZ: Okay. But then it sounds  
10 like there's plenty of -- be plenty of material  
11 for a Work Group meeting and --

12 MR. RUTHERFORD: Oh yes.

13 MR. KATZ: -- without that, and  
14 depending on what comes of that, there may be  
15 good fodder for the Board meeting.

16 And so anyway, we have those two.  
17 Kansas City, my sense is that that's -- there's  
18 still a lot of work ongoing and that's not going  
19 to be ready by then.

20 CHAIRMAN MELIUS: Hanford, my  
21 understanding is there's active data that has  
22 been gathered, and is in process, and there's  
23 potential for Board action.

**NEAL R. GROSS**

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

1 MR. RUTHERFORD: Yes. Yes, in fact  
2 there's been interviews, data captured, and  
3 there's another data capture actually  
4 scheduled right now for early December. And  
5 there is an open issue that could drive some  
6 action for the March meeting.

7 MR. KATZ: So we have one bid from  
8 Brad for Hanford. Any reason -- anyone, any  
9 reason not to go to Richland?

10 We'll need to settle it today, because  
11 the process of making arrangements, that's got  
12 to get going.

13 CHAIRMAN MELIUS: Well, let's talk,  
14 throw Rocky into that. What I'm not sure about  
15 is how connected these issues are, in terms of  
16 decision-making. The Hanford one, the one I  
17 know about, is -- should be relatively  
18 straightforward.

19 MEMBER FIELD: Can your hear all  
20 that?

21 CHAIRMAN MELIUS: And it's a single  
22 issue, but the Rocky ones, I'm not sure where  
23 the data falls, but how that ties in to some of

**NEAL R. GROSS**

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

1 the other issues and what will be --

2 MR. RUTHERFORD: Well if you -- yes.  
3 If you look at the years associated with the  
4 potential falsification, I mean, it lines up  
5 with the years that we're looking at with other  
6 issues.

7 CHAIRMAN MELIUS: Oh, okay.

8 MR. RUTHERFORD: So, I mean, they're  
9 all roughly in the same time period that we're  
10 looking at, you know.

11 CHAIRMAN MELIUS: And I think the  
12 other, maybe another consideration is that  
13 where we hold the meeting doesn't preclude the  
14 Board taking action on the site. I think it's  
15 as much, do we need -- where have we been  
16 recently and where do we -- where would we,  
17 might benefit from further input.

18 We haven't been -- I think we've been  
19 to Rocky a lot more recently than Hanford.

20 MR. KATZ: Yes. It's been a few  
21 years for Hanford.

22 CHAIRMAN MELIUS: Yes. Since we've  
23 visited Wanda there.

**NEAL R. GROSS**

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

1 MR. KATZ: Yes. And Josie, yes.

2 CHAIRMAN MELIUS: And I'm not sure  
3 which one is easier to get to at the end of  
4 March, or get out of, I guess is the --

5 MR. KATZ: Well, Wanda made  
6 assurances, previously, that Hanford would be  
7 fine, Richland would be fine in March.

8 CHAIRMAN MELIUS: Yes, well Brad  
9 claims it never snows in Idaho Falls either.  
10 Hanford? Yes, okay. Sounds good.

11 MR. KATZ: Okay. Let's do that,  
12 then. Very good. Thanks. That's helpful.  
13 So we've settled that. Now, just for  
14 scheduling further out, so I have, for the next  
15 teleconference, again, the last meeting now  
16 scheduled, the latest meeting is July 23rd  
17 through 24th.

18 We need a teleconference, and  
19 ballpark, you know, timing for that would be  
20 September 21st, that week. But it can fall on  
21 either side of that week, too. September 21st  
22 is about the right timing. So look at that week  
23 first. If that week's not good, then we can go

**NEAL R. GROSS**

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

1 before or after, too.

2 MEMBER MUNN: I suggest the previous  
3 week, the week of the 14th.

4 MR. KATZ: You're not available the  
5 week of the 21st, is that what you're saying,  
6 Wanda?

7 MEMBER MUNN: No, I could do it.  
8 Just September, but it seems the preceding week  
9 might be a little easier.

10 CHAIRMAN MELIUS: Okay. Anybody  
11 have problems with either week, I guess is --  
12 David, do you have issues with --

13 MEMBER KOTELCHUCK: No, I was looking  
14 --

15 CHAIRMAN MELIUS: The other David,  
16 but you should --

17 MEMBER KOTELCHUCK: Oh, excuse me.

18 CHAIRMAN MELIUS: Yes, but --

19 MEMBER KOTELCHUCK: I was looking at  
20 my -- the -- I was looking at Rosh Hashanah and  
21 Yom Kippur for some of us.

22 CHAIRMAN MELIUS: Yes, that's the  
23 week of the 14th. I've got it on my calendar.

**NEAL R. GROSS**

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

1 MEMBER KOTELCHUCK: Thirteenth, 14th  
2 is Rosh Hashanah, so that Yom Kippur would  
3 occur, if somebody will help me --

4 MEMBER MUNN: On the 23rd.

5 MEMBER KOTELCHUCK: Pardon?

6 MEMBER MUNN: On the 22nd.

7 CHAIRMAN MELIUS: 22nd, 23rd.

8 MEMBER KOTELCHUCK: Oh good. Okay.

9 MEMBER MUNN: One of the reasons I was  
10 suggesting the preceding week.

11 MEMBER KOTELCHUCK: 22nd, 23rd, yes  
12 there it is.

13 MR. KATZ: Okay. So recall, this  
14 just a teleconference. It's just that 11 a.m.  
15 call.

16 MEMBER KOTELCHUCK: Right. So  
17 Monday would certainly not -- Monday the 21st  
18 is not --

19 CHAIRMAN MELIUS: Yes.

20 MR. KATZ: Yes.

21 MEMBER MUNN: Yes, it is.

22 MR. KATZ: Yes. It's just a call,  
23 and it's -- we can either do it Wednesday,

**NEAL R. GROSS**

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

1 Monday, whatever.

2 MEMBER KOTELCHUCK: That's good.

3 MEMBER MUNN: Yes. Wednesday would  
4 be September 16th, the preceding day.

5 MR. KATZ: Well, the week of -- okay.

6 MEMBER KOTELCHUCK: That would work,  
7 the 16th.

8 MR. KATZ: So is that good, the 16th?

9 MEMBER RICHARDSON: The 16th is not  
10 good for me.

11 MR. KATZ: No, no, not good. But  
12 what about the --

13 MEMBER RICHARDSON: I can do anything  
14 else, but --

15 MR. KATZ: -- following week, the  
16 23rd?

17 MEMBER MUNN: 23rd?

18 MR. KATZ: Is that a --

19 CHAIRMAN MELIUS: Of September?

20 MR. KATZ: Yes. Teleconference.  
21 Is that good with everybody? Dave?

22 MEMBER KOTELCHUCK: One second.  
23 Looks good.

**NEAL R. GROSS**

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

1 MR. KATZ: Looks good, he says.

2 CHAIRMAN MELIUS: Okay.

3 MR. KATZ: Okay. So let's do that.

4 Bill Field, is that okay with you, too?

5 MEMBER FIELD: Yes, that works fine.

6 Thanks.

7 MEMBER KOTELCHUCK: The usual time?

8 MR. KATZ: Yes, 11 a.m. Eastern time.

9 MEMBER KOTELCHUCK: Okay, so that's  
10 September 23rd, 11 a.m.

11 MR. KATZ: Okay. And then for the  
12 next in-person meeting, the right ballpark is  
13 a year from now, November 2nd, the week of the  
14 2nd, the 9th, the 16th, that's the ballpark.  
15 Get it in before Thanksgiving for sure.

16 MEMBER ANDERSON: Not the first week.

17 MR. KATZ: Not the first week. So  
18 the week of the 9th, maybe?

19 CHAIRMAN MELIUS: We've got  
20 Veteran's day in the middle of that week,  
21 Wednesday.

22 MR. KATZ: Of the 9th?

23 CHAIRMAN MELIUS: Yes.

**NEAL R. GROSS**

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

1 MR. KATZ: It's on a Wednesday?

2 CHAIRMAN MELIUS: It's the 11th, yes.  
3 It's always on the 11th.

4 MR. KATZ: Always on -- okay.

5 CHAIRMAN MELIUS: It's one of the  
6 holidays we actually support on the actual day.

7 MR. KATZ: The actual day, right,  
8 regardless of what day of the week.

9 CHAIRMAN MELIUS: There's the 4th,  
10 and Christmas and a few others, but --

11 MR. KATZ: What about the week of the  
12 16th?

13 MEMBER ANDERSON: Of November?

14 MR. KATZ: Yes.

15 MEMBER ANDERSON: That would work  
16 better for me. Towards the end of that week.

17 CHAIRMAN MELIUS: So 18th, 19th or, I  
18 mean --

19 MEMBER MUNN: Wednesday and  
20 Thursday.

21 CHAIRMAN MELIUS: Wednesday,  
22 Thursday or --

23 MEMBER MUNN: Eighteenth and 19th,

**NEAL R. GROSS**

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

1 yes, that would be --

2 MR. KATZ: Eighteen, 19 are we  
3 saying? Okay. And Bill, on the phone?  
4 November 18th --

5 MEMBER FIELD: That sounds good.

6 MR. KATZ: Okay, super.

7 MEMBER KOTELCHUCK: Now this is the  
8 -- are we talking about --

9 MR. KATZ: This is an in-person  
10 meeting, November 18th and 19th of next year.  
11 Okay. Okay, that takes care of scheduling.

12 CHAIRMAN MELIUS: It's also the  
13 September, you know, may be, I mean -- not to  
14 predict anything politically, or not to let  
15 politics intrude on our efforts. Okay.

16 MEMBER KOTELCHUCK: This meeting's  
17 going to be done for --

18 CHAIRMAN MELIUS: Absolutely.  
19 Absolutely. It's -- that's -- I mean, will  
20 last for a whole fiscal year. I mean, I'll be  
21 meeting through the following September before  
22 we get out of there.

23 MR. KATZ: Okay. That's -- we've run

**NEAL R. GROSS**

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

1 out of time.

2 CHAIRMAN MELIUS: When I was in  
3 NIOSH, I had somebody who was trying to get out  
4 to the crab processing places out in Kodiak, and  
5 I think spent about a month in Alaska trying to  
6 do the -- make the trip.

7 Okay, why don't we take a break? A  
8 reminder, we do have, if you have nothing more  
9 to do after you eat your lunch, you can look at  
10 the public comments from the last meeting,  
11 because we'll be going over those.

12 And then also prepare your Work Group  
13 report, and any -- or reports, and Subcommittee  
14 reports, and also you might want to look at both  
15 the NIOSH schedule for reports that they -- that  
16 went around from what, with what Ted sent out.

17 And then SC&A sent out their updated  
18 scheduling and so forth as a separate email,  
19 that I believe everybody's --

20 MR. KATZ: Right.

21 CHAIRMAN MELIUS: -- gotten. So we  
22 can try to be prepared. And -- but the  
23 highlight of the afternoon, get all prepared,

**NEAL R. GROSS**

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

1 the highlight will be the first -- at 1:30, so  
2 be on time, LaVon Rutherford will give us his  
3 SEC update.

4 MEMBER MUNN: Cliffhanger.

5 CHAIRMAN MELIUS: Cliffhanger, lots  
6 of questions, should be a very volatile session  
7 so be prepared. You don't want to miss it.

8 MR. KATZ: Sharpen your knives.

9

10 (Whereupon, the above-entitled  
11 matter went off the record at 11:56 a.m. and  
12 resumed at 1:36 p.m.)

13 CHAIRMAN MELIUS: Welcome back and  
14 we'll now move on with our agenda. Let me check  
15 on people on the line. Okay.

16 MR. KATZ: I'm getting to you.

17 CHAIRMAN MELIUS: I'm only doing it,  
18 he said like it was good advice. And I'll now  
19 let the Designated Federal Official do his  
20 designated duties.

21 MR. KATZ: Thank you. Thank you very  
22 much. Just checking, first, roll call. I  
23 know who's in the room. Everyone's in the room

**NEAL R. GROSS**

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

1       who was here before. But on the line, Bill, are  
2       you with us again?

3               DR. FIELD: I'm present --

4               MR. KATZ: Dr. Bill?

5               DR. FIELD: -- and attending.

6               MR. KATZ: Super. And we were  
7       missing before Mr. Griffin, is he still  
8       missing? Is he on the line? Okay. And how  
9       about Dr. Poston? Okay. So that takes care  
10      for roll call then.

11              CHAIRMAN MELIUS: Is Dr. Lockey here?

12              MR. KATZ: Lockey, we knew.

13              CHAIRMAN MELIUS: Yes, but if you do  
14      the roll call --

15              MR. KATZ: Okay. And Dr. Lockey, are  
16      you on the line?

17              No Dr. Lockey either.

18              CHAIRMAN MELIUS: Okay.

19              MR. KATZ: And let me just a couple  
20      other things. Remind folks who've joined us on  
21      the phone to mute your phones. Press \*6 if you  
22      don't have a mute button, that'll mute your  
23      phone. And press \*6 again to take it off of

**NEAL R. GROSS**

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

1 mute. But please keep it on mute except when  
2 you're addressing the group.

3 CHAIRMAN MELIUS: Public comment.

4 MR. KATZ: And one other thing.  
5 Exactly, public comment. Thank you, Dr.  
6 Melius. We have a public comment session that  
7 begins at 4:30 and goes at least until 5:30 or,  
8 well, until 5:30 or until we run out of public  
9 comments. That comes before.

10 So for people who've joined us in the  
11 room, there's a sign-up book outside. If you  
12 want to make public comment during the public  
13 comment session, please sign the book.

14 For people on the line, you don't need  
15 to sign in. We will get to folks on the line  
16 after we've gotten through everyone who's in  
17 the room here during public comment session.  
18 And that's it. Thank you. Dr. Melius.

19 CHAIRMAN MELIUS: Yes. And just one  
20 more thing on public comment. I'm not sure  
21 we'll do it today, but there will be a  
22 presentation on Santa Susana at 4:00 and  
23 immediately following that presentation we

**NEAL R. GROSS**

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

1 will start the public comment period. So if it  
2 starts a little early, that would be fine.

3 MR. KATZ: Yes.

4 CHAIRMAN MELIUS: Yes. Good. And  
5 now I'd like to introduce the highlight of the  
6 meeting, the SEC petitions status update. LaVon  
7 Rutherford, I believe it is.

8 MR. KATZ: Yes.

9 MR. RUTHERFORD: Thank you. It's  
10 nice to be the highlight, that's for sure. I'm  
11 going to give you a Special Exposure Cohort  
12 update and then I'm going to take all the  
13 drillings and the questions that you guys are  
14 going to have afterwards.

15 All right. The purpose, obviously,  
16 as we do the -- I'm usually loud enough anyway,  
17 but that's okay. We do this at every Advisory  
18 Board meeting. We give the update of  
19 upcoming SEC petitions and existing petitions,  
20 petitions that are in different phases. This  
21 gives the Board updates and allows them to  
22 prepare Work Group meetings and other Advisory  
23 Board meetings.

**NEAL R. GROSS**

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

1           Okay. As of October 28th, we had a  
2 little bit of an increase here in the number of  
3 petitions we received. We're up to 222. We  
4 have four petitions in qualification process.

5           If you recognize that we went quite  
6 some time without receiving a petition and here  
7 recently we've gotten, I think, about six in the  
8 last four or five months. And you can see the  
9 status on the existing petitions. We have two  
10 that are in the evaluation process right now.

11           The petitions that are in  
12 qualification: Westinghouse Electric  
13 Corporation, Bloomfield -- this is for the  
14 residual period at Westinghouse. It is going  
15 to qualify. I will let you know that. And  
16 there is some, you know, we have found some  
17 issues with, not the petition, but in our early  
18 reviews of documentation, we actually found  
19 indication there may have been work involved at  
20 Westinghouse Electric Corporation. During  
21 this residual period they did some work for  
22 Fernald.

23           And so we have actually provided that

**NEAL R. GROSS**

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

1 documentation to the Department of Labor so  
2 they can evaluate if those actually should be  
3 covered operational years instead of residual  
4 years.

5 SEC 220 is for Y-12. This is 1944 to  
6 '45. You guys, I think everybody knows that we  
7 already have an SEC for 1944 and '45 period.  
8 Therefore, it's highly unlikely this  
9 petition's going to qualify. The only way this  
10 petition would qualify is if they presented  
11 evidence that incidents such that, you know,  
12 exposure -- I mean, so -- I can't think of the  
13 word. What's the right word I'm looking for?  
14 Presence. There. It's such a heavy word,  
15 presence. If we had a incident, such as  
16 criticality or something like that, that  
17 ultimately we could move from the 250 days to  
18 presence. They haven't provided that on this  
19 one, so it's unlikely that it would qualify.

20 Lawrence Livermore National Lab, this  
21 is the post-SEC years at Lawrence Livermore.  
22 This is in the early stages of qualification,  
23 but it does look like it will qualify.

**NEAL R. GROSS**

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

1           And then we just recently got a Grand  
2 Junction Operations Office. We're just now  
3 going through that. Most of you will remember  
4 we're already evaluating those years at this  
5 time anyway.

6           Two petitions that have qualified and  
7 we're moving forward with the evaluation: Dow  
8 Chemical Corporation. This is actually here  
9 in California, 1947 to '57. We are almost  
10 finished with this evaluation at this time. We  
11 did get slowed up a little bit with some funding  
12 issues at OSTI, you know, to look at some of the  
13 documents that Dow had there.

14          But this Evaluation Report should be out within  
15 the next month or two. Anyway, it says January  
16 2015, but that's -- you know, hopefully we'll  
17 get those documents sooner than that.

18          Idaho National Laboratory, this  
19 evaluation's been ongoing. There's been a lot  
20 of work going on both with the Site Profile work  
21 and concurrently the SEC evaluation that's  
22 going on at the same time. We expect to  
23 complete that evaluation by February 2015.

**NEAL R. GROSS**

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

1 There's still, obviously, going to be a lot of  
2 work going on with that one.

3 And then Kansas City Plant, we  
4 presented that some time ago. The Board has  
5 been reviewing that, and the Board Work Group  
6 and SC&A. There's been a lot of activity with  
7 that one was well: interviews, on-sites and  
8 data captures and such.

9 We have a number of sites that have  
10 portions of their petition evaluation that are  
11 open. They still need to be resolved.  
12 Fernald, we have 1984 to 1989. I think they're  
13 getting very close to closing things out at  
14 Fernald.

15 Grand Junction's Operations Office,  
16 the '75 to 2006. This one will be presented.  
17 We are going to present an addendum or revision  
18 depending on how that lays out at the March  
19 Board meeting.

20 Hanford, as mentioned earlier in the  
21 meeting, there's been a lot of work going on  
22 with the '84 to '90 period at Hanford. And we  
23 hope to be able to take some action on that one

**NEAL R. GROSS**

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

1 as well at the March meeting.

2 Los Alamos National Lab, this one's  
3 been a struggle. We really tried to -- the  
4 post-1994 period, '95 period, we've taken an  
5 approach of this is a 10 CFR 835 era, and we've  
6 taken the approach to see how the site is  
7 implementing 10 CFR 835. We're struggling a  
8 little bit getting the documentation from them  
9 on that. We went back and forth and we decided  
10 to take a project or something that was going  
11 on during that period, maybe an exotic, and look  
12 how they were complying with 835 just to see  
13 that, you know, that they were following 835 and  
14 that dose reconstruction would be feasible.

15 We did just recently get some  
16 information from them and hopefully we'll be  
17 able to move forward with that.

18 Rocky Flats Plant, as I mentioned  
19 earlier today, we have roughly five items, open  
20 issues. And of those, we've completed papers  
21 on three. Another paper will be out very  
22 shortly and we should be able to have a Work  
23 Group meeting. After SC&A's had a period of

**NEAL R. GROSS**

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

1 time to review that neptunium report, we ought  
2 to be able to have a Work Group meeting.

3 Sandia National Lab-Albuquerque,  
4 this, again, we're looking at the 10 CFR 835  
5 implementation at the site. It has slipped  
6 somewhat, mainly because of the priorities that  
7 we have with other activities. Obviously, new  
8 SEC petition evaluations, because of the 180  
9 days, are going to take precedence. And so  
10 certain things, we adjust priorities based on  
11 that, based on what the Board is currently  
12 really wanting or looking at. And so the  
13 post-'94 period at Sandia has slipped a little  
14 bit.

15 Santa Susana Field Laboratory, I  
16 think I will let Dr. Hughes handle this one  
17 later on.

18 And Savannah River Site, continues to  
19 be a lot of activity at Savannah River. We were  
20 slowed down considerably because of  
21 classification reviews on documents. I think  
22 we've got that issue -- or at least we've got  
23 a path forward worked out. And we should get

**NEAL R. GROSS**

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

1 some of the documents and things released here  
2 soon so we can start making some progress there.

3 St. Louis Airport Storage Site, this  
4 one's kind of in limbo, mainly because we  
5 presented our evaluation. And maybe what we  
6 ought to do is, you know, we indicated the  
7 '72-'73 period, 1984-'98 period, we felt dose  
8 reconstruction was feasible.

9 It might be appropriate at the next  
10 Board meeting or, you know, if there's too much  
11 on the Board meeting, maybe during the Board  
12 conference call, that I provide a status  
13 update, you know, and basically get things  
14 moving on that period again.

15 And potential 83.14s, again, these  
16 have been on the plate for a while, mainly  
17 waiting on a litmus claim that we could move  
18 them forward. There's really no claims that  
19 are being negatively affected by this, us  
20 waiting, because there are no claims, you know,  
21 in that period. 1945 to 1948, that was the old  
22 Z Division at LANL. It's now  
23 Sandia-Albuquerque. And as soon as we get a

**NEAL R. GROSS**

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

1 litmus claim, we'll move that forward.

2 The Dayton Project was a facility  
3 designation change so we had a limbo period of  
4 nine months. However, currently all the  
5 claims are covered by another, existing SEC, so  
6 we have no litmus claims there as well. And  
7 that's it. Questions?

8 CHAIRMAN MELIUS: Yeah, Paul.

9 MEMBER ZIEMER: LaVon, on St. Louis,  
10 can you remind us when the original petition  
11 came to us and what action did we take?

12 MR. RUTHERFORD: Yeah, I can do a  
13 brief reminder on that because I don't --

14 MEMBER ZIEMER: I don't need all the  
15 details but --

16 MR. RUTHERFORD: I was the one who  
17 presented it, so I know a lot of it. That  
18 actually -- it's probably been, I don't know,  
19 four or five years ago that it was presented  
20 originally. We recommended adding a Class  
21 during the operational period. There was a  
22 period of time, basically, the site was a  
23 storage site. They had some of the K-65

**NEAL R. GROSS**

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

1 materials, the African ores that were stored  
2 out there for a very brief time. Some worker  
3 was doing some raffinates. We ultimately  
4 added a Class for that operational period.

5 Then there went to a stagnant period  
6 where it was basically closed down, and then  
7 they went through a clean-up period in the  
8 1972-'73, I think, timeframe. And then there  
9 is additional clean-up work that went on later  
10 on, if I remember correctly. That may not be  
11 totally, you know, accurate, but it's generally  
12 in that manner.

13 And what we found was, during the  
14 '72-'73 time period, or during, you know, those  
15 later years, we had additional information.  
16 We had monitoring data that allowed us to dose  
17 reconstruction. But there was never a formal  
18 recommendation by the Board on that period.

19 MEMBER ZIEMER: Okay. That was  
20 really what my question was. Maybe Dr. Melius  
21 remembers. So it was that latter period, and  
22 did we send it back for some review or did we  
23 do anything?

**NEAL R. GROSS**

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

1 MR. RUTHERFORD: No.

2 MEMBER ZIEMER: We didn't take action?

3 MR. RUTHERFORD: Yeah, there was a  
4 period of time, you know, that we didn't take  
5 action on some of the residual periods and  
6 things like that. And this was kind of a  
7 residual period. And there was never really a  
8 follow-on on that one.

9 CHAIRMAN MELIUS: What's a A kind of  
10 a residual period?

11 MR. RUTHERFORD: Well, when I say a  
12 kind of a residual period, I mean, because there  
13 was some remediation work that went on in that  
14 period as well, in addition to that residual  
15 period.

16 CHAIRMAN MELIUS: Okay. And have we  
17 had SC&A review that?

18 MR. RUTHERFORD: I do not believe so.

19 CHAIRMAN MELIUS: Okay. So, maybe  
20 it's not appropriate to do it today, but if you  
21 think you have enough information, maybe we can  
22 get this moving ahead.

23 MR. RUTHERFORD: Okay.

**NEAL R. GROSS**

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

1           CHAIRMAN MELIUS:    Is there enough  
2           information in the Evaluation Report to form  
3           the basis for evaluating the residual period,  
4           or is there additional information that's not  
5           in the report?

6           MR. RUTHERFORD:    No, I think it's all  
7           there.    I think.    And all the supporting  
8           documents are referenced and such.

9           CHAIRMAN MELIUS:    Okay.

10          MR. RUTHERFORD:    If you would like, I  
11          could put --

12          MEMBER ZIEMER:     Well, I was wondering  
13          if there was an actual recommendation from  
14          NIOSH and if we just chose not to act.    And did  
15          we specifically choose not to act?

16          MR. KATZ:        I think we just covered --

17          MEMBER ZIEMER:     Or did we just forget  
18          to act or what happened?    I just don't  
19          remember, but I can attribute that to my age.  
20          But somebody needs to know what happened.

21          CHAIRMAN MELIUS:    Well, LaVon is  
22          fairly young.

23          MEMBER ZIEMER:     I don't need to know

**NEAL R. GROSS**

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

1 today, but I'd like a follow up on --

2 CHAIRMAN MELIUS: When he was a high  
3 school senior, he went to the same football  
4 games I was going to in Cincinnati, in '83.

5 (Laughter.)

6 MR. RUTHERFORD: What I can do is  
7 provide the Board and SC&A, basically, a  
8 summary of, you know, where we were when and,  
9 you know, the dates and also point to --

10 MR. KATZ: The transcript.

11 MR. RUTHERFORD: -- the documents and  
12 such.

13 MR. KATZ: Well, and the transcript  
14 from the Board meeting.

15 MR. RUTHERFORD: Oh yes, exactly.

16 MR. KATZ: But basically the  
17 transcript -- so it wasn't set aside to be  
18 addressed later, but the Board only  
19 specifically took the action that was being  
20 recommended, which was to add the Class for the  
21 operational period. And it just wasn't spoken  
22 to.

23 MR. RUTHERFORD: Right. Okay.

**NEAL R. GROSS**

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

1                   MEMBER ZIEMER:   But there was another  
2 recommendation.  That's --

3                   MR. KATZ:           Well, there was a  
4 recommendation, but it wasn't spoken to, is  
5 what I'm saying.  The Board didn't speak to it.

6                   CHAIRMAN MELIUS:   So, what I would  
7 suggest is that for the Board call, the next  
8 call, can you put together a short presentation  
9 on the residual period?

10                  MR. RUTHERFORD:   Yes, I can.

11                  CHAIRMAN MELIUS:   And then we'll do  
12 that and we can either take action at the Board  
13 call or we can refer it on for additional --

14                  MR. RUTHERFORD:   Yes.

15                  CHAIRMAN MELIUS:   We can either  
16 accept the recommendation or we can refer it on  
17 for further review.  And I think that would  
18 probably be a better way of doing it.  Does  
19 everybody agree?

20                  MR. RUTHERFORD:   Yes.

21                  MEMBER ZIEMER:   Thank you.

22                  CHAIRMAN MELIUS:   Okay.  Yes, thank  
23 you on that.

**NEAL R. GROSS**

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

1 Other questions for LaVon? So LaVon,  
2 could you just sort of go over what is going to  
3 be available for the March meetings?

4 MR. RUTHERFORD: Yes.

5 CHAIRMAN MELIUS: And I hope the  
6 transcriber --

7 MR. RUTHERFORD: Can you pull that  
8 back up, please?

9 CHAIRMAN MELIUS: -- listens very  
10 carefully here and keeps track of this.

11 MR. RUTHERFORD: I'm waiting for my  
12 presentation to come back up again so I can go  
13 back. No, actually, we will be presenting Dow  
14 Chemical Walnut Creek Petition Evaluation  
15 Report. We will plan to present the Idaho  
16 National Lab Evaluation Report. The Grand  
17 Junction Operations Office, we plan to present  
18 that as well.

19 Then I expect action to be taken on  
20 Hanford. Some kind of action at least. I believe  
21 so, anyway.

22 There potentially could be action on  
23 Rocky Flats, just depends on the release of

**NEAL R. GROSS**

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

1 documents and where the Work Group goes on that  
2 one. So there's four or five, anyway.

3 CHAIRMAN MELIUS: Okay. What is the  
4 timing on Grand Junction?

5 MR. RUTHERFORD: When will the  
6 addendum or the evaluation revision, whichever  
7 way we end up going, when will that be out?

8 CHAIRMAN MELIUS: Yeah.

9 MR. RUTHERFORD: January/February  
10 timeframe.

11 CHAIRMAN MELIUS: Okay.

12 MR. RUTHERFORD: That --

13 CHAIRMAN MELIUS: Go ahead.

14 MR. RUTHERFORD: I was going to say,  
15 that report actually would've been out earlier,  
16 but in our additional reviews we found some  
17 thorium sources that were not previously  
18 recognized that we need to look at that.

19 CHAIRMAN MELIUS: I'm just trying to  
20 determine are there any of these that are  
21 straightforward enough that would be done in  
22 time for our January conference call?

23 MR. RUTHERFORD: Well, I'll see if

**NEAL R. GROSS**

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

1 Jim agrees with me. I think Dow Walnut Creek  
2 would be pretty -- yeah, I think Dow Walnut  
3 Creek would be pretty straightforward enough.  
4 I think it'll be ready.

5 CHAIRMAN MELIUS: Well, when?  
6 Because our call is early in January.  
7 That's --

8 MR. KATZ: Very early in January.

9 CHAIRMAN MELIUS: Yes. So it would  
10 have to be before the holidays.

11 MR. RUTHERFORD: No, that's not going  
12 to work.

13 MR. KATZ: Yeah, I don't think so.

14 CHAIRMAN MELIUS: Okay. That's  
15 fine. Just checking. So, Dow, Idaho, Grand  
16 Junction and Hanford, okay.

17 Any other questions for LaVon, here,  
18 now that he's got us confused? Okay. You're  
19 off the hook for now.

20 Okay. We now have our Board work  
21 session. And we've completed part of it. So  
22 we will start with the public comment session  
23 from our last Board meeting.

**NEAL R. GROSS**

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

1           And you all should have gotten two  
2 documents, one is the summary spreadsheet and  
3 the other is the transcripts that sort of back  
4 that up and provide a little bit more detail on  
5 that.

6           And I will go through this relatively  
7 briefly, but feel free to interrupt me or if you  
8 have questions and so forth. There were a  
9 number of first comments had to do with Simonds  
10 Saw and Steel. And there was some questions  
11 about the basis for the dose reconstruction and  
12 the follow-up clean-up there. Those have been  
13 addressed and responded to.

14           MR. KATZ: Which document?

15           CHAIRMAN MELIUS: It's a  
16 spreadsheet.

17           MR. KATZ: A spreadsheet, Excel.

18           CHAIRMAN MELIUS: And it's got a  
19 funny name to it. Yes, what is BPCP? Board --

20           MR. KATZ: Board public comment  
21 session, or whatever the -- comment  
22 presentation.

23           MEMBER ZIEMER: Oh, it's a

**NEAL R. GROSS**

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

1 spreadsheet. I've got it.

2 CHAIRMAN MELIUS: Okay. Then we  
3 have a set of three comments regarding the Santa  
4 Susana site. And those have all been  
5 addressed, including some follow-up I think  
6 we'll probably hear about a little bit later  
7 today.

8 There's some questions on the INL site  
9 and comments from one of the people at that  
10 meeting. And, again, I think these are all  
11 straightforward in terms of being addressed.

12 There's actually a whole series of  
13 comments on INL that we heard, which were, as  
14 I recall, very helpful in terms of further  
15 background on that site. And we'll probably be  
16 talking more about it. It was quite a long  
17 comment, as you may remember.

18 Okay. Then we have some general  
19 comments, some comments on Hooker, General  
20 Steel Industries and on Dow Madison. And these  
21 are being followed up on or in the process of  
22 being followed up on.

23 Some comments on the Blockson site,

**NEAL R. GROSS**

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

1       which was more of an issue having to do with DOL  
2       and sort of a facility designation.  There was  
3       another comment on the Blockson site and,  
4       again, sort of a what-if, procedural issue,  
5       which, again, I think was addressed actually  
6       right at the meeting by LaVon.

7               And there was some additional  
8       follow-up reported from the April Board  
9       meeting.  It was something new.  You're adding  
10      Boulder, Ted?

11              MR. KATZ:  It was probably commented  
12      on that we would follow-up on that.

13              CHAIRMAN MELIUS:  Oh, okay.  Okay.  
14      That's the first I've seen.  Longer term  
15      follow-up.  But, again, there was a follow-up  
16      to some comments made at the April Board meeting  
17      and a conference call and NIOSH and ORAU had  
18      followed up and addressed that.

19              So any Board Members questions or  
20      comments on that?  I think the level of  
21      documentation's good and -- okay.  I don=t  
22      think we need any further action on that.

23              Now we'll move onto Subcommittee and

**NEAL R. GROSS**

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

1 Work Group reports. Josie's not here. The  
2 first one I have on my list, which was off the  
3 website, is on Brookhaven. I don't think  
4 there's much going on there. Henry, do you --

5 MEMBER ANDERSON: Nothing.

6 CHAIRMAN MELIUS: Nothing. I think  
7 it's --

8 MEMBER MUNN: -- there's no meeting.

9 MEMBER ANDERSON: No.

10 CHAIRMAN MELIUS: Fernald, Brad?

11 MEMBER CLAWSON: On Fernald, we've  
12 really got one outstanding issue that we're  
13 still working on. That's the thorium. That's  
14 in SC&A=s hands. They're supposed to have a  
15 paper for us in about a month or so.

16 CHAIRMAN MELIUS: Okay. And that's  
17 on schedule, John?

18 MR. STIVER: Yes, it is.

19 CHAIRMAN MELIUS: Okay. Well,  
20 Hanford, we've talked about there's some active  
21 evaluation going on and data gathering  
22 regarding some issues out at Hanford. And we  
23 will be doing a follow-up there.

**NEAL R. GROSS**

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

1           So we can expect a Work Group meeting  
2 before the March meeting. And I expect we'll  
3 be in a place to take action at the March meeting  
4 on that. I think that I understand from both  
5 Sam and from talking to Arjun about that.  
6 Thank Sam for his communication on that one.

7           Idaho, Phil?

8           MEMBER SCHOFIELD: There are --

9           MR. KATZ: Use the mic, please.

10          MEMBER SCHOFIELD: Oh, okay. There  
11 are more worker interviews scheduled in about  
12 a week and a half that will hopefully shed a lot  
13 more light on some of the areas that we're kind  
14 of weak on. And that's really where we stand  
15 at this point.

16          CHAIRMAN MELIUS: Okay. And then we  
17 have the SEC Evaluation Report for March, so  
18 that will pull that together. Okay. And  
19 we've been assured that that's on schedule?

20          MR. RUTHERFORD: Yes.

21          CHAIRMAN MELIUS: Okay.

22          MR. RUTHERFORD: But it's on schedule  
23 now. There's always things we can come up

**NEAL R. GROSS**

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

1 with. I would like to point out this is a very  
2 unique situation in that we have a Site Profile  
3 review going on at the same time that an SEC  
4 evaluation is going on. So it has been a  
5 coordination trick, I can tell you.

6 CHAIRMAN MELIUS: Well, and it's also  
7 combining two sites and --

8 MR. RUTHERFORD: Yes.

9 CHAIRMAN MELIUS: Yeah, which were  
10 initially evaluated as separate sites and now  
11 have been combined.

12 MR. RUTHERFORD: Actually, we have to  
13 separate them from -- initially, the idea was  
14 that they thought they were going to be able to  
15 do it as one petition. It's going to be two  
16 petition evaluations. The second petition  
17 evaluation will be for the Argonne Lab itself  
18 because, regulation-wise, we can only do it by  
19 site, you know, for a single site.

20 So we've got a petitioner providing a  
21 second petition for that separate site, which  
22 will qualify and we'll move it forward. So I  
23 guess I should have mentioned that earlier.

**NEAL R. GROSS**

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

1 CHAIRMAN MELIUS: Yeah. Yeah.

2 (Laughter.)

3 MR. RUTHERFORD: I apologize for  
4 that. I forgot about that, I guess.

5 CHAIRMAN MELIUS: Okay. Got me  
6 confused. So what's the timeframe on the  
7 second petition?

8 MR. RUTHERFORD: It will not be ready  
9 for the March meeting, but it should be shortly  
10 thereafter just because we're doing data  
11 gathering for both sites.

12 So, the interviews, the data captures  
13 and all are going on concurrently. I just  
14 don't think that, from a schedule standpoint,  
15 we'll be able to produce both of them at the same  
16 time in order for the March meeting.

17 CHAIRMAN MELIUS: Okay. So, don't  
18 go away.

19 MR. RUTHERFORD: I'm not.

20 CHAIRMAN MELIUS: Do they overlap?  
21 What extent do the petition evaluations  
22 overlap, in terms of --

23 MR. RUTHERFORD: Years, are you

**NEAL R. GROSS**

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

1 talking about or --

2 CHAIRMAN MELIUS: Years, operations?

3 MR. RUTHERFORD: Well, it's not clear  
4 yet. And this is, again, this is really  
5 difficult because this facility sits inside of  
6 the main facility --

7 CHAIRMAN MELIUS: Yeah, right.

8 MR. RUTHERFORD: And also this is very  
9 similar to Y-12. If you remember back when we  
10 did the early years at Y-12, we had facilities  
11 at Y-12 that were turned over to Oak Ridge  
12 National Lab and they were doing work with  
13 calutrons and cyclotrons.

14 And, so, in this situation, you've got  
15 working going on at Idaho that it's actually  
16 being done by the Argonne crew, but at the Idaho  
17 facility. So there's a lot of little nuances  
18 that are going to make it difficult.

19 CHAIRMAN MELIUS: Okay. Yeah. I'm  
20 also thinking, in terms of the review, where  
21 we've essentially combined the Site Profile  
22 reviews, and now we're separating them out  
23 again.

**NEAL R. GROSS**

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

1 MR. RUTHERFORD: Yeah, right.

2 CHAIRMAN MELIUS: Yes. Yes.

3 Thank you, LaVon. K-20, gaseous  
4 diffusion plants. Phil, anything to report on  
5 them?

6 MEMBER SCHOFIELD: Nothing to report  
7 this time. We're kind of a little in the dark  
8 here for recently, but we need to get a meeting  
9 put together and try and get those closed out  
10 if at all possible.

11 CHAIRMAN MELIUS: Yeah, it's the Site  
12 Profile.

13 MEMBER SCHOFIELD: This is the Site  
14 Profile issues.

15 CHAIRMAN MELIUS: Kansas City,  
16 Josie's not here. Brad, do you want to?

17 MEMBER CLAWSON: Yeah, we've had  
18 quite a bit of data capture up through there.  
19 Matter of fact, it was just a little while ago.  
20 We're proceeding on with the work on it. We're  
21 waiting kind of, and it's in NIOSH's court to  
22 respond that they have to put their mark in the  
23 sand, but we've had some good data capture up

**NEAL R. GROSS**

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

1           there and we'll go on from there.

2                   CHAIRMAN MELIUS:    Good.    Timeframe,  
3           do we have one?

4                   MR. RUTHERFORD:    Well, unless I'm  
5           wrong here, I mean, we provided our evaluation.  
6           It's now in the Board and Work Group=s hands to  
7           provide a response to the evaluation.

8                   Now, there is a lot of work that's  
9           going on to gather interviews and such, but we  
10          have committed to now products beyond --  
11          because we haven't gotten anything from SC&A or  
12          anything to review at this point.

13                   MEMBER CLAWSON:    Okay.    Well, I was  
14          understood from Pete that since we've dove into  
15          this a little bit that there's -- the ER is being  
16          revised.

17                   MR. RUTHERFORD:    Okay.    Pete has not  
18          said anything to me about that.

19                   MEMBER CLAWSON:    Okay.    Well --

20                   MR. RUTHERFORD:    And this is the very  
21          first time I've ever heard.    I'll talk to Pete.

22                   MEMBER CLAWSON:    No, I could be wrong  
23          on that but, you know, we're proceeding on, so

**NEAL R. GROSS**

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

1 we're trying to get into where we can get into  
2 a Work Group and then move on from there.

3 CHAIRMAN MELIUS: And does SC&A have  
4 anything to add or -- Joe?

5 MR. FITZGERALD: Yeah, we're still in  
6 the issue resolution. I mean, we're  
7 identifying issues as we go. There's new  
8 issues that weren't covered in the ER that we  
9 have now identified.

10 So, this is a transition period where  
11 we've gone from the ER to one of actually the  
12 Work Group and SC&A identifying issues,  
13 bringing them to the floor. It's being done in  
14 conjunction with NIOSH, so there's a lot of  
15 interchange. But, how should I put it, the  
16 dust hasn't really settled on what the issue  
17 slate is, but we're getting close to having  
18 that. So we should be able to --

19 CHAIRMAN MELIUS: And as you're  
20 identifying issues, are you sort of separating  
21 out SEC issues from Site Profile issues?

22 MR. FITZGERALD: That's, I mean,  
23 that's the process. I think, really, in a lot

**NEAL R. GROSS**

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

1 of the research and interviews and everything,  
2 we've done a lot. It's directed to sifting out  
3 what may have been Site Profile issues earlier  
4 in the year to ones that are standing as  
5 potential SEC issues.

6 CHAIRMAN MELIUS: Okay.

7 MR. FITZGERALD: And that potential  
8 part is taking some time to really get a feel  
9 for it.

10 CHAIRMAN MELIUS: And some of the  
11 potential ones may not be fully addressed in the  
12 SEC Evaluation Reports?

13 MR. FITZGERALD: That's right. And  
14 that means you're doing fundamental research  
15 onsite. So this is new stuff that's really  
16 being looked at.

17 CHAIRMAN MELIUS: Okay.

18 MR. KATZ: So the next product will be  
19 an SC&A evaluation review.

20 CHAIRMAN MELIUS: Right. And, yeah,  
21 so there'll be an SEC evaluation review and  
22 that'll be the basis for a Work Group meeting.  
23 Okay. Good. Lawrence Berkeley?

**NEAL R. GROSS**

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

1                   MEMBER ZIEMER:       NIOSH is still  
2 reviewing information from the most recent data  
3 captures there. And I was just checking my  
4 emails, and I didn't get to the right one, but  
5 Dr. Hughes is here. But I believe she  
6 indicated to me that it will probably be early  
7 next year, maybe January, before NIOSH finishes  
8 the last White Paper. And she's nodding yes,  
9 that that's correct.

10                   Now, we have several White Papers  
11 already that have been prepared earlier and  
12 those have actually been also reviewed by SC&A,  
13 but we're waiting for this final group of White  
14 Papers so we have all the issues from Lawrence  
15 Berkeley. And then we'll have an opportunity  
16 for SC&A to review those and then we will meet.

17                   CHAIRMAN MELIUS: Okay. Thank you,  
18 Paul.

19                   Linde. Gen, is there anything?  
20 We're done, right? So that should be inactive?

21                   MR. KATZ: Yes.

22                   CHAIRMAN MELIUS: Okay.

23                   MR. KATZ: It's inactive.

**NEAL R. GROSS**

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

1                   CHAIRMAN MELIUS: It doesn't say so  
2 on the website.

3                   Okay. LANL? Mark's not here. I  
4 don't know if there's any -- yeah. You had it  
5 on your --

6                   MR. RUTHERFORD: Yeah, I think I  
7 provided the update. We're working that 10  
8 CFR. 835 implementation with this site and we  
9 just got all the information from them back in,  
10 I think, October.

11                   And so we should be able to move  
12 forward here and provide something to the Work  
13 Group. You know, I don't know, I don't want to  
14 commit to a date, but it'll be soon because  
15 they're still reviewing how much information we  
16 got. Okay.

17                   CHAIRMAN MELIUS: How about an, you  
18 know, an estimate?

19                   MR. RUTHERFORD: A couple months.

20                   CHAIRMAN MELIUS: Okay. It's in the  
21 transcript.

22                   MR. KATZ: I think we got him.

23                   CHAIRMAN MELIUS: We'll remember.

**NEAL R. GROSS**

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

1           Okay.    Mound.    Josie's not here  
2           also.   Brad, do you have any update?  I'm not  
3           sure there's much activity there.

4           MEMBER CLAWSON:  There hasn't been  
5           much activity at all on that.

6           CHAIRMAN MELIUS:  Have we completed  
7           the Site Profile?  I don't recall.

8           MEMBER CLAWSON:  No, we --

9           CHAIRMAN MELIUS:  Oh, here, Jim  
10          has --

11          DR. NETON:  There's still a hold up on  
12          our issuance of the review of the external dose  
13          section  of  the  Site  Profile  due  to  
14          neutron-photon ratio issues.

15          CHAIRMAN MELIUS:  Oh, right.

16          DR. NETON:  Dr. Taulbee's working on  
17          that and his schedule's been pretty full, but  
18          I think it's high on his priority list right  
19          now.

20          CHAIRMAN MELIUS:  Okay.  Nevada Test  
21          Site.  Brad?

22          MEMBER CLAWSON:  Yeah, we've got a  
23          Work Group meeting coming up on that, I believe,

**NEAL R. GROSS**

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

1 December 3rd. And all of these are Site  
2 Profile issues.

3 SC&A has reviewed the matrix. We've  
4 just got to sit down with NIOSH and basically  
5 close out the Site Profile issues. That should  
6 be it for Nevada Test Site.

7 CHAIRMAN MELIUS: Good. Thank you.  
8 When I saw the announcement on the Work Group  
9 meeting, I expected it to get recalled, that it  
10 had the wrong name on it. We hadn't seen Nevada  
11 Test Site for a while, so thanks for keeping  
12 that moving, Brad, and everybody involved in  
13 that.

14 X-10, Oak Ridge National  
15 Laboratories. Gen?

16 MEMBER ROESSLER: Dr. Taulbee's not  
17 here and I've been waiting for word from NIOSH.  
18 Does anybody else have any update on that?

19 MR. RUTHERFORD: Yeah, we completed  
20 everything with the petition evaluation  
21 before. This is now, there was a post period  
22 after the SEC period that we were looking at  
23 additional works and exotics and things.

**NEAL R. GROSS**

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

1           And we went and retrieved a number of  
2 log books that identified air sampling and  
3 such. We've been working through those. We  
4 also got into the difficulty of getting the  
5 documents released from a classification  
6 standpoint, so that slowed us down. But we  
7 have all the documents now and we can move  
8 forward with that.

9           The problem we got is, to be honest,  
10 is resources. We're balancing priorities  
11 right now. And, you know, if we see something  
12 that's clearly looks like it's going to be an  
13 SEC issue, we'll move that to the forefront.

14           But right now, we're working through  
15 all those documents and, hopefully, we'll have  
16 something to the Work Group. I'm not going to  
17 commit more than in the next six months.

18           CHAIRMAN MELIUS: Okay.

19           MR. RUTHERFORD: I just looked and  
20 November, December, January are rough right  
21 now.

22           CHAIRMAN MELIUS: Okay. No, I  
23 think, as I recall, when we did the original SEC

**NEAL R. GROSS**

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

1 evaluation there was uncertainty as to whether  
2 there was uncertainty as to whether there would  
3 be other ones sort of going forward there. I'm  
4 not sure I'm remembering the competing  
5 priorities discussion, but at least the general  
6 basis for it, you said. Gen, do you have  
7 anything to add or is that --

8 MEMBER ROESSLER: Thank you. No,  
9 we're just waiting.

10 CHAIRMAN MELIUS: Okay. Pacific  
11 Proving Ground, Dr. Lockey isn't here. I don't  
12 believe there's been a meeting or --

13 MR. KATZ: No.

14 CHAIRMAN MELIUS: Okay. All I do is  
15 keep getting emails about when is the site  
16 visit. I'll probably get more of those.

17 MEMBER MUNN: You know, we all want to  
18 go.

19 CHAIRMAN MELIUS: Dr. Lemen's going  
20 to be out in that general area later this month,  
21 Australia and Indonesia. So maybe you can take  
22 a sail over them.

23 MEMBER LEMEN: I may just drop by.

**NEAL R. GROSS**

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

1 CHAIRMAN MELIUS: Yes.

2 MEMBER LEMEN: Then they won't have  
3 to have a site visit. I'll just go over.

4 CHAIRMAN MELIUS: No, well --

5 (Simultaneous speaking.)

6 CHAIRMAN MELIUS: Okay. I skipped  
7 over Pantex.

8 MEMBER CLAWSON: Yeah, we had a Work  
9 Group meeting, along with Fernald here, about  
10 a month, month-and-a-half ago. Everything on  
11 Pantex is pretty well taken care of, the Site  
12 Profile issues.

13 But we still have the neutron-photon  
14 ratio issue that, I believe, has been our  
15 overarching issue several times. And that's  
16 the only thing that we have left on that.

17 DR. NETON: Actually, we decided not  
18 to use the neutron-photon ratio approach at  
19 Pantex because of some issues that we had with  
20 that. And we're now redeveloping a coworker  
21 model just based on the actual neutron dose  
22 distributions. And that's in the works. It's  
23 a couple months out. Yeah, and these are for

**NEAL R. GROSS**

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

1 non-SEC cancers because Pantex is an SEC --  
2 after a certain period of duration of the  
3 covered period.

4

5 CHAIRMAN MELIUS: Okay.

6 MEMBER CLAWSON: So once we have that  
7 paper, we'll finish up Pantex.

8 CHAIRMAN MELIUS: Okay. Good.  
9 Thank you both. And, Jim, we'll also remember  
10 a couple months out.

11 Pinellas?

12 MEMBER SCHOFIELD: We haven't done  
13 much on Pinellas right now. It's kind of like,  
14 just like the gaseous diffusion plants, and  
15 we'll hopefully get together and close that one  
16 out. I don't think there's a whole lot left on  
17 that that we have.

18 CHAIRMAN MELIUS: Jim's going to  
19 complicate things.

20 DR. NETON: Well, this is going to  
21 sound like a broken record about Pinellas, but  
22 there's only issue remaining at Pinellas,  
23 outstanding, and that's the reconstruction of

**NEAL R. GROSS**

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

1 tritide doses. And we're still trying to  
2 figure out whether they filtered the smears  
3 before they measured them or not, which, if they  
4 did, causes some issues with trying to  
5 reconstruct the tritide exposures.

6 That's a little bit out, though, on  
7 the schedule and that's one of those  
8 prioritization-type issues. I think it's out  
9 into January next year. So early next year,  
10 it's on schedule, is my recollection.

11 CHAIRMAN MELIUS: What's involved in  
12 finding that out?

13 DR. NETON: I think there's some more  
14 interviews that have to be done. They're  
15 searching through the health physics  
16 documentation, the records. Because we just  
17 have one indication that they did filter these  
18 samples. But there's got to be some other  
19 health physics documentation to substantiate  
20 that somewhere, why they did that in the first  
21 place, you know, or maybe they didn't and  
22 there's other documentation to address that.

23 CHAIRMAN MELIUS: Okay. Thanks for

**NEAL R. GROSS**

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

1 the explanation.

2 Rocky Flats I think we've already  
3 pretty much addressed. Probably should have a  
4 Work Group meeting between now and the --

5 MEMBER MUNN: Meeting in December.

6 CHAIRMAN MELIUS: Oh, it's already  
7 scheduled. Okay. Good.

8 Sandia, Dr. Lemen?

9 MEMBER LEMEN: I don't have anything  
10 new to report. I'm waiting for Sam. Does Sam  
11 got anything new?

12 MR. RUTHERFORD: Yeah, I think I  
13 actually talked about that a little earlier,  
14 that we did get a number of documents from  
15 Sandia, actually, back in September.

16 We are actually supposed to get more  
17 documents later on this month. But I think our  
18 schedule right now doesn't have us really  
19 completing things until sometime in April of  
20 next year.

21 MEMBER LEMEN: So we haven't planned  
22 any Board Working Group meetings until after we  
23 get data back from them.

**NEAL R. GROSS**

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

1 CHAIRMAN MELIUS: Right.

2 MR. KATZ: Can we go back to Rocky  
3 Flats? Is that Rocky Flats you said we have a  
4 meeting in December? No, we have a Dose  
5 Reconstruction meeting in December.

6 MR. RUTHERFORD: Nevada Test Site.

7 MR. KATZ: Nevada Test Site and  
8 Fernald. Those are in December. No Rocky  
9 Flats meeting in December. We have not  
10 schedule a Rocky Flats, because I've not  
11 contacted Mark about this.

12 MEMBER MUNN: I thought he had  
13 scheduled.

14 MR. KATZ: No. We have NTS on the  
15 3rd, Fernald on the 4th and Dose Reconstruction  
16 on the 8th. That's it.

17 CHAIRMAN MELIUS: Okay.

18 MR. KATZ: Anyway. I just wanted to  
19 get that straight.

20 CHAIRMAN MELIUS: Savannah River,  
21 Mark isn't here. And I think we're waiting for  
22 some NIOSH reports?

23 MR. KATZ: I think so. Yes, we're

**NEAL R. GROSS**

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

1 waiting on NIOSH. Well, SC&A's been working on  
2 matters too. I don't know whether they have a  
3 report coming out too.

4 CHAIRMAN MELIUS: Yes, we have an  
5 SC&A report that we're waiting for for the SEC  
6 evaluation, which is a coworker.

7 MR. KATZ: Exactly.

8 MR. RUTHERFORD: And we were waiting  
9 for a number of documents to be released from  
10 the site from classification review. Now that  
11 those documents are slowly coming out, we'll be  
12 able to finish up some other papers that we're  
13 working on.

14 CHAIRMAN MELIUS: Timeframe?

15 MR. RUTHERFORD: Let's see what Dr.  
16 Taulbee has in here. I don't see an update on  
17 any. I'll have to get back with the Board on  
18 that one.

19 CHAIRMAN MELIUS: Do you have one?

20 MR. RUTHERFORD: I don't see it.

21 MEMBER ZIEMER: There's a date of  
22 March 2015 up there.

23 MR. RUTHERFORD: Oh yeah, March of

**NEAL R. GROSS**

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

1 2015.

2 CHAIRMAN MELIUS: And I also think  
3 our sort of coworker guideline issue may impact  
4 on this also.

5 Scientific Issues Work Group.  
6 David.

7 MEMBER RICHARDSON: Since the last  
8 meeting I had a chance to talk with NCRP about  
9 -- we had a topic that we were interested in  
10 which was biological effectiveness of  
11 low-energy photons and tritium. And the NCRP  
12 was working on a report on that.

13 I had some back and forth with them  
14 about whether we could get a draft of that  
15 report, or at least the first chapters of it,  
16 to review. And, unfortunately, they have a new  
17 executive director who said that they're not  
18 going to release any of the material until  
19 publication.

20 They're behind on publication and it  
21 had been intended to be out by now. But  
22 hopefully by early 2015 there will be a report  
23 that's available for us to review on that.

**NEAL R. GROSS**

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

1                   And the suggestion, again, had been to  
2                   get maybe David Kocher to come and at least  
3                   introduce the report and present sections of it  
4                   for us.

5                   CHAIRMAN MELIUS:   Okay.  Do we want  
6                   to do that for a Board meeting or for a Work  
7                   Group meeting?

8                   MEMBER RICHARDSON:   I think for a  
9                   Work Group meeting.

10                  CHAIRMAN MELIUS:   Okay.  Jim, you're  
11                  shaking your head.  Is it we=re doing it for a  
12                  Board meeting or --

13                  DR. NETON:   Well, I think it could  
14                  start as a Board meeting and then eventually  
15                  escalate it through a Work Group.

16                  CHAIRMAN MELIUS:   Okay.

17                  MEMBER RICHARDSON:   Yes, I was hoping  
18                  we could digest it some and then maybe --

19                  CHAIRMAN MELIUS:   Okay.  SEC Work  
20                  Group.  I think we've got three things  
21                  underway, if I remember correctly.  One is the  
22                  coworker sufficient accuracy issue which we're  
23                  already talking about today.  And I think you

**NEAL R. GROSS**

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

1 have a pretty good idea where that is.

2 Secondly, we have a SC&A review of a  
3 Savannah River coworker issue that I think  
4 is -- I can't remember if it's just out from DOE  
5 review or where. It's very close. Just got  
6 it, okay. I'm still on the bad list for my CDC  
7 email. So I will get it when I get back to the  
8 office next week.

9 And then the third issue we have.  
10 Once upon a time a long time ago the SEC  
11 evaluation group looked at the Dow Madison SEC  
12 and so forth. And we now have a follow-up. We  
13 have a Site Profile and we have also a PER.

14 So if this is okay with my fellow  
15 Subcommittee chair, Work Groups, I think we  
16 would like to task SC&A to really review both,  
17 the PER and the Site Profile.

18 And my understanding, one, that this  
19 is sort of a priority, available resources  
20 issue also. And my understanding is that NIOSH  
21 now has the timing appropriate, is that true,  
22 Stu? At least that's what Ted tells me after  
23 talking to you.

**NEAL R. GROSS**

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

1 MR. HINNEFELD: Right. The Site  
2 Profile has been revised. So there's a revised  
3 Site Profile published, so that's certainly  
4 available to review. PER is underway now.

5 MR. KATZ: It's about the come out.

6 MR. HINNEFELD: I mean, we haven't  
7 actually considered all of those. So  
8 certainly the Site Profile revision is  
9 available for review.

10 CHAIRMAN MELIUS: It seems sensible  
11 to me to combine the two. Is that -- I'm not  
12 familiar with the PER.

13 MR. HINNEFELD: Well, the PER review  
14 typically kind of does the revised Site Profile  
15 review anyway. You know, they kind of look at  
16 the changes that were done and were the changes  
17 to the Site Profile appropriate? I think  
18 that's one of the tasks, isn't it?

19 And so to our way of thinking, whether  
20 they're combined or not, you know, is kind of  
21 irrelevant to us. So I suppose it could be  
22 combined as one assignment and then if the PER  
23 cases aren't completely worked they would, you

**NEAL R. GROSS**

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

1 know, SC&A would just have to wait until they  
2 get that sub-task until the cases are worked.

3 CHAIRMAN MELIUS: Yeah, why don't we  
4 get it assigned? Dr. McKeel will rest easier  
5 and we can get this going. And then face this  
6 when the review is done, at the appropriate  
7 timing we can then decide if all this Site  
8 Profile issues, sort of new issues, revolve  
9 around the PER. Then, you know, the chair of  
10 the Work Group would be glad to send this all  
11 over to the Procedures Subcommittee for action.

12 But if there are others, we can sort  
13 of work that out when we get to that point.

14 MEMBER MUNN: We're looking forward  
15 to your action.

16 CHAIRMAN MELIUS: Our actions. It=s  
17 a group decision. Okay. I hope we haven't  
18 confused everybody by that.

19 Paul, maybe our hardest working Work  
20 Group, TBD-6000.

21 MEMBER ZIEMER: Well, TBD-6000, I  
22 want to report on two different facilities.  
23 First of all, General Steel Industries. You

**NEAL R. GROSS**

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

1        may recall that Appendix BB, which is,  
2        basically, what you might call the Site Profile  
3        for General Steel Industries, Revision 1 of  
4        that was issued this past summer.

5                SC&A was tasked to review the revision  
6        and they have just completed that review. We  
7        just got the review within the last few days,  
8        actually. And I believe once NIOSH has a  
9        chance to review that and respond, the Work  
10       Group will meet.

11               Now, this does also raise the issue of  
12       the process of a PER, as well, because there's  
13       not a PER for this one yet, either. It was my  
14       understanding that NIOSH may be wanting to  
15       await the review of this one before they  
16       actually issue a PER in case there is an  
17       additional revision or two.

18               I'm not sure which is the best way to  
19       do this because in the past some of these PER  
20       reviews were actually reviews of the revisions  
21       themselves.

22               But we have the revision. I think  
23       we'll be prepared fairly soon. Although, I

**NEAL R. GROSS**

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

1 didn't see it on the NIOSH worksheet yet when  
2 they would have a chance to respond.

3 My early review of the SC&A report,  
4 and I haven't had a chance to review it in  
5 complete detail, a lot of the comments were  
6 wording things in there, but there is one thing,  
7 at least, that's a little more substantial. So  
8 the Work Group will have to take a look at that.

9 But at the moment, we're proceeding  
10 just with what we have before us. And it will  
11 be up to NIOSH how they want to proceed with the  
12 PER in the process.

13 But that's where we are in GSI. And,  
14 personally, I'd like to get the comments closed  
15 as quickly as we can because this has been a long  
16 process and we want to make sure that there's  
17 a sooner rather than later opportunity for any  
18 revised dose reconstructions to be handled.  
19 Most of them have already been done and many of  
20 them, I'm sure, will have to be redone. So  
21 we'll need to come to closure on that.

22 The other thing I'll report on is  
23 Simonds Saw, which is also a TBD-6000. Just

**NEAL R. GROSS**

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

1 within the last few days, I think late last  
2 week, we received Rev 2 of what constitutes  
3 their TBD. This is not an SEC issued Site  
4 Profile and we just received that from NIOSH a  
5 few days ago. SC&A will have to review that  
6 yet. But just to let you know that that is in  
7 the works and at some point we'll have to see  
8 if there's any issues yet on Simonds Saw on the  
9 Site Profile.

10 CHAIRMAN MELIUS: Okay. Good.  
11 TBD-6001, otherwise known as the Uranium  
12 Refining Atomic Weapons Employers Work Group,  
13 nothing to report?

14 MEMBER ANDERSON: Nothing to report.

15 CHAIRMAN MELIUS: Okay.

16 MEMBER ANDERSON: We've got  
17 additional assignment sites, but they're not,  
18 I don't think, ready for us to look at yet.

19 CHAIRMAN MELIUS: Okay. Surrogate  
20 Data is in the same position. We have nothing  
21 thing active for that. We're not expecting  
22 anything to be active about, but you never know.  
23 Weldon Spring?

**NEAL R. GROSS**

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

1           MEMBER LEMEN: I have nothing new to  
2 report on that.

3           CHAIRMAN MELIUS: What do we have  
4 that's old? I don't --

5           MEMBER LEMEN: I don't have anything  
6 that's old either, unless NIOSH does.

7           CHAIRMAN MELIUS: We haven't done a  
8 Site Profile review there, have we?

9           MEMBER LEMEN: I think everything  
10 just kind of stopped after the SEC.

11          MR. HINNEFELD: No, I don't recall  
12 any Site Profile issues being open from the SEC  
13 process.

14          MEMBER LEMEN: That's correct.

15          MR. HINNEFELD: When we finished the  
16 SEC process, I didn't think there were any Site  
17 Profile issues left. That's my recollection  
18 anyway.

19          CHAIRMAN MELIUS: Is there a Site  
20 Profile review or was it just an SEC review?

21          MR. HINNEFELD: Well, there was --

22          MR. KATZ: Combined maybe.

23          MR. HINNEFELD: Yeah, when an SEC

**NEAL R. GROSS**

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

1 review is done, you know, and the collection of  
2 issues are made, sometimes those are parceled  
3 into Site Profile issues and SEC issues.

4 And sometimes we'll resolve the SEC or  
5 add an SEC Class and get rid of the SEC issues  
6 and still have Site Profile issues remaining.  
7 But I don't recall that there were any Site  
8 Profile issues remaining from the Weldon  
9 Springs work.

10 CHAIRMAN MELIUS: But if SC&A, and  
11 this is a hypothetical, if SC&A has not done a  
12 Site Profile review, then there might be SEC  
13 issues. They may have focused just on SEC  
14 issues and not focused at all on Site Profile  
15 issues, which is why we do separate Site Profile  
16 reviews. And I just don't recall on this one  
17 what was done.

18 MR. HINNEFELD: I don't recall  
19 either. I don't know that --

20 CHAIRMAN MELIUS: Well, maybe John  
21 Stiver has some.

22 MR. STIVER: After the SEC was closed  
23 out, I believe we had a meeting in September of

**NEAL R. GROSS**

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

1 2012. And then all the TBDs were revised after  
2 that, in 2013, and we have not looked at those  
3 yet.

4 I think it's probably, mainly, some of  
5 the superficial changes to incorporate the SEC,  
6 but I don't know because we haven't really  
7 checked on that yet.

8 CHAIRMAN MELIUS: Okay. Should we  
9 task or --

10 MR. KATZ: Why not? Why not just to  
11 confirm that. If it's superficial, it'll be  
12 easy.

13 MR. STIVER: Yes, I mean, it's a  
14 matter of an afternoon. One afternoon looking  
15 at it and see if there's anything on it.

16 MEMBER LEMEN: So if you task the  
17 SC&A, does that mean should we have another  
18 Working Group meeting after that?

19 MEMBER MUNN: It depends.

20 MR. STIVER: In any case there are TBD  
21 revisions out there that we have not seen yet.

22 CHAIRMAN MELIUS: Okay. So we'll  
23 task SC&A to review those. Okay.

**NEAL R. GROSS**

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

1                   MEMBER LEMEN:   And then should the  
2 Working Group wait until SC&A reviews it and  
3 then take action after that?

4                   CHAIRMAN MELIUS:   Yeah, yeah, NIOSH  
5 is going to have to respond to their reviews.  
6 And this is down the road a bit, but that --

7                   MEMBER LEMEN:   I just want to make  
8 sure there's nothing from the Working Group  
9 you're expecting.

10                  MR. KATZ:   Nothing yet.

11                  CHAIRMAN MELIUS:   Nothing yet.

12                  And Worker Outreach, Josie's not  
13 here, so I think we'll put that off until the  
14 next meeting.   And there is some follow-up that  
15 we need to do in that, but Josie needs to should  
16 be present for that.

17                  And then we have our two  
18 Subcommittees.   Dose Reconstruction Reviews.  
19 David?

20                  MEMBER KOTELCHUCK:   Okay.   Well, our  
21 last --

22                  CHAIRMAN MELIUS:   Can you speak into  
23 the microphone --

**NEAL R. GROSS**

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

1                   MEMBER KOTELCHUCK:           Our last  
2           teleconference meeting was October 29th, which  
3           Wanda kindly chaired in my absence, and much was  
4           done. We almost finished 10 through 13.

5                   Actually, we have 14 findings  
6           remaining in the so-called DCAS sites file. We  
7           have a next meeting, as Ted noted, on December  
8           8th. And we will finish up the findings at that  
9           time and then begin, finally, the 14th set.  
10          And that will allow us also to begin working on  
11          the audit report, finally, for 10 through 13.

12                   And work is going on on the blind cases  
13          and work is continuing on NIOSH work on the 9th  
14          up through the 19th set. So that's the report  
15          and we're moving along.

16                   CHAIRMAN MELIUS: Paul.

17                   MEMBER ZIEMER: I'd like to ask my  
18          periodic question. And that is, what are the  
19          plans to report to the Secretary on the  
20          scientific validity? Is that what you were  
21          talking about?

22                   MEMBER KOTELCHUCK: Yes, that's what  
23          I was talking about, the audit.

**NEAL R. GROSS**

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

1 MEMBER ZIEMER: Okay.

2 MEMBER KOTELCHUCK: Oh yes,  
3 absolutely. We're behind.

4 MEMBER ZIEMER: Yes. That's okay.

5 MEMBER KOTELCHUCK: We had hoped to  
6 begin earlier, but we will do it now and try to  
7 expedite it.

8 MEMBER ZIEMER: I just wanted to make  
9 sure I understood that.

10 CHAIRMAN MELIUS: And I will ask my  
11 periodic question, which is what about the  
12 blind reviews?

13 MEMBER KOTELCHUCK: The blind reviews,  
14 we've gone over, I believe, four out of the six.  
15 It's been put back on our schedule because we  
16 want to get 10 through 13 completed so we can  
17 do the report to the Secretary.

18 The blind reviews, as you remember  
19 from earlier meetings, for the four cases that  
20 we reviewed, the blind reviews were identical  
21 or compatible. We haven't moved ahead on the  
22 others. We will now be able to, however, when  
23 we finish 13.

**NEAL R. GROSS**

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

1           CHAIRMAN MELIUS:   Okay.   Any other  
2           questions, comments, anything from NIOSH or  
3           SC&A on that?   Okay.

4           MR. KATZ:   Well, just to update you,  
5           SC&A has been assigned.   They're doing six plan  
6           reviews now, additional ones.   And they've  
7           also been assigned their 21<sup>st</sup> set of dose  
8           reconstructions, which will take them through  
9           March.   So that's also happened in this  
10          interim.

11          CHAIRMAN MELIUS:   Procedures Review.

12          MEMBER MUNN:   Procedures has not met  
13          since I gave you a fairly concise report during  
14          our September Board teleconference.   We are  
15          scheduled for Tuesday, November 25.   So we will  
16          be meeting later this month.

17                 At our last meeting, we had a number  
18                 of PERs that we looked at and we have a gaggle  
19                 more that's coming up for us.   We also took a  
20                 look at several OTIBS that we were attempting  
21                 to close out last time, some of which we did.

22                 They included ingestion, inhalation  
23                 of plutonium and internal dosimetry issues,

**NEAL R. GROSS**

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

1 including some internal doses related to gross  
2 alpha and gross beta. But most of our focus,  
3 I think, will probably be on PERs during this  
4 upcoming Procedures meeting later this month.

5 CHAIRMAN MELIUS: Any questions or  
6 comments? Yes, Paul.

7 MEMBER ZIEMER: Actually, if I might  
8 be permitted to ask a question of David on the  
9 previous report. We have 21 total reviews we  
10 will have finished with this last group, 21  
11 groups of dose reconstruction reviews. Is it  
12 21?

13 MEMBER KOTELCHUCK: No, we've been  
14 working on 10 through 13 sets --

15 MEMBER ZIEMER: Yes, but which ones  
16 -- which group is ready for SC&A's completing  
17 or --

18 MR. STIVER: Well, we have delivered  
19 up through set 19 now. Set 17 were the six  
20 additional blinds that Dr. Kotelchuck was  
21 talking about that. And since then we've been  
22 tasked to do Set 20, which are another  
23 additional set of blinds.

**NEAL R. GROSS**

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

1 MEMBER ZIEMER: Okay. But --

2 MR. STIVER: And then 21 through 30  
3 are standard dose reconstructions.

4 MEMBER ZIEMER: Okay. So with  
5 those, how many total cases have we reviewed?  
6 Is it somewhere around four to 500?

7 MEMBER KOTELCHUCK: Let's see.  
8 Total? You mean from the beginning?

9 MEMBER ZIEMER: Yeah.

10 MR. STIVER: The table I put in  
11 there --

12 MEMBER KOTELCHUCK: Over 200. I'm  
13 just looking at the --

14 MR. KATZ: No, no, no. David, John  
15 has the numbers. We talked about this  
16 recently.

17 MR. STIVER: Yeah, in the review that  
18 I sent out to you guys, there's a table on Page  
19 15. And the total number of cases up through  
20 Set 19 is 468. Findings are nearing completion  
21 through Set 13. That still leaves 14 through  
22 19 including --

23 MR. KATZ: So though Set 21 it'll be

**NEAL R. GROSS**

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

1 about 500. That's correct.

2 MEMBER ZIEMER: Okay. So about 500,  
3 what I'm trying to get at is to get an update  
4 on what percent of the total cases that have  
5 been reconstructed have we been able to review  
6 and whether our original goal of two-and-a-half  
7 percent was even realistic. I have a feeling  
8 it wasn't and I don't know if we'll be able to  
9 achieve, ever, what we thought we could ten  
10 years ago, or more than ten years ago, twelve  
11 years ago, and whether or not we should.

12 I don't think we need to do it today,  
13 but I'm wondering if the Dose Reconstruction  
14 Subcommittee might advise us as to what is  
15 realistic, so that we have on record --

16 MEMBER KOTELCHUCK: Sure.

17 MEMBER ZIEMER: Maybe we need a new  
18 goal or we have to do more or change the goal.

19 MEMBER KOTELCHUCK: Yeah. I mean,  
20 to respond just to what you're saying, I mean,  
21 I've looked at the numbers and we're really  
22 running around one percent. Maybe  
23 one-point-something, at least half of

**NEAL R. GROSS**

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

1 two-and-a-half-percent. And that's what  
2 we've been running and it's been very slow.

3 CHAIRMAN MELIUS: But, I mean, well,  
4 we've all talked about this, but it's not a  
5 static methodology and it's very complicated.  
6 So the methods that were used for the first  
7 hundred were different than the last hundred.

8 MR. KATZ: But are we doing it any  
9 faster? I don't --

10 CHAIRMAN MELIUS: No. Well, and so I  
11 guess the follow-up, and reason for my question  
12 was about the blind reviews is, is there a  
13 better method that we could be using or a  
14 different methodology we should be using that  
15 might be more efficient? Or a mix of  
16 methodologies and approaches that might be more  
17 efficient in terms of assuring the quality of  
18 that, but also identifying any remaining  
19 problems.

20 I think most of our problems have been  
21 -- at least my estimate is just sort of this fact  
22 that you've separated the dose reconstruction  
23 reviews from the Site Profile, SEC issues and

**NEAL R. GROSS**

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

1 so forth. We go at them sort of differently.  
2 And Procedures and so forth. But is there some  
3 way of taking that into account? Is there  
4 something else we should be able to do in  
5 methodology.

6 But I think to get to that, I think,  
7 when we last talked about this, which is  
8 probably a couple years ago, was the issue of,  
9 one, we needed to have a report to the Secretary  
10 or something like that would summarize this, at  
11 least for the more recent reviews to be able to  
12 evaluate it.

13 And, secondly, the blind reviews  
14 would also be helpful in terms of helping to  
15 evaluate what other methodologies might be  
16 used. Not that we could ever do, you know,  
17 two-and-a-half percent blind reviews, but  
18 might point to issues that would come up.

19 So I think we could try to aim for, you  
20 know, pulling our -- so really looking at our  
21 methodology again as we're doing this audit.

22 MEMBER KOTELCHUCK: Well, as both the  
23 chair and also a new person on the Committee,

**NEAL R. GROSS**

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

1 we have not had, with the blind reviews that  
2 have been completed and that we've looked at,  
3 there seems to be no problem, that we're doing  
4 a good job, there is agreement.

5 And the Sets 10 through 13 have been  
6 very, very slow. And at least from my point of  
7 view, that's most of the time I've been on the  
8 group and the Subcommittee, we've been  
9 discussing those.

10 And so the push has really been to get  
11 those out so that we can begin to work on the  
12 audit. I believe we can come back onto the  
13 blind review cases fairly quickly. They're  
14 small in number and there hasn't been a problem.

15 So with respect to what the Chairman  
16 is saying, we will go back to blind reviews, but  
17 we just had to get 10 through 13 off our plate.  
18 And that has been, I felt, an imperative,  
19 because we could not even begin to talk about  
20 the report to the Secretary, which has a high  
21 priority.

22 CHAIRMAN MELIUS: I'm not being  
23 critical of both the priorities. I was just

**NEAL R. GROSS**

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

1 trying to address how do we address the bigger  
2 issue, which Paul raised also. Is there some  
3 change? And not to reflect on the work that  
4 you've done or the Subcommittee or the people  
5 involved in the reviews, but it's been a long  
6 time and we need to look at that. And we  
7 recognize that we need to at least get that 10  
8 to 13 audit, whatever we're calling it,  
9 completed as a priority and then be able to move  
10 on.

11 MEMBER KOTELCHUCK: I'm not feeling  
12 that you're attacking the Committee or  
13 anything --

14 CHAIRMAN MELIUS: Yeah, yeah. Okay.

15 MEMBER KOTELCHUCK: -- but just  
16 trying to say how we sort of established  
17 priorities ongoing. And getting something to  
18 the Secretary, as I've said, is a high priority.

19 CHAIRMAN MELIUS: Yeah.

20 MR. KATZ: And if I could just add  
21 something related to Paul's point, to put a very  
22 fine point on it. We're falling, despite the  
23 fact that we've really thrown ourselves at this

**NEAL R. GROSS**

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

1 harder since -- although we've had some quorum  
2 issues at times that have gotten in the way,  
3 we're actually losing ground in terms of the  
4 difference between where the Subcommittee is in  
5 reviewing cases and the SC&A's production  
6 reviews.

7 CHAIRMAN MELIUS: Right.

8 MR. KATZ: So we definitely have to  
9 have this sort of better thinking about how we  
10 go about this in a big sense, so I totally  
11 concur.

12 CHAIRMAN MELIUS: Stu.

13 MR. HINNEFELD: I was going to offer  
14 one thing to keep in mind when you talk about  
15 the original objective of two-and-a-half  
16 percent, or whatever, is that for many years now  
17 the Subcommittee has selected cases with PoCs  
18 over 40 percent or over 45 percent, which is a  
19 very tiny minority of the total cases.

20 I bet that's far less than  
21 two-and-a-half percent of the dose  
22 reconstructions we do. And so, you know, based  
23 on those facts, that we are only selecting this

**NEAL R. GROSS**

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

1 top tier, if you selected them all, I bet you  
2 wouldn't be at two-and-a-half percent.

3 So there's a really fundamental  
4 reason here why the Subcommittee, I think,  
5 could come back and say it's not realistic,  
6 beyond the fact that it's an awful lot of work,  
7 it's just not realistic because they're not  
8 two-and-a-half percent in the range we want to  
9 look at.

10 CHAIRMAN MELIUS: Yeah, but another  
11 take on that would be that because they're, you  
12 know, over 40 percent, they probably are more  
13 difficult to review. And since you were  
14 already prioritized, we're already selected to  
15 try to address the problems, but it also makes  
16 the work load bigger.

17 MR. KATZ: Right.

18 MR. HINNEFELD: Yeah.

19 CHAIRMAN MELIUS: Yeah, yeah. If it  
20 was a random sample, I think we would probably  
21 have a lot more done because it would be a lot  
22 quicker to do. And that's not to fault the  
23 selection criteria, but, again, I think we need

**NEAL R. GROSS**

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

1 to sort of look at what comes out of the audit  
2 and what our past experience has been beside  
3 this. Are there other approaches we can use?  
4 Yes, David.

5 MEMBER RICHARDSON: Well, I mean, I'm  
6 going to play the devil's advocate. I mean, I  
7 can't go back 12 years, but I can go back a  
8 number of years when we talked about that logic  
9 of sampling. And we recognized we were doing  
10 stratified sampling, over-sampling certain  
11 types of cases, but nonetheless we had our sites  
12 set at at least sampling a couple percent of the  
13 cases in order to get some coherent picture of  
14 the information. And we're well below that  
15 target.

16 I mean, so that does force us to kind  
17 of reflect about how we can characterize the  
18 whole process based on, let's say, one-half of  
19 a percent or a one percent sample.

20 The second part was some of the  
21 problems we find would be, and these are more  
22 difficult cases in a sense, but some of the  
23 problems we find seem to be still sporadic,

**NEAL R. GROSS**

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

1 episodic, quality control, sort of, you know,  
2 quality assurance issues that I'm not sure, you  
3 know, would be uninformative if we would sample  
4 other parts. And we just don't know right now.  
5 So there seem to be some of those QA/QC issues.

6 And the third one is we had set our  
7 sites at this couple percent sampling issue,  
8 but since the ten year review, NIOSH has taken  
9 on sampling some cases as well. And I don't  
10 remember what your goal was or how many blind  
11 reviews or basically reconstructions NIOSH was  
12 going to run through, but in a sense there's a  
13 shadow program running and also doing this.

14 MR. HINNEFELD: I've forgotten now,  
15 but it's maybe one percent. It's not a very big  
16 percent.

17 MEMBER RICHARDSON: But it's in some  
18 sense we have now, we have two one percent  
19 programs going on and that may help us.

20 CHAIRMAN MELIUS: And it might be  
21 helpful, when we're ready, is to get a report  
22 on the NIOSH review process also when we're  
23 ready to be talking about the audit and what

**NEAL R. GROSS**

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

1 should we be doing in terms of methodology. So  
2 you could be able to summarize, you know, your  
3 experience, Stu, with doing these reviews and  
4 so forth. Okay.

5 MEMBER KOTELCHUCK: I mean, I'm  
6 counting on the review for the Secretary as  
7 informing us. I mean, I'm looking forward to  
8 that, to learn, not just that I have to report  
9 to somebody else above me but that it will give  
10 us a picture, finally, of where things are  
11 slowing down or can be changed to speed things  
12 up.

13 CHAIRMAN MELIUS: Yes. Okay. Any  
14 other comments on that issue? Okay. Do we  
15 have any other Board --

16 MEMBER KOTELCHUCK: Yes, two more.  
17 Do you want something on Ames?

18 MR. KATZ: Ames.

19 CHAIRMAN MELIUS: Ames?

20 MR. KATZ: You skipped it.

21 CHAIRMAN MELIUS: Did I skip Ames?

22 MEMBER KOTELCHUCK: We have an Ames  
23 Working Group. You skipped us.

**NEAL R. GROSS**

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

1           MR. KATZ: I was going to catch you.  
2           It's all right. It wasn't on the website, I,  
3           guess.

4           MEMBER KOTELCHUCK: Right. I'll be  
5           glad to report it.

6           CHAIRMAN MELIUS: Ames is missing  
7           from the website. No respect. Unless it's  
8           been renamed.

9           MEMBER KOTELCHUCK: Right. Well, it  
10          has not even had its first meeting yet. But it  
11          is getting organized and --

12          CHAIRMAN MELIUS: Well, that's why  
13          the website hasn't been alerted yet.

14          MEMBER KOTELCHUCK: Right. For the  
15          record, then, let me say that the Ames Work  
16          Group is Dr. Roessler, Loretta Valerio, Brad  
17          Clawson and myself.

18                 I've been in touch with Tom Tomes. He  
19          has sent us background files which many folks  
20          have been looking at and I've been in  
21          discussions with him trying to basically get a  
22          better orientation as to quite where we are.

23                 He envisions that we need four more

**NEAL R. GROSS**

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

1 White Papers, which he is talking about doing  
2 next summer, of 2015. We have not met as a  
3 group and we will be having an organizing  
4 conference call sometime either in December or  
5 January. That's when I'd like to have it.

6 And then we'll proceed in discussions  
7 with Tom. I'll share the discussions that I  
8 had with him with the rest of the Working Group  
9 and we'll see.

10 Obviously, if it will take him until  
11 next summer, then we're not going to be able to  
12 do very much between now and then, regrettably.

13 CHAIRMAN MELIUS: My recollection is  
14 that there was a Site Profile review from SC&A.  
15 And so are these White Papers in response to  
16 that? That's what I'm trying to --

17 MEMBER KOTELCHUCK: Yes.

18 MR. STIVER: Yeah, I was going to say  
19 that we turned in or delivered our review in  
20 August of 2013, our 22 findings on that. So I'm  
21 assuming is what is our response. This is  
22 non-SEC.

23 CHAIRMAN MELIUS: Yes, yes. They're

**NEAL R. GROSS**

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

1 Site Profile issues that --

2 MR. HINNEFELD: These are for things  
3 that are for -- this is in SEC for much of its  
4 period and so many of these issues are related  
5 to the non-SEC cancer claim dose  
6 reconstructions.

7 CHAIRMAN MELIUS: And one of the  
8 reasons we held up to do the Site Profile review  
9 was so NIOSH could then focus some resources on  
10 being able to address these Site Profile  
11 issues. So that I think the schedule makes  
12 sense in those terms, so. I just wanted to get  
13 that on the record.

14 MR. KATZ: Okay.

15 CHAIRMAN MELIUS: Did I miss anybody  
16 else? Did the website have any other failures?

17 MR. KATZ: No, that's good.

18 CHAIRMAN MELIUS: Yes.

19 MR. KATZ: Blockson, there's no  
20 activity right now.

21 CHAIRMAN MELIUS: Yeah. I'm not  
22 sure if Blockson needs activity does it?

23 MR. KATZ: There'll probably be a PER

**NEAL R. GROSS**

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

1 at some point, which is why I'm not making it  
2 inactive.

3 CHAIRMAN MELIUS: Okay. We'll wait.  
4 Good. Any other things Board needs to do?

5 MR. KATZ: No, I think that does it.

6 CHAIRMAN MELIUS: Okay. Then we  
7 will break until 4 o'clock.

8 I'm reluctant to try to move up the  
9 Santa Susana because we have people scheduled  
10 to come in and I don't want to -- though some  
11 people are here, I'm concerned that other  
12 people might come in around 4 o'clock given --

13 MEMBER SCHOFIELD: And some are going  
14 to call in later.

15 CHAIRMAN MELIUS: Yes. We have  
16 people later, so, yes. Because I think our  
17 presentations, I think, will go on a little  
18 longer, at least a half-hour, but just a guess.  
19 So we will start back up here promptly at 4  
20 o'clock.

21 (Whereupon, the above-entitled  
22 matter went off the record at 3:00 p.m. and  
23 resumed at 4:02 p.m.)

**NEAL R. GROSS**

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

1                   CHAIRMAN MELIUS:       Okay.       We'll  
2 reconvene now.   And my schedule here.   So I'm  
3 not sure.   Phil, do you have anything you want  
4 to say to start or should we just go into -- I  
5 could use his --

6                   MEMBER SCHOFIELD:   I think we should  
7 just go ahead and get started.

8                   CHAIRMAN MELIUS:   Okay.

9                   MEMBER SCHOFIELD:   The only think I  
10 do have is just one brief thing.   I really  
11 appreciate DOE and all the people at the  
12 facility yesterday for arranging the tour.   I  
13 think that was very educational for us.

14                  CHAIRMAN MELIUS:   So what we'll do is  
15 we'll start.   Dr. Hughes will do a presentation  
16 from NIOSH.   Then we'll hear from SC&A, John  
17 Stiver,   and then we'll hear from the  
18 petitioner.

19                  And at some points there may be after  
20 presentations, some questions from the Board  
21 Members, but then we will, after that, after  
22 hearing from the petitioner, we will go into the  
23 public comment period.   So let's do that.   So

**NEAL R. GROSS**

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

1 we'll start with you, Lara. Welcome. Haven't  
2 seen you for a while, so --

3 DR. HUGHES: Yes.

4 CHAIRMAN MELIUS: -- good to see you.

5 DR. HUGHES: Thank you, Dr. Melius.

6 CHAIRMAN MELIUS: Yes.

7 DR. HUGHES: This is the Santa Susana  
8 Special Exposure Cohort Site Profile update.  
9 Okay. When we say Santa Susana in the context  
10 of this program, we really talk about four  
11 separate covered sites.

12 We kind of treat them as one thing  
13 because all the sites share the same operator  
14 over the course of time and also share the  
15 workforce and most importantly for our program,  
16 their dosimetry program, the issues affecting  
17 the dosimetry program are shared between all  
18 these sites.

19 The first site, the largest, is Area  
20 IV of the Santa Susana field laboratory which  
21 is covered from 1955 to the present. There are  
22 currently two Special Exposure Cohort classes  
23 from 1955 through 1964, the Canoga Avenue

**NEAL R. GROSS**

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

1 Facility which is covered 1955 through '60, the  
2 entire period as an SEC Class.

3 The DeSoto Avenue facility has a  
4 covered period of 1959 through 1995 as well as  
5 1998. And it is currently in SEC Class from  
6 1959 through 1964.

7 And the Downey Facility has a covered  
8 period of 1948 through 1955 and the entire  
9 covered period is an SEC Class currently.

10 Now, those of us who went on the tour  
11 yesterday got a nice detailed history of the  
12 site. The contractor history is somewhat  
13 complicated and I don't want to go into it.

14 All of these sites were non-weapons  
15 facilities that did research into nuclear  
16 reactors and other nuclear materials. So they  
17 were reactor operations.

18 There were about ten different  
19 reactors that were built and tested as well as  
20 a number of critical test facilities which is  
21 kind of, it was a small reactor.

22 And there was a number of nuclear  
23 support operations. There was a hot lab

**NEAL R. GROSS**

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

1 facility. There was a small accelerator  
2 facility. There was radioactive material  
3 handling facility. There were waste handling  
4 facilities and so forth.

5 The Work Group for Santa Susana was  
6 established in 2008 in response to the Board  
7 contractor doing a review of the NIOSH TBD on  
8 the sites. That was done in 2008. There were  
9 two SEC Evaluation Reports for Area IV that were  
10 delivered to the Board in 2009 and 2010.

11 The first SEC Evaluation Report on  
12 Area IV was also reviewed by the Board  
13 contractor and the TBD issues and the SEC issues  
14 resulting from those reviews were the  
15 discussion points in front of the Work Group.

16 The Work Group has met in 2008 and 2009  
17 and 2010. And just recently, in 2014, the very  
18 last meeting last month was mainly to touch base  
19 and kind of reestablish the Work Group.

20 So the issues that were discussed in  
21 the past in front of the Work Group included  
22 things like the site definition and operations  
23 timeline of all four sites, incidents, internal

**NEAL R. GROSS**

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

1 monitoring issues, internal coworker model  
2 feasibility and necessity.

3 I forgot to mention with all of the  
4 SECs that were established for these sites,  
5 were based on defining of internal  
6 infeasibility. So the internal data was a big  
7 discussion issue.

8 There was also issues with the  
9 external monitoring data, the neutron data, the  
10 environmental approach that is outlined in the  
11 TBD as well as how we deal with the tritium  
12 plumes that are on site and potential work  
13 exposures.

14 Currently, the Work Group is  
15 discussing the neutron/photon ratio White  
16 Paper that was sent to the Work Group in 2010,  
17 but that was kind of on hold pending some other  
18 issues.

19 What needs to be discussed is the  
20 internal coworker model that has been completed  
21 by NIOSH in March of 2014. And since I prepared  
22 this presentation, the Board contractor has  
23 also issued their review of the neutron/photon

**NEAL R. GROSS**

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

1 ratio White Paper. So that's also in front of  
2 the Work Group to be discussed soon.

3 There are several NIOSH draft  
4 documents that are ready to release. The  
5 external coworker model is in a pending status  
6 pending the resolution of issues regarding  
7 neutrons. And there's several TBD revisions  
8 that are pending resolution of issues and they  
9 will be released as soon as those are resolved.

10 So since 2010, NIOSH has done  
11 considerable work on the site, although the  
12 Work Group has not met. In the last Work Group  
13 meeting in 2010 there was discussion on the  
14 internal and external coworker model. So ever  
15 since then NIOSH has continued the discussion  
16 and issue resolution affecting the internal  
17 data.

18 Back in 2010 we have been working with  
19 a database that was received from Santa Susana  
20 from Boeing that we attempted to work into an  
21 internal coworker model, however, there were  
22 numerous problems.

23 The reason being that this database

**NEAL R. GROSS**

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

1 was not developed for the purposes NIOSH  
2 needed. It was developed for an  
3 epidemiological study, so there was some issues  
4 with that.

5 So NIOSH has been negotiating with  
6 Boeing trying to obtain scanned worker  
7 dosimetry records so we could do the data entry  
8 ourselves.

9 Also in 2010, NIOSH prepared the  
10 neutron/photon White Paper and revised the  
11 internal/external and environmental TBDs  
12 mainly to include the SEC language.

13 In 2011, the negotiations with Boeing  
14 about the worker records continued. And we  
15 also, at the same time, tried to resolve issues  
16 with the, what we call the Boice database  
17 because it was developed for the  
18 epidemiological study by Dr. Boice.

19 We found some issues that we decided  
20 that we cannot use it for NIOSH purposes of  
21 developing internal coworker model.

22 And also in 2011 another iteration of  
23 TBD revisions were completed, but they remain

**NEAL R. GROSS**

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

1 pending resolution of issues with the coworker  
2 studies.

3 2012, finally Boeing decided to  
4 release the scanned worker records to NIOSH.  
5 Those were received in March of 2012 and it  
6 consisted of 14,000 files that had to be sifted  
7 through and classified.

8 So the data entry from those lasted  
9 from May 2012 to January 2013. And the  
10 internal and external coworker models as a  
11 result of those records were completed and  
12 reviewed in 2013.

13 The external model is currently  
14 pending and waiting approval once we decided  
15 how to approach the issues on neutrons which is  
16 something we've been working on in the past few  
17 months.

18 So this year the internal coworker  
19 model was approved and released in March. And  
20 once we decided that the internal model was  
21 feasible, we picked up the issue resolution on  
22 the external because that was kind of on a  
23 holding pattern pending to see if the internal

**NEAL R. GROSS**

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

1 was going to happen.

2 So the internal coworker model will be  
3 known as OTIB-80. It's a plutonium model,  
4 uranium model and a gross beta model starting  
5 in 1965 which is the end of the SEC Class up  
6 until the modern day period.

7 The external coworker model will be  
8 known as OTIB-77, currently in draft status.  
9 It is a result of an analysis of about 175,000  
10 data points and it will consist of a site wide  
11 model addressing photon, electron and neutron  
12 doses. It will also have a separate model for  
13 Area IV and a separate model for the DeSoto  
14 facility.

15 The neutron/photon ratio White Paper  
16 was developed to provide a bounding approach  
17 for unmonitored neutrons for the time span of  
18 1956 to 1987.

19 To do this, we analyzed over 1,000  
20 paired neutron and photon measurements around  
21 the reactor facilities. There was a lognormal  
22 fit data involved which resulted in a  
23 neutron/photon ratio of 1.73.

**NEAL R. GROSS**

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

1           The neutron approach that's to be done  
2 with the neutron/photon ratio is that it's to  
3 be used for a worker that was either employed  
4 site wide or had an unknown work location.

5           We've also found that the  
6 accelerator, there was a small accelerator  
7 facility operated at site only for a short  
8 period of time and in cases where a worker could  
9 be placed at this facility, the NTA film with  
10 a correction factor would actually be useable.  
11 But it's not anticipated to be a large part of  
12 the neutron approach.

13           As indicated in the NIOSH White Paper,  
14 the reactor exposure is to use an N/P ratio and  
15 some additional research has indicated that for  
16 a situation such as fuel handling or other  
17 nuclear procedures that were done at the site  
18 that the reactor N/P ratio is most likely  
19 bounding.

20           So our current path forward is to  
21 issue the external coworker model to  
22 incorporate the neutron guidance and revise  
23 TBDs to continue issue resolution with SC&A

**NEAL R. GROSS**

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

1 regarding the coworker models and the neutron  
2 approach and address remaining SEC issues and  
3 remaining Site Profile issues which regarding  
4 to the SEC I think that was mentioned earlier  
5 in the SEC updates.

6 There's a question of the year 1965  
7 because that was a year that initially  
8 qualified for evaluation, however, the Class  
9 was only recommended through 1964.

10 So we still owe the Board some kind of  
11 decision on what's going to happen with 1965.  
12 And with that my presentation is complete. So  
13 if you have any questions?

14 CHAIRMAN MELIUS: Okay. Questions?  
15 Yes, Gen?

16 MEMBER ROESSLER: You mentioned not  
17 being able to use the Boice database and I can  
18 understand why NIOSH data that's put together  
19 for dose reconstruction cannot be used for  
20 epidemiology. But remind me why it can't be  
21 done the other way.

22 DR. HUGHES: Well, we received the  
23 Boice database from Boeing and as far as I'm

**NEAL R. GROSS**

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

1 remembering correctly, we were assured that  
2 this database was a complete database of all  
3 workers, of all internal dosimetry data that  
4 there was.

5           However, we also have in our database  
6 from the 1960s what's called annual exposure  
7 reports. It was reports written by the site  
8 that indicated how many workers were monitored,  
9 how many urine bioassays they did, how many were  
10 positive.

11           And we actually did some kind of  
12 quality assurance and we found some  
13 discrepancies that we were not able to resolve.  
14 So at this point we were saying that we do not  
15 have enough confidence that the Boice database  
16 is actually complete.

17           Now, I'm not in the position to judge  
18 the epidemiological study that Dr. Boice did,  
19 it's just for our purposes, we found some issues  
20 that we just said, well, we cannot use this  
21 because we're not confident that it's complete.

22                   CHAIRMAN           MELIUS:           Okay.

23           Other -- yes. Henry, you had --

**NEAL R. GROSS**

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

1 MEMBER ANDERSON: No, no.

2 CHAIRMAN MELIUS: Oh, okay. Other  
3 questions?

4 MEMBER RICHARDSON: And now that you,  
5 if I understand correctly, you received a file  
6 which you described as scanned records. And  
7 you contracted ORAU to keypunch those records?

8 DR. HUGHES: Well, they were entered  
9 into a database format. Each worker at the  
10 site had a paper folder that contained the  
11 dosimetry records, the batch readings, the  
12 urine bioassay reports from the labs that did  
13 the analyses.

14 And during the course of the Boice  
15 study, actually, this was all scanned and  
16 digitized and it was available in electronic  
17 format. So what we got was the scanned raw  
18 records of each single worker and that's what  
19 we used to extract the internal/external data.

20 It's very much the same thing that we  
21 receive for an individual worker during dose  
22 reconstruction from the site, except that we  
23 receive the entirety of the monitored workforce

**NEAL R. GROSS**

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

1 at Santa Susana.

2 MEMBER RICHARDSON: And when you  
3 described it as 14,000 files, is it one file per  
4 worker or what makes it 14,000 --

5 DR. HUGHES: Yes.

6 MEMBER RICHARDSON: -- files?

7 DR. HUGHES: Yes. Now, not all of  
8 these workers were actually monitored, but  
9 there were that many files. So we had to pull  
10 out. Some workers were not actually  
11 monitored, but they might have been employed.  
12 I'm not exactly sure. There are that many  
13 files and each represents a worker, but not all  
14 of these did actually contain monitoring  
15 records.

16 MEMBER RICHARDSON: Some files were  
17 empty?

18 DR. HUGHES: That's correct.

19 MEMBER RICHARDSON: So the  
20 contention is that the workforce of radiation  
21 monitored workers at the site is 14,000 people?

22 DR. HUGHES: No, it's more on the  
23 order of 5,000, I believe. I don't want to say

**NEAL R. GROSS**

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

1 anything wrong. I would have to check my  
2 numbers.

3 MEMBER RICHARDSON: And then when you  
4 compared that to the annual reports summarizing  
5 the number of people who are bioassayed and were  
6 radiation monitored in this case now, with the  
7 ORAU data, does it correspond to the  
8 expectation?

9 DR. HUGHES: I actually have not done  
10 that comparison. However, we do know this is  
11 all the site has.

12 MEMBER RICHARDSON: But it's, I mean,  
13 I --

14 CHAIRMAN MELIUS: But has it  
15 completed?

16 DR. HUGHES: Yes.

17 MEMBER RICHARDSON: Because  
18 basically you went back to the scanned files  
19 that had been used for the epidemiological  
20 analysis which --

21 DR. HUGHES: Yes.

22 MEMBER RICHARDSON: -- your  
23 records --

**NEAL R. GROSS**

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

1 DR. HUGHES: Correct.

2 MEMBER RICHARDSON: -- to be  
3 incomplete and you reentered them and I guess,  
4 it leaves the question now, are they complete?

5 DR. HUGHES: We hope so, yes. Well,  
6 we actually have not gone back and done the  
7 comparison. However, what we've done, we've  
8 done a comparison with the NOCTS claim files  
9 that we received and have --

10 MEMBER RICHARDSON: I mean, it's  
11 been -- I mean if some were even --

12 DR. HUGHES: Which is a subset --

13 MEMBER RICHARDSON: -- passed. One  
14 is --

15 DR. HUGHES: -- of it, but there was  
16 no discrepancy with that, so.

17 MEMBER RICHARDSON: Yes. I mean,  
18 one of them is, it's interesting to know whether  
19 the effort paid off. Another one that=s --

20 DR. HUGHES: Yes.

21 MEMBER RICHARDSON: -- just  
22 interesting. I mean, there have been examples  
23 in the past where we thought we had complete

**NEAL R. GROSS**

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

1 data and then we realized that there were gaps  
2 and we said there appear to be gaps. And then  
3 further effort went into locating files and  
4 there was more, so. I would just, it might be  
5 worth --

6 DR. HUGHES: Okay. Yes, the --

7 MEMBER RICHARDSON: Wherever  
8 possible trying to reconcile the --

9 DR. HUGHES: Yes, that can certainly  
10 be done.

11 CHAIRMAN MELIUS: Okay. Any other  
12 questions?

13 MEMBER RICHARDSON: I had a --

14 CHAIRMAN MELIUS: Oh, go ahead.

15 MEMBER RICHARDSON: -- another  
16 question. Because the external file had  
17 175,000 data points and the neutron to photon  
18 ratio was derived from 1,180 paired  
19 measurements. So is my understanding that of  
20 the 175,000 --

21 DR. HUGHES: No, sorry. That's two  
22 completely different things. The 175,000 is  
23 dosimetry readings, batch readings, that sort

**NEAL R. GROSS**

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

1 of thing. The 1,100 neutron/photon, this is  
2 survey data, hand held survey meter data --

3 MEMBER RICHARDSON: Oh.

4 DR. HUGHES: -- that was --

5 MEMBER RICHARDSON: Oh --

6 DR. HUGHES: -- collected --

7 MEMBER RICHARDSON: -- these are --

8 DR. HUGHES: -- around the reactors.

9 MEMBER RICHARDSON: -- area  
10 monitors. Oh --

11 DR. HUGHES: Yes.

12 MEMBER RICHARDSON: -- then those  
13 aren't monitors. Okay. I got you.

14 DR. HUGHES: Yes. It's not  
15 personnel dosimetry, it's area data.

16 MEMBER RICHARDSON: Okay. Now,  
17 within the file, the monitoring file there's  
18 for a subject in a badging period, they have  
19 potentially estimates of their photon dose and  
20 their neutron dose as well. Is that right?

21 DR. HUGHES: That's correct. If  
22 they were wearing the NTA film badge and if it  
23 had a reading, it would be reported in their

**NEAL R. GROSS**

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

1 file. That is correct.

2 MEMBER RICHARDSON: Okay.

3 CHAIRMAN MELIUS: You set? Okay. I  
4 couldn't tell if you were writing something  
5 down earlier or had another question. That's  
6 why I interrupted anyway. Any other Board  
7 Members with questioning? Board Members on  
8 the phone?

9 If not, I have one comment. First of  
10 all, thank you for a very good succinct summary  
11 of a long period of time. So it was helpful.

12 One thing I'd say, since, as you know,  
13 we're as a Board and NIOSH are dealing with the  
14 evaluation of coworker models, and I think it  
15 would be helpful as the Work Group and SC&A and  
16 NIOSH address these coworker models here, at  
17 least keep in mind the kind of implementation  
18 guidelines we have.

19 So I just don't want to have to  
20 backtrack on this. So, again, I don't want to  
21 sort of hold you to criteria that you haven't  
22 seen yet.

23 DR. HUGHES: I have been warned, so.

**NEAL R. GROSS**

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

1                   CHAIRMAN MELIUS:     Okay.     Okay.  
2     Okay.   Well, not as much a warning as a request.

3                   DR. HUGHES:    Yes.

4                   CHAIRMAN MELIUS:   Do the best that  
5     you can without having to -- I don't think it  
6     affects it, it's as much as I think what you  
7     present going forward and so forth.   So thank  
8     you.   Okay.   Now, we'll hear from John Stiver  
9     from SC&A.

10                  MR.    STIVER:        Thanks.        Good  
11     afternoon, everybody.   I'm John Stiver from  
12     SC&A and I'm going to be giving our and the  
13     Board's perspective on the various activities  
14     that have taken place since the initiation of  
15     the TBDs and the reviews and the SEC petitions  
16     and so forth since 2006.

17                         The first half of the slides really  
18     deal with kind of a timeline of the activities  
19     that have happened.   It's a very convoluted set  
20     of findings and activities, as anybody who's  
21     tried to wade through the transcripts from the  
22     meetings would attest to.

23                         And then after that, I'm going to go

**NEAL R. GROSS**

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

1 ahead and just kind of give you an idea and let  
2 you know where we are and how we got there.  
3 Kind of give you a thumbnail sketch of what we  
4 really believe the issues to be and then where  
5 we're headed from there.

6 Lara had given you some of this  
7 information. 2006 and 2007, the Technical  
8 Basis Documents were first issued. In January  
9 through April of 2006 there were a series of  
10 five worker outreach meetings. Those have  
11 been incorporated into our Site Profile review.

12 And then in June of 2007, SEC Petition  
13 93, which was a 83.13, I believe the initial  
14 period was from 1955 through the present,  
15 basically, including the post-1987 remediation  
16 period.

17 The report was sent to the advisory  
18 Board in February of 2008, discussed by the  
19 Board in April and June of 2008 and then in  
20 August of 2008, we submitted our review of the  
21 Santa Susana Site Profile.

22 And, so, this is somewhat unique in  
23 that the Site Profile review was conducted in

**NEAL R. GROSS**

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

1 the midst of ongoing SEC deliberations in the  
2 petition process.

3 Our review uncovered a total of 39  
4 findings. You can see how they're parsed out  
5 in the slides based on the different TBDs with  
6 most of the findings associated with the  
7 internal dose TBD, Number 5.

8 On August 26th of 2008, ten days after  
9 we released our review we had the first Santa  
10 Susana Work Group meeting. And it's important  
11 to note that all the Site Profile findings were  
12 discussed, but none were officially closed.

13 Obviously, within a ten day period,  
14 the petitioners hadn't had time to review and  
15 comment on our review. There was the issue of  
16 ongoing SEC deliberations.

17 And so the findings really discussed  
18 in terms, the potential SEC impact. And those  
19 that were determined to be Site Profile issues  
20 at that meeting were pended until the SEC issues  
21 could be resolved. Excuse me, I've got a  
22 little problem with my voice here.

23 The Work Group agreed that SC&A should

**NEAL R. GROSS**

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

1 go ahead and combine some of the closely related  
2 findings. This was kind of situation where  
3 NIOSH was getting hit from several different  
4 angles on one given issue. And so we went ahead  
5 and prepared a new SEC issues matrix and  
6 condensed everything down into a total of 13  
7 findings.

8 These are really a mixture of  
9 petitioner concerns, issues that were  
10 identified by NIOSH and then some of the  
11 combined SC&A findings.

12 And on April 17th of 2009, we had the  
13 second Work Group meeting. Oh by the way, this  
14 is the issues matrix, it's the 13 findings are  
15 the ones that are still in the issues matrix  
16 that we're working from today.

17 NIOSH was tasked with several action  
18 items for the next meeting which was held in  
19 April of 2010. And during that intervening  
20 period there was a great deal of SEC activity  
21 that took place.

22 Basically, the Board recommended a  
23 Class be added to the SEC based on Petition 93

**NEAL R. GROSS**

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

1 which was from January of '55 through December  
2 of '58.

3 And then, in November of 2009,  
4 Petition 156, which was an 83.14, which was from  
5 NIOSH was kind of fast-tracked. It was,  
6 obviously, qualified very quickly. January  
7 15th, 2010, sent to the advisory Board. It was  
8 discussed at the February 9th, 2010, Board  
9 meeting that I believe was here at Manhattan  
10 Beach.

11 And then in March the Board  
12 recommended another second class be added to  
13 the SEC which was from January 1st, '59 through  
14 December 31st, 1964.

15 So the combined SEC's basically cover  
16 the period of January 1st, '55 through December  
17 31st of 1964. And, obviously, the outstanding  
18 SEC issues may impact that 1964 end date.

19 April 2010, a third Work Group  
20 meeting, the 13 issues were discussed in  
21 context of NIOSH's actions from 2009. Also we  
22 presented review of the Rev 0, OTIB 77, which  
23 was the external dose coworker data set and

**NEAL R. GROSS**

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

1 coworker model.

2 We found five main issues all related  
3 to the appropriateness of the Boice database  
4 for coworker modeling. NIOSH had some  
5 tasking, obviously, to complete the external  
6 and internal dose coworker models and to  
7 provide updates to the environmental TBDs.  
8 And we were to review those products as they  
9 were made available.

10 And in June of 2014, as Lara's  
11 mentioned, NIOSH released their White Paper on  
12 neutron dosimetry. We began reviewing that  
13 and in October of 2010 we were pretty close to  
14 completion.

15 However, that was never finished up  
16 because of competing priorities regarding some  
17 of the other sites that we're dealing with.  
18 And let me get to the next -- here we go. Hang  
19 on, I think we missed one.

20 Okay. Basically, although NIOSH was  
21 busy, you know, collecting data and putting  
22 together these coworker models, there was  
23 really no SC&A or Work Group activity since 2010

**NEAL R. GROSS**

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

1       until 2014.

2                   And in March, NIOSH released OTIB 80  
3       which was the internal dosimetry data set. And  
4       this used the Boeing database and abandoned the  
5       Boice data set. We commenced our review in  
6       July of this year and we're not getting to the  
7       point where we're close to completing that  
8       review.

9                   There were some brief discussions at  
10       the April and July 2014 Board meetings and then  
11       the fourth Work Group meeting was a  
12       teleconference meeting on October 16th, 2014,  
13       in which we kind of tried to jump start the SEC  
14       finding resolution process, get reacquainted  
15       with everything and NIOSH provided some of  
16       their updates on the forthcoming work products,  
17       OTIB 77 and the environmental TBD revisions.

18                   Where do we stand, the issue matrix,  
19       the September 24th update of that that was used  
20       at meetings posted on the DCAS website at the  
21       URL that's listed here.

22                   Only one finding was closed. This  
23       was Number 9, which is the question of which

**NEAL R. GROSS**

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

1 areas, whether it was going to be Area IV,  
2 Canoga Park, DeSoto and Downey, how we should  
3 be considered in the SEC and what were the start  
4 dates for the SEC.

5 And our research, Boeing is up here  
6 2005, made it pretty clear that before 1955  
7 there really were no radiological activities  
8 taking place. It was mostly design and  
9 construction.

10 And, obviously, the petition was for  
11 Santa Susana, Area IV, so the Work Group felt  
12 that we could go ahead and close this one out.

13 There's one open combined finding  
14 that depends on the internal coworker model.  
15 This is Number 10. The adequacy of the  
16 internal monitoring program really subsumes  
17 five sub-issues related to the completeness of  
18 the bioassay data set and how well it correlates  
19 to specific radionuclides.

20 The issue of missing radionuclides,  
21 those are really the big ones, and then the fact  
22 that there was really no internal coworker  
23 model. You've got to keep in mind that some of

**NEAL R. GROSS**

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

1 these findings really date back from 2009, so.

2 There were four open findings that  
3 depended on the review of external coworker  
4 models. This is Number 1 and the sodium  
5 reactor experience incident in 1959. This  
6 issue of maybe a technical shortfall in the  
7 external radiation monitoring badges.

8 Number 7, identification of workers  
9 with blank radiation exposure records. This  
10 is a NIOSH generated issue. Those previous 2  
11 were petitioner issues.

12 Number 13, this was a combined SC&A  
13 finding and this is all related to the external  
14 dose coworker model. Mainly, it subsumes  
15 three areas of concern, one that there was no  
16 coworker model developed at this point.

17 There was the issue of low energy in  
18 thermal neutrons and that was really below  
19 about the 500 keV cut off the NTA film. And  
20 there were some questions regarding the  
21 dosimetry response to low energy photons.

22 There are four findings that are open  
23 that depend on revisions to both the internal

**NEAL R. GROSS**

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

1 and the external coworker models. Now, this is  
2 the petitioner issue of uranium fires and how  
3 those are going to be treated.

4 The sodium burn pit, this is another  
5 petitioner issue, whether the facility was  
6 adequately monitored and the records are  
7 missing.

8 Number 8 was a NIOSH issue. This was  
9 about monitoring of firemen who might have been  
10 involved with fires or been around the sodium  
11 burn pit when activities were going on there.

12 And then Number 11 is kind of  
13 broad-based finding, another combined SC&A  
14 finding about incidents in general. So  
15 there's going to be some overlap here with the  
16 sodium reactor experiment and the sodium burn  
17 pit.

18 Three findings dependent on the  
19 environmental TBDs. This is the issue Number  
20 3 of tritium plumes. The workers may have been  
21 exposed to contaminated drinking water on site.

22 The petitioner issue of insufficient  
23 air monitoring, and another combined SC&A

**NEAL R. GROSS**

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

1 finding, Number 12, lack of information on  
2 environmental exposures in general.

3 This just kind of subsumes two issues,  
4 one being the back extrapolation of stack  
5 emission data for the years 1971 to 1999 when  
6 the measurements were taken to earlier periods  
7 from, in this case, would be '64 through 1970.

8 And then also the contaminated ground  
9 water impacting onsite drinking water, which is  
10 kind of overlapping a bit with petitioner issue  
11 Number 3.

12 Where do we stand now? Our review of  
13 the June 2010 White Paper on neutron/photon  
14 ratios was submitted on October 23rd. So I  
15 think NIOSH has had some time to start looking  
16 at that.

17 Now, we're just about done with our  
18 review of TIB-80. We'll have that probably in  
19 DOE review within another week or two. We're  
20 still awaiting the release of TIB-77 and the  
21 environmental TBDs. And so, obviously, the  
22 open SEC issues are contingent upon complete  
23 reviews of all three of these documents.

**NEAL R. GROSS**

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

1           Our next Work Group meeting is going  
2           to be happening, I believe, back to back with  
3           the Kansas City plant meeting in January of  
4           2015. And that really completes my update.  
5           If there are questions, I'll entertain those.

6           CHAIRMAN MELIUS:        Board Member  
7           questions? Oh, Paul.

8           MEMBER ZIEMER:        Sorry. John, has  
9           SC&A, to your knowledge, examined any data that  
10          tells us where the tritium plume is located and  
11          where it's migrated to or has NIOSH?

12          MR. STIVER:        That's pretty well --

13          MEMBER ZIEMER:        Well, actually --

14          MR. STIVER:        -- established.

15          MEMBER ZIEMER:        -- it was in the  
16          report, but I don't recall seeing it.

17          MR. STIVER:        Yes, it's in the TBDs.  
18          It's been pretty well-established where the  
19          pluming has -- it's really a matter of were  
20          workers monitored for that and who --

21          MEMBER ZIEMER:        Well, you  
22          mentioned --

23          MR. STIVER:        -- might expect --

**NEAL R. GROSS**

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

1           MEMBER ZIEMER:    -- the drinking  
2 water. I'm really asking what evidence there  
3 is that it may or may not have?

4           MR. STIVER: Well, we were --

5           MEMBER ZIEMER:    Where does the  
6 drinking come from on the --

7           MR. STIVER: Well, there's --

8           MEMBER ZIEMER:    -- site and where's  
9 the plume?

10          MR. STIVER: To my understanding,  
11 there was some of the monitoring wells showed  
12 contamination.

13                 The ones that were kind of downgraded  
14 from the reactors or, basically, a neutron  
15 activation with water would produce the tritium  
16 and then that would, you know, flow down grade.

17                 However, the drinking water wells, to  
18 my knowledge, never really showed any  
19 contamination. NIOSH, and you guys can  
20 correct me if I'm wrong, but I believe this was  
21 sort of a kind of a high side approximation to  
22 account for the possibility that there was some  
23 intermixing with the aquifers that could have

**NEAL R. GROSS**

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

1 contaminated the drinking water wells.

2 And so there was a great deal of  
3 discussion about this, I believe, in 2009 in a  
4 Work Group meeting. And we were kind of in  
5 agreement with them at the time that the well,  
6 I think it was Number 34, was a pretty solid  
7 estimate to be used in this.

8 But, you know, once again, until we  
9 see the revised TBDs, we really can't comment  
10 on the adequacy of that.

11 CHAIRMAN MELIUS: Thanks. Any other  
12 Board Member questions? David.

13 MEMBER RICHARDSON: I just had a few  
14 clarifying questions. On one of your slides  
15 you said one of the open issues that was related  
16 to internal coworker models was insufficient  
17 correlation of bioassay data to specific  
18 radionuclides. What did that mean?

19 MR. STIVER: Well, and I think that  
20 was mainly regarding the gross beta and how that  
21 would then be correlated to the fission  
22 products. This is an issue, I believe, that  
23 was raised back in the Site Profile review.

**NEAL R. GROSS**

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

1           But there was that and I think the  
2 bigger issue there was the missing  
3 radionuclides. You know, the new model  
4 basically looks at plutonium, uranium and then,  
5 you know, basically mixed fission products.  
6 And so that still leaves some others that really  
7 are not accounted for --

8           MEMBER RICHARDSON: Okay.

9           MR. STIVER: -- so.

10          MEMBER RICHARDSON: And then on a  
11 subsequent slide, there were four open findings  
12 about the external coworker model and one of  
13 them was a Tiger Team report indicating  
14 inadequate radiation badges. What do you mean  
15 by inadequate?

16          MR. STIVER: I think this was related  
17 to, I think, it was post-1987 when there was  
18 DOELAP accreditation for the film badge  
19 dosimetry programs.

20          And I believe this is a petitioner  
21 issue that they were concerned that that might  
22 have rendered some of the dosimetry  
23 questionable.

**NEAL R. GROSS**

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

1           And we were kind of under the  
2           impression at the time that we discussed this  
3           that at least, you know, during the previous  
4           period that probably wouldn't be an issue  
5           really because, you know, it was really more  
6           about DOELAP accreditation as opposed to  
7           whether the badges had some sort of a  
8           technological shortfall.

9           MEMBER RICHARDSON: Okay.

10          MR. STIVER: But once again, until  
11          the --

12          MEMBER RICHARDSON: So this --

13          MR. STIVER: -- TBD's released, we  
14          can't really close this out.

15          MEMBER RICHARDSON: Okay. So it  
16          wasn't a judgment about adequacy or inadequacy  
17          of coverage of the badging program --

18          MR. STIVER: Right.

19          MEMBER RICHARDSON: -- but it was a  
20          question about the performance of the badges.

21          MR. STIVER: It was more of a  
22          performance issue, you know, with the badges.

23          MEMBER RICHARDSON: Okay.

**NEAL R. GROSS**

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

1                   CHAIRMAN MELIUS:   Okay.   Any other  
2 Board Members with questions?   I have one.  
3 I'm not sure if it's for John or for NIOSH, but  
4 I just want to make sure I understand the issue  
5 of the 1965 SEC, sort of how that fits into this  
6 schedule.   It's sort of in the background here.

7                   MR. RUTHERFORD:   Yes.

8                   CHAIRMAN MELIUS:   I can't quite tell.

9                   MR. RUTHERFORD:   Okay.   Well, I  
10 wanted to, actually, make a clarification  
11 anyway.   John said that the qualified period  
12 actually extended much farther than that.   The  
13 actual qualified period for the petition ended  
14 in 1965.   And so, that's why the remaining year  
15 that's open is 1965.

16                  CHAIRMAN MELIUS:   Yes.

17                  MR. RUTHERFORD:   Okay.   And right  
18 now, we don't have an SEC issue that would move  
19 that forward to extend that Class or we haven't  
20 identified one as of yet.

21                                 And, so, our position was at the time  
22 when we added the Class was up through 1964, we  
23 made the recommendation to add the Class, but

**NEAL R. GROSS**

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

1 we'd seen nothing at that time beyond 1964.

2 CHAIRMAN MELIUS: It's sort of  
3 bureaucratic, but did we actually close out for  
4 '65 and --

5 MR. RUTHERFORD: No, that's, again,  
6 another one of the one's that --

7 CHAIRMAN MELIUS: Okay.

8 MR. RUTHERFORD: Yes.

9 CHAIRMAN MELIUS: Okay.

10 MR. RUTHERFORD: All right.

11 CHAIRMAN MELIUS: Okay. But we're  
12 expecting that the work that's ongoing --

13 MR. STIVER: Yes.

14 CHAIRMAN MELIUS: -- with the  
15 coworker models, I suspect would address that  
16 '65 and I think also if we found issues that  
17 would extend beyond '65 as part of the Site  
18 Profile review, there are other ways of  
19 addressing that through the SEC process, 83.14s  
20 and so forth. So it wouldn't be ignored, but  
21 we do have to address '65 at some point. Okay.  
22 Good. Any other questions? Yes, David.  
23 Yes.

**NEAL R. GROSS**

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

1                   MEMBER RICHARDSON: Can I? And this  
2 is, again, just to help me wrap my head around  
3 the -- there were roughly 14,000 electronic  
4 images of paper files with radiation dosimetry  
5 data provided and that would be either external  
6 or internal dosimetry information.

7                   Of those there were five or 6,000 of  
8 them which were not blank folders, if I'm  
9 understanding this correctly.

10                  And this pertains to the radiation  
11 dosimetry information for workers at all four  
12 sites of which the Boice report says there's  
13 maybe five or 6,000 people radiation monitored  
14 and maybe 42,000 people also employed at those  
15 four sites who are not radiation monitored?

16                  DR. HUGHES: I'm sorry. I'm having  
17 trouble following. Yes, 14,000 files is what  
18 we received, each file representing a worker.  
19 Not every worker was monitored at all.

20                  Some were only monitored for  
21 external, and I think the 5,000 might be the  
22 internal number. Some were monitored for  
23 external and internal --

**NEAL R. GROSS**

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

1 MEMBER RICHARDSON: Yes.

2 DR. HUGHES: -- exposure. So  
3 depending on the worker, there were a lot of  
4 workers where you just would have a card with  
5 somebody's name in the file, but no dosimetry  
6 entries.

7 And I would have to go back check my  
8 numbers because there's so many numbers, I  
9 simply just don't --

10 MEMBER RICHARDSON: But then --

11 DR. HUGHES: -- remember.

12 MEMBER RICHARDSON: -- the total  
13 workforce population --

14 DR. HUGHES: The --

15 MEMBER RICHARDSON: -- at these four  
16 sites --

17 DR. HUGHES: -- 40,000 --

18 MEMBER RICHARDSON: -- is --

19 DR. HUGHES: -- I think is the  
20 Rocketdyne. Yes, that's the --

21 MEMBER RICHARDSON: Yes.

22 DR. HUGHES: -- entirety of the four  
23 sites and the --

**NEAL R. GROSS**

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

1                   MEMBER RICHARDSON:           So the  
2 importance of the coworker models as they've  
3 been highlighted as issue here, partly relates  
4 to the fact that radiation dosimetry  
5 information maybe is available for 5,000 out of  
6 48,000 or --

7                   DR. HUGHES: Well, not all of these  
8 40,000 would be covered under this program.  
9 This is the entire workforce that was looked at  
10 by Boice who did the entire Rocketdyne,  
11 Rockwell International workforce at the time,  
12 so --

13                   MEMBER RICHARDSON: So that might --

14                   DR. HUGHES: -- this is one of the  
15 issues that currently only Area IV is covered,  
16 but there's also Area I, II and III which, you  
17 know, the workforce was in all of these areas.

18                   But, however, currently, what's  
19 covered under this program is only Area IV, so  
20 you would only look at the workers from Area IV  
21 follow-up program. So the 40,000 encompasses  
22 all workers at all sites, so.

23                   MEMBER RICHARDSON: But going back

**NEAL R. GROSS**

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

1 you had described covered periods, I think, at  
2 all four.

3 DR. HUGHES: That is correct.

4 MEMBER RICHARDSON: And so it's not  
5 possible that you would need to reconstruct  
6 doses for somebody who had a non-covered cancer  
7 at any of those --

8 DR. HUGHES: Yes.

9 MEMBER RICHARDSON: -- four?

10 DR. HUGHES: Yes.

11 MEMBER RICHARDSON: Okay. I'm  
12 sorry. You know, it's --

13 DR. HUGHES: It's --

14 MEMBER RICHARDSON: -- not easy and  
15 I'm trying to catch --

16 DR. HUGHES: -- a complicated --

17 MEMBER RICHARDSON: -- myself up --

18 DR. HUGHES: -- site --

19 MEMBER RICHARDSON: -- on it.

20 DR. HUGHES: -- and with the  
21 different areas, it gets very complicated.

22 CHAIRMAN MELIUS: Okay. Phil, then  
23 Brad.

**NEAL R. GROSS**

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

1                   MEMBER SCHOFIELD: You know, if you  
2 read some of the interviews and stuff, people  
3 talk about coming up for Canoga, DeSoto and  
4 going into Area IV and back and forth between  
5 the different facilities.

6                   My question is what kind of  
7 documentation? Do they have a guard gate with  
8 a very good documentation system to know who was  
9 coming into Area IV, who wasn't, where they were  
10 coming from or in some cases even where they  
11 were going?

12                   Because you have these people going to  
13 these different facilities, including Area IV,  
14 but they might have been stationed out of Area  
15 II, DeSoto, Canoga. We don't know how some of  
16 these people went back and forth, but according  
17 to their interviews, they did go back and forth.

18                   DR. HUGHES: Yes, we're aware of that  
19 and as far as a I know the dose reconstruction,  
20 if there is such a situation, tries to address.  
21 But, however, mainly we go by the dosimetry  
22 records that are available for the worker.

23                   Since we don't assign area

**NEAL R. GROSS**

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

1 monitoring, we assign the dose based on  
2 internal/external monitoring or in cases where  
3 that's not available, using the coworker  
4 models.

5 CHAIRMAN MELIUS: Okay. Brad.

6 MEMBER CLAWSON: I'm trying to  
7 understand, a little bit like Phil, the area  
8 there because as we saw yesterday how  
9 everything kind of runs downhill and I'm pretty  
10 sure that the contamination that from some of  
11 these went elsewhere.

12 How are we able to just look at Area  
13 IV? They had other DOE things going on in Area  
14 I. I'm trying to figure out how we're able to  
15 just put our hands around Area IV. What's --

16 MR. HINNEFELD: Well, I can just  
17 offer that Area IV, if you're talking about  
18 Santa Susana Field Laboratory, Area IV is the  
19 covered facility. And we didn't make that  
20 decision. And so we reconstruct doses that  
21 occur on the covered facility. That's what the  
22 statute says.

23 Reconstruct doses that occurred on

**NEAL R. GROSS**

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

1 the covered facility. If that covered  
2 facility affected a neighbor, the way the  
3 statute stands now, that neighbor has no remedy  
4 under our program.

5 MEMBER CLAWSON: Okay. But if you  
6 were in Area I doing work for DOE, then that  
7 tells me that you've got a problem with the  
8 covered area. So how do we remedy that?

9 MR. HINNEFELD: That's another  
10 agency's decision.

11 MEMBER CLAWSON: Okay. So that's  
12 the Department of Labor?

13 MR. HINNEFELD: Yes, I guess. I  
14 think that's Labor.

15 MR. RUTHERFORD: Let me. And  
16 recognize, if we have information that there  
17 was DOE work going on, I mean, real information  
18 documents that there's DOE work going on, we  
19 would provide that to the Department of Labor  
20 and Department of Labor would make that  
21 decision. We've done that I don't know how  
22 many times in the past --

23 MEMBER CLAWSON: Okay.

**NEAL R. GROSS**

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

1 MR. RUTHERFORD: -- so.

2 MEMBER CLAWSON: Right. I'm just  
3 wanting to understand how we can parcel that up.  
4 Thanks.

5 CHAIRMAN MELIUS: Wanda and then I'm  
6 going to close comments because we need to move  
7 along here. Wanda, do you have a question or  
8 comment?

9 MEMBER MUNN: My comment has to do  
10 with how easy it is to confuse what we're  
11 talking about when we speak about this site.  
12 When people talk about there being four areas,  
13 in my mind I'm thinking four areas are Area IV,  
14 DeSoto, Downey, et cetera, Canoga and other  
15 people who are talking about four areas are  
16 talking about Area I, II, III and IV.

17 And I would hope that we'd be very  
18 careful in distinguishing that in the way we  
19 talk about these things because it's very easy,  
20 I think, to find yourself talking about an area  
21 on top of a mountain when someone else is  
22 thinking you're talking about an area down in  
23 the flats at Downey or someplace.

**NEAL R. GROSS**

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

1                   CHAIRMAN MELIUS: Thank you. Now,  
2 we'd like to hear from the petitioner, Bonnie  
3 Klea.

4                   MS. KLEA: Is there anyone here who  
5 did not go on the site tour?

6                   CHAIRMAN MELIUS: Oh --

7                   MS. KLEA: Okay.

8                   CHAIRMAN MELIUS: -- lots of us.

9                   MS. KLEA: Anyway, my name is Bonnie  
10 Klea and I've met some of you before. And I so  
11 appreciate you taking another look at Santa  
12 Susana. We have so many workers that have not  
13 been paid, a lot of families without fathers,  
14 a lot of widows.

15                   Anyway, I wanted to tell you a little  
16 story. I've been working with EPA for 20 years  
17 since I was diagnosed with cancer in 1995.

18                   I worked at the SRE and I worked in the  
19 nuclear area. Wasn't told what they were doing  
20 up there, didn't know anything about nuclear  
21 because I was so young. But I was diagnosed  
22 with bladder cancer 25 to 30 years after I was  
23 up there. And that's second only to lung

**NEAL R. GROSS**

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

1 cancer. Lung is number one, bladder is number  
2 two.

3 But I just wanted to tell you a little  
4 story from the EPA's historical site review.  
5 Anyway, this is the reservoir. Here's Area IV.

6 The reservoir was built in 1919 to  
7 capture the water from Area IV, 1919. There  
8 was a burrow, flat -- what am I trying to say,  
9 fault. There's a fault that runs from here to  
10 fill the reservoir and it was built in 1919.

11 In 1954, we found a memo written by the  
12 company saying well, they'll build the reactors  
13 there and there's no problem if there's an  
14 accident, they'll just divert the water.

15 That's what they did. We had, of  
16 course, you know, the partial meltdown in 1959.  
17 By 1962 we have records of monitors put in the  
18 reservoir with high levels of radiation. We  
19 have those records.

20 By 1968, they built big concrete  
21 diversion paths for all the drainage from Santa  
22 Susana to go directly into the river instead of  
23 into the reservoir.

**NEAL R. GROSS**

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

1           By 1969 the reservoir was closed.  
2           And that reservoir was water served to everyone  
3           in the San Fernando Valley. I don't know how  
4           many millions of people there were.

5           We have a little community right over  
6           here called Hidden Lake. In the earthquake of  
7           '94, the lake was smelly and dirty and they  
8           called in a remediation company to clean it.  
9           And they said we can't clean it because your  
10          sediment is all full of TCE. So we know stuff  
11          got off site.

12          And in the 1959 sodium reactor  
13          experiment accident, the workers in Area I all  
14          had to have their cars repainted. And we have  
15          historical interviews with the workers that EPA  
16          did and many comments in there about having  
17          their cars repainted.

18          And we just had a meeting, just a few  
19          weeks ago, with John Pace, who was one of the  
20          operators trying to shut down the reactor. And  
21          he said they knew the wind data and they knew  
22          the releases were going to go all over the San  
23          Fernando Valley and Eastern Simi Valley.

**NEAL R. GROSS**

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

1           And they had to release the gases or  
2 blow up the reactor. And so they released the  
3 gases for two to three weeks before they could  
4 shut it down.

5           But, anyway, I'm grateful that you're  
6 here taking another look at the situation. I'm  
7 the one that turned in the drinking water data,  
8 went to the Health Department and then to our  
9 County and found their records that, indeed,  
10 Ventura County and Rocketdyne knowingly at that  
11 time, gave us water that was contaminated and  
12 they knew it, from the wells.

13           And we were in a drought and also  
14 during that drought they started recapturing  
15 the Area IV water run-off. This is all the  
16 nuclear area. And they piped it up to these  
17 tanks up here and used it for every rocket  
18 engine test.

19           So not only was that water  
20 contaminated, it was storm water run-off, it  
21 was used to cool down the rocket test and so  
22 whatever was in it was airborne again.

23           Many of the workers are sick, who

**NEAL R. GROSS**

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

1 worked in other areas. And this is Area IV,  
2 across the street was Area III. We had all the  
3 maintenance workers over here who would come  
4 over and clean up spills and fires.

5 In our audience today we have one of  
6 the auxiliary fireman's widow who is here and  
7 she'll be talking about how her husband was  
8 called into the SRE during the accident.

9 And he went in with a fire  
10 extinguisher to put out spot fires, didn't know  
11 and he had to decontaminate and bury his  
12 clothes. And he's died of cancer.

13 So we have that worker who is not  
14 getting compensated because he was an engineer  
15 over in Area I. And we had DOE operations  
16 everywhere.

17 Over here in Area I we had an oil rig  
18 that was a drop tower to test the fuel rods so  
19 they could practice dropping them into the  
20 reactor. We had DOE workers everywhere.

21 And I worked up here. I don't  
22 remember going through a gate. Once I came in  
23 through the main entrance I don't remember any

**NEAL R. GROSS**

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

1 other place where we had to show ID to get into  
2 Area IV.

3 And during the SRE accident the  
4 workers were all sent home. They were heavily  
5 contaminated and so they pulled in workers from  
6 all the other areas to come in and to help them  
7 shut down the reactor.

8 And they threw all the debris from the  
9 SRE out in the back lot. And John Pace should  
10 be on the phone today to talk about that.

11 So I can't think of anything else that  
12 I'm missing. It's a very toxic site. And we  
13 found in one of the canyons, somebody used it  
14 as a dump and they had barrels that look to  
15 similar to what I've seen at Santa Susana where  
16 they took barrels of waste and got behind a  
17 board and blew them up.

18 They did that in the burn pit. We  
19 found 55-gallon drums in a canyon right off site  
20 that all had high powered rifle holes in them.  
21 So there's a lot of history and we're still  
22 trying to find out everything.

23 But, anyway, thank you again for

**NEAL R. GROSS**

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

1 coming. I can't think of anything else I'm  
2 forgetting. And like I say the workers came  
3 from everywhere --

4 CHAIRMAN MELIUS: Yes.

5 MS. KLEA: -- the maintenance  
6 workers, the fire department was over here, the  
7 cafeteria was here. I have a lady whose mother  
8 worked for one of the cafeteria companies who  
9 provided food. And so the cafeteria was right  
10 next to Area IV.

11 And that company's out of business, so  
12 her mom who died of lung cancer can't get  
13 compensated for that because they can't find  
14 the subcontractor. So I'm hoping that you'll  
15 get that SEC moved forward. I'm hoping through  
16 the whole DOE period, I think it was '89, not  
17 '87.

18 I even know clean-up workers who are  
19 sick just from doing the remediation up there.  
20 So thank you and I'm hoping and I'm praying --

21 CHAIRMAN MELIUS: Okay, ma'am.

22 MS. KLEA: -- to help some of the  
23 widows. Thank you.

**NEAL R. GROSS**

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

1 CHAIRMAN MELIUS: Thank you. Okay.

2 MS. KLEA: Do you have any questions?

3 No?

4 CHAIRMAN MELIUS: I don't think  
5 right --

6 MS. KLEA: Okay.

7 CHAIRMAN MELIUS: -- now. Thanks.  
8 Okay. Now, we go into a formal public comment  
9 period and so I will have Ted tell you the rules.

10 MR. KATZ: Yes, just --

11 CHAIRMAN MELIUS: These are pretty  
12 simple, so.

13 MR. KATZ: Yes, very simple. It's  
14 just for those of you who have comment, your  
15 comments -- all of the proceedings of these  
16 meetings, including this today, are  
17 transcribed and published in a transcript on  
18 the NIOSH website.

19 So everything you say, verbatim, will  
20 be repeated there on the NIOSH website, so if  
21 you have private things you talk about about  
22 yourself or about another party, all of those  
23 will be captured.

**NEAL R. GROSS**

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

1           The material you give about yourself  
2 will be published just as you say it without any  
3 kind of redaction and without any editing.

4           If you talk about another person,  
5 though, that's not here speaking for him or  
6 herself, the things you say about another  
7 person may be edited, redacted to the extent  
8 they need to be to protect that person's privacy  
9 because they're not here to state that they  
10 actually want this information released to the  
11 public. So just to let you know, that's how the  
12 transcript for this will be handled.

13           CHAIRMAN MELIUS: And I would just  
14 add, if there's some private personal  
15 information or otherwise that you, or you  
16 prefer not to talk about certain issues in front  
17 of the group, there are people from NIOSH and  
18 from SC&A here who would be glad to talk to you  
19 or follow-up and so forth.

20           We're not limited to just what people  
21 say in the public comment period. And what we  
22 get later can be as valuable and is considered  
23 as important in terms of what applies to helping

**NEAL R. GROSS**

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

1 address the issues at that site as what's said  
2 in the public comment period. So it's not  
3 weighed any differently or treated any  
4 differently onto that.

5 How we do this is we do go through and  
6 I have a listing and I'm going to go in sort of  
7 an initial order of what people did. We will  
8 first deal with people that are in the room and  
9 then we will go on. We take comments over the  
10 phone also and we have some people that are  
11 signed up to do that. But first I'll start with  
12 people in the room and the first person I have  
13 listed is Charlene Roesch.

14 MS. ROESCH: My husband wrote his  
15 occupational history before he passed away.

16 My name is Charlene. I'm the widow of  
17 James Roesch who worked at Rocketdyne for Santa  
18 Susana for over ten years. He died in 1998.

19 The details of his employment, he did  
20 many things up there as are listed in his  
21 occupational thing that he did. There was a  
22 tab that shows where they have the nuclear  
23 contamination and so let me just kind of

**NEAL R. GROSS**

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

1 paraphrase or read a little bit. It's kind of  
2 hard, so bear with me.

3 In approximately 1957 he was assigned  
4 and trained as an auxiliary fireman. His badge  
5 number's 219 which I have with me. They had  
6 training sessions monthly and he really felt  
7 that he benefitted from that.

8 And moving on to 1959, you all know  
9 about the partial meltdown of the nuclear  
10 reactor. He was called in as an auxiliary  
11 fireman. He was given a hard hat and a fire  
12 extinguisher and told to go extinguish spot  
13 fires.

14 He went in the building. He  
15 described it as being smoky and twisted and the  
16 fire was basically out. He saw a little room  
17 with a closed door inside the reactor building  
18 and went inside. And there were, he called  
19 them like tech guys in lab coats and they were  
20 doing something feverishly around this area.

21 He thought so maybe later on, maybe  
22 something with the fuel rods, he wasn't sure.  
23 But when he went in they yelled at him and said

**NEAL R. GROSS**

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

1        what are you doing in here?  And he said, well,  
2        I'm looking for spot fires.  So they said get  
3        out of here, there's no fire here.

4                    And he left and he continued his job.  
5        And then after the fire was all done, they took  
6        the boys to the firehouse and had them shower  
7        and shampoo.  He said it was creepy because  
8        they watched him do it, gave him coveralls to  
9        come home in and told us to wash his clothes,  
10       which I did.

11                   He was diagnosed with multiple  
12       myeloma in 1996.  I remember him asking the  
13       doctor how do you get this, and they said well,  
14       one of the ways you get it is nuclear radiation.  
15       And he went oh.  And that is one of the covered  
16       illnesses that we know about.

17                   He had tumors all up and down his  
18       spine.  It was really advanced by the time they  
19       caught it on him.  And the X-rays, there were  
20       a few vertebrae on his neck, especially, that  
21       were just shadows on the X-ray.

22                   And they didn't know why he wasn't  
23       dead or paralyzed at that point.  But he went

**NEAL R. GROSS**

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

1 through major chemo, radiation and then a drug  
2 called Aredia, which helped to rebuild bones.

3 And for a while he was basically kind  
4 of cancer free for a little bit, but they don't  
5 call it really remission. And then it came  
6 back with a vengeance and he died in February  
7 of '98.

8 And, basically, been denied  
9 compensation because he didn't normally work in  
10 Area IV. He was a mechanic in Area I, if I  
11 remember. And so every time it would come up  
12 again, they'd say oh, you have a wonderful case,  
13 you know, no problem, you'll get compensation.  
14 And then because he's not an Area IV, it was  
15 denied.

16 So I thank you for listening. If  
17 anybody has any questions. He wrote his  
18 history down and he did a lot of things up there.  
19 Then the last page shows an article that was  
20 done years ago with me holding his auxiliary  
21 fireman's badge which I brought if you want to  
22 see it. But it's not contaminated. He didn't  
23 have it on that day.

**NEAL R. GROSS**

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

1           And so thank you for your attention to  
2           this matter. And I certainly hope that things  
3           happen, not only from me, but I've heard a lot  
4           of sad stories from other fireman families as  
5           we've gone to many of these meetings and it's  
6           hard every time we do it.

7           But if people get compensated or at  
8           least get recognized for what they did, it would  
9           be nice. So I thank you. Any questions?

10           CHAIRMAN MELIUS: Okay. Thank you  
11           for --

12           MS. ROESCH: Thank you.

13           CHAIRMAN MELIUS: -- sharing. And  
14           the next person I have listed is Lorraine  
15           Kurowsky, is it?

16           MS. KUROWSKY: Kurowsky.

17           CHAIRMAN MELIUS: Yes.

18           MS. KUROWSKY: I have a similar  
19           story. My husband started to work in the --

20           CHAIRMAN MELIUS: Well --

21           MS. KUROWSKY: -- area quite --

22           CHAIRMAN MELIUS: -- can you get up to  
23           the mic and then start over again. I'm --

**NEAL R. GROSS**

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

1 MS. KUROWSKY: My husband started  
2 working at Canoga Park 12/11/78, and they  
3 refused my application for recognition for what  
4 he did. And they said, well, he didn't work  
5 with radioactive material enough. He was only  
6 22.78 percent.

7 And then they said that he wasn't  
8 really working with radioactive material, but  
9 yet he told me two stories that stayed in my  
10 mind.

11 One was that there was a deer  
12 struggling walking up in that area in IV at  
13 Santa Susana. And he says it was struggling  
14 and it was collapsing and it would try to get  
15 back up. And he said after a while it just  
16 expired.

17 And someone said, hey, you guys in  
18 this area go clean it up. And my husband was  
19 a blue collar worker and he did crating and  
20 packing. So he says go clean it up and let's  
21 pack it up and get rid of it, whatever get rid  
22 of meant. I don't know.

23 Then also they were dispersing a truck

**NEAL R. GROSS**

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

1 and my husband worked with this little guy.  
2 Just my husband, he's a big guy, 6'5" and he  
3 worked with this little guy who was, what, about  
4 5-foot.

5 And my husband was going on the back  
6 of the truck lifting these, what they called  
7 pigs to take them off of the truck, and making  
8 sure that it wasn't too heavy for his coworker.

9 So he says, hey, he says you can handle  
10 some of these, but I'll stay up here. And he  
11 was handling these pigs that I don't even know  
12 what they were.

13 But anyway, he would hand them to him.  
14 And when he handed it to his co-worker who was  
15 this little guy, he handed it to him and it just  
16 went off.

17 And then grabbed this Mr. Waco and  
18 took him off the site and washed him down and  
19 took his clothes and gave him coveralls and sent  
20 him home.

21 And he did get cancer and die of  
22 cancer. But they never touched my husband.  
23 They never said anything to him. He says, you

**NEAL R. GROSS**

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

1 know, just go on your business and that was it.

2 And yet they said because he had 22.78  
3 he wasn't qualified. Well, he died in '01 -- in  
4 '03, I'm sorry. He had '01 in cancer in his  
5 pancreas and they said it wasn't part of what  
6 the cancer they were looking for, but then  
7 again, they said, well, it could have been, but  
8 it was always not here not there.

9 And as the other lady that stepped up,  
10 we feel sorry for the people that weren't  
11 compensated because we did lose our husbands.  
12 My children lost their father.

13 And it's just hard. And just  
14 thinking we should have been recognized in some  
15 way. Thank you.

16 CHAIRMAN MELIUS: Okay. Yes.  
17 Again, just if you want to talk to some of the  
18 people here from NIOSH and may be able to do some  
19 follow-up on the individual case if there was.  
20 I'm not sure how much information they had when  
21 they were doing the dose reconstruction. It  
22 may be helpful. But thank you. D'Lanie  
23 Blaze, is it?

**NEAL R. GROSS**

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

1 MS. BLAZE: D'Lanie.

2 CHAIRMAN MELIUS: D'Lanie, I'm  
3 sorry.

4 MS. BLAZE: Yes.

5 CHAIRMAN MELIUS: It's not your  
6 writing, it's my eyes.

7 MS. BLAZE: The acknowledgment of  
8 Santa Susana Field Laboratories complete site  
9 history on behalf of Area I, II and III  
10 personnel has been a passion of mine since 2007.

11 I'm very happy that the Presidential  
12 Advisory Board on Radiation and Worker Health  
13 has come back to Santa Susana Field Lab with an  
14 interest in touring Areas I, II and III and  
15 that, at last, an extension to the Area IV SEC  
16 is moving forward.

17 We are grateful for your presence and  
18 your efforts on behalf of Santa Susana Field Lab  
19 personnel. Worker advocates and SEC  
20 petitioner and former worker and a site  
21 historian were not permitted to go on  
22 yesterday's tour of the facility.

23 In lieu of our absence, it was

**NEAL R. GROSS**

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

1 requested that we provide a list of things that  
2 we'd have liked to point out to the Advisory  
3 Board if we had been on the tour.

4 Each of you were provided with a copy  
5 to your guide to sightseeing hot spots of the  
6 Santa Susana Field Lab which features a  
7 detailed fold-out map of Atomic Energy  
8 Commission and Department of Energy activities  
9 throughout Areas I, II and III.

10 This guidebook is based on historical  
11 documents that were published by Department of  
12 Energy, its contractors and other agencies.

13 All information is cited. All  
14 resources are included in their entirety on an  
15 accompanying disk. And over 300 worker  
16 interviews that were conducted by Department of  
17 Energy and the Environmental Protection Agency  
18 in 2009 are also included.

19 Upon your review, we are confident  
20 that you will find that Areas I, II, and III  
21 satisfy legislative criteria that is used to  
22 determine a Department of Energy facility under  
23 the statute.

**NEAL R. GROSS**

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

1           Currently, Santa Susana Field Lab  
2 claimants are denied EEOICPA compensation at a  
3 rate of nearly 90 percent, often based solely  
4 on an Area I, II or III work location.

5           However, Area I, II and III workers,  
6 employees of a DOE contractor, were rotated to  
7 Canoga and DeSoto facility regularly.

8           Those are both SEC facilities wherein  
9 the SEC covers all workers. It is therefore  
10 illogical to exclude Area I, II and III  
11 personnel from EEOICPA.

12           Further, as illustrated in the  
13 guidebooks, Atomic Energy Commission and  
14 Department of Energy's engagement in nuclear  
15 laser and coal gasification research, waste,  
16 storage and disposal of Area IV material,  
17 personnel who were monitored for radiation  
18 exposure, accidents and spills involving DOE  
19 waste and construction, modification and  
20 integration of new and existing facilities for  
21 use by or on behalf of Department of Energy  
22 throughout Areas I, II and III of SSFL is very  
23 well documented.

**NEAL R. GROSS**

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

1           Again, this documentation has been  
2 provided in DOE's own words, from their own  
3 published documents. There is no denying any  
4 documented history by this agency and its  
5 predecessors.

6           And Department of Energy may have put  
7 it best in their statement that, "Historically,  
8 great benefits have been obtained by separating  
9 growing and diverse programs and test  
10 facilities at the Santa Susana Field Lab."

11           It is my sincere hope that you will  
12 ardently support and argue for the inclusion of  
13 Area I, II and III personnel to EEOICPA in  
14 accordance with the legislation and in the  
15 spirit of the Act as it was intended by  
16 Congress.

17           I wanted to address the question on  
18 the tritium plume that was raised after SC&A's  
19 presentation. The tritium plume would be  
20 underneath the SNAP Area IV Number 59.

21           And Department of Energy acknowledged  
22 transport of contamination and tritium to the  
23 site wide reclaimed water system and stated in

**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 the guidebooks, that you guys have, that the  
2 drainage from SNAP Building 59 reached the  
3 Silvernail pond in Area III which was the entry  
4 point to the site wide water reclaim system.

5 Now tritium has also been discovered  
6 in Areas I and II. And there are two documents,  
7 specifically, on the disk that you were  
8 provided yesterday that speak to the tritium  
9 plume, one by the EPA, the Rocketdyne Santa  
10 Susana Field Lab sample analysis report from  
11 1989 and the document, Radiation Protection and  
12 Health Physics Services, tritium production  
13 and release to groundwater at Santa Susana  
14 Field Lab. That's on your disks.

15 I thank you very much for coming to  
16 Santa Susana and for the opportunity to  
17 comment.

18 CHAIRMAN MELIUS: Okay. Thank you.  
19 Okay. Is there anybody else in the audience  
20 here, who wishes to speak to the Santa Susana  
21 site before I go to the phone? Okay. Good.  
22 Is there anybody on the phone who wishes to  
23 speak to the Santa Susana site or offer

**NEAL R. GROSS**

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

1 comments?

2 MR. PACE: This is John Pace. Can  
3 you hear me?

4 CHAIRMAN MELIUS: Yes, we can.  
5 Thank you, Mr. Pace. I had you --

6 MR. PACE: Okay.

7 CHAIRMAN MELIUS: -- on the list  
8 here. Go ahead.

9 MR. PACE: Okay. Well, I would like  
10 to help Mrs. Roesch out there. She spoke, one  
11 of the first speakers. Her husband was a  
12 fireman and I was, when she told the story, I  
13 was there at the time and at the SRE reactor when  
14 her husband through the door to help put out the  
15 fire that we had.

16 We had a fire and explosion in the high  
17 bay area at the time, pulling out the sodium  
18 pump which caused the reactor to go down in  
19 1959.

20 And we were trying to replace it. As  
21 we was gotten it all lose and a man come out of  
22 the down the floor where it was at, came up.  
23 And we had a kind of a tent we had covered over

**NEAL R. GROSS**

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

1 to keep the oxygen out.

2 And then when he came through, somehow  
3 it allow oxygen in the area where that sodium  
4 was at with the sodium pump and it had a big  
5 explosion and a fire on top of that.

6 And that's when Mr. Roesch came with  
7 the, you know, fire department to see if he  
8 could help us out. And he come through a small  
9 room that we had there and into the high bay  
10 area.

11 And we yelled at him to get out of the  
12 building or out of the deal just exactly like  
13 his wife just had told you. And because we was  
14 worried because with the explosion and all the  
15 radiation that came out of the pump area, it was  
16 only three feet from the reactor where we was  
17 working.

18 And we was worrying about having other  
19 fires here, of more radiation coming up out of  
20 the reactor core. So what she tells you is  
21 actually true and I'm a witness to that.

22 And I was there on that. That was an  
23 incident that I've talked about many times and

**NEAL R. GROSS**

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

1 NIOSH knows about it. It's on the record with  
2 them. But I haven't had anything for evidence  
3 to prove to them that this occurred.

4 And I got exposed to a lot of radiation  
5 myself on that. Me and three other men, we got  
6 blown clear across the room on our tippy toes  
7 there trying to keep from falling down.

8 With that explosion we ended up all  
9 having about four showers apiece trying to get  
10 that radiation and contamination off us when it  
11 happened.

12 And then most of them went home in the  
13 coveralls, we call redlines, what we wear for  
14 protection. And I happened to be lucky and  
15 have clothes in my locker I was able to wear  
16 home.

17 But I just wanted to be of  
18 verification to Mrs. Roesch that I was there and  
19 I'll be glad to help her on anything. And I  
20 would like to make one, just real quick point,  
21 is the radiation that came out of the SRE  
22 reactor, and I was there, I was there at the time  
23 of the nuclear accident and afterwards.

**NEAL R. GROSS**

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

1 I was there and my crew had started the  
2 reactor up and ran the reactor for the two  
3 weeks. That's all everybody talks about.  
4 They ran a broken reactor, a reactor that wasn't  
5 suitable for running, but we was told to start  
6 it back up again.

7 But during that time, a lot of  
8 radiation leaked out of that reactor through  
9 the fuel elements, the seals around there. The  
10 reactor had gotten so hot before we was able to  
11 get it shut down on the 13th that it damaged that  
12 it was leaking out into the high bay area.

13 So there's lots there that NIOSH needs  
14 to learn about and I've already spoke on this  
15 before. I don't want to do a lot of talk on it  
16 because there's records of it already, but key  
17 thing was just for Mrs. Roesch there.

18 I was there and I'll be glad to work  
19 with her and help her out on that incident there  
20 with her husband. So if there's any questions  
21 anybody would like to ask me that would be fine.  
22 And anybody have a question at all or B-

23 CHAIRMAN MELIUS: I don't think right

**NEAL R. GROSS**

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

1 now. But thank you very much, Mr. Pace, for --

2 MR. PACE: Okay. And thank you.  
3 You --

4 CHAIRMAN MELIUS: Yes.

5 MR. PACE: And bye, now.

6 CHAIRMAN MELIUS: Sir. Anybody else  
7 on the phone that would like to make comments  
8 on Santa Susana? Okay. If not, I'm going to  
9 go -- I have at least three people that have  
10 wanted to make comments, I believe, on other  
11 sites.

12 The first one is Terrie Barrie.  
13 Terrie, are you on the line? Okay. Terrie, do  
14 you maybe have a phone on mute or are we off?

15 MS. BARRIE: All right. Can you hear  
16 me?

17 CHAIRMAN MELIUS: Oh, now we can.  
18 There you are. Okay.

19 MS. BARRIE: Okay. Do you hear me  
20 now?

21 CHAIRMAN MELIUS: Yes, we can. Yes.

22 MS. BARRIE: Okay. I'll start all  
23 over again. Good evening, Dr. Melius and

**NEAL R. GROSS**

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

1 Members of the Board. This is Terrie Barrie of  
2 the Alliance of Nuclear Worker Advocacy Groups  
3 and I thank you for allowing me to call in my  
4 comments.

5 Part of my comment does concern Santa  
6 Susana. So I was happy to hear that some of the  
7 Board Members and members of the community  
8 questioned why Areas I, II and III are not  
9 covered under this program.

10 From the oral history I've heard from  
11 the workers and their advocates and apparently  
12 attested to tonight, it was not uncommon for the  
13 workers from Santa Susana to be detailed from  
14 one area and assigned to another.

15 It seems common practice with all DOE  
16 workers. And as you know, workers assigned to  
17 Areas I, II and III have been denied  
18 classification as a DOE worker and are not  
19 covered under this program.

20 A month or so ago, I found a Department  
21 of Labor final decision which spells out the  
22 criteria necessary for which DOL will designate  
23 a site as a covered DOE facility.

**NEAL R. GROSS**

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

1           The test needed to overcome is that  
2           the claimant or advocate must prove that  
3           Department of Energy had use of or controlled  
4           the site. I need to emphasize the word or. It  
5           appears that Department of Labor has a tendency  
6           to ignore that word in the statute.

7           The law states the DOE must have  
8           proprietary interest in the facility or have a  
9           certain type of contract with that facility.  
10          The law does not state DOE must have proprietary  
11          interest and a service contract.

12          The final decision states quite  
13          clearly what is needed to prove proprietary  
14          interest. And I quote, "The evidence must  
15          establish that the MED, Manhattan Engineering  
16          District (Department of Energy), had rights of  
17          ownership, use or control of the buildings in  
18          which the employee worked."

19          D'Lanie Blaze just prepared an  
20          excellent guidebook for the Board which gives  
21          many examples of the Department of Energy's use  
22          of Areas I, II and III.

23          It is my hope that the Board and the

**NEAL R. GROSS**

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

1 affected claimants petition the Department of  
2 Labor to designate Areas I, II and III as a  
3 covered DOE facility. And I'd be happy to  
4 supply the link to that final decision.

5 I'd like to turn now to the issues with  
6 the Rocky Flats SEC petition. I want to thank  
7 LaVon Rutherford for his offer to discuss the  
8 issues and I'm looking forward to our call next  
9 week.

10 For those of you who are not familiar  
11 with this, here's a brief summary. A man who  
12 was assisting a family member with cancer who  
13 worked at the Rocky Flats facility after 1993,  
14 which is the end of the current SEC Class,  
15 alerted me to a recent release of NIOSH's  
16 occupational internal dose document for the  
17 Rocky Flats facility.

18 The document states, and I quote,  
19 "Because of data issues and limitations, no  
20 specific methods to bound doses from 233  
21 uranium and 232 uranium had been determined.  
22 Therefore, doses to unmonitored RFP workers  
23 from neptunium, thorium and 233 uranium and its

**NEAL R. GROSS**

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

1 associated 232 uranium and 228 thorium  
2 contaminates cannot be reconstructed."

3 One would think that means since NIOSH  
4 cannot reconstruct dose for these elements,  
5 that the SEC Class should be extended.

6 Please note there is no qualifying  
7 statement that limits the years NIOSH cannot  
8 reconstruct those in that document. But  
9 apparently, this statement is not enough for  
10 NIOSH to recommend to the Board to withstand the  
11 SEC Class for Rocky Flats.

12 It is my understanding that for some  
13 reason NIOSH needs to release the White Paper  
14 on neptunium, and I might be wrong about this,  
15 before making any kind of recommendation to the  
16 Board.

17 But if they already know they can't  
18 reconstruct dose for these elements, why is it  
19 necessary to wait for the release of this paper.

20 I must remind everyone that time is  
21 something many sick workers do not have an  
22 abundance of. A friend of mine passed away  
23 this summer. He did not fall within the

**NEAL R. GROSS**

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

1 current SEC Class.

2 And as for the worker I mentioned  
3 earlier tonight, even if the Board recommends  
4 tomorrow to expand the Class for the Rocky Flats  
5 facility, outside of a miracle that worker will  
6 not live to receive the deserved compensation  
7 because of the aggressive nature of the cancer.

8 Please keep the deteriorating health  
9 of the workers in the forefront of this process.  
10 Thank you again, for allowing me to call in  
11 these comments and I look forward to my  
12 conversation with LaVon.

13 CHAIRMAN MELIUS: Okay. Thank you.  
14 For those of you that weren't part of the  
15 emails, there was -- Terrie Barrie and LaVon  
16 scheduled a conference call for next week  
17 sometime. I can't remember the date, but --

18 MR. RUTHERFORD: Next Wednesday at  
19 1:00.

20 CHAIRMAN MELIUS: Next Wednesday to  
21 try to clarify that particular issue. Anyway,  
22 thank you. The next person I have to be listed  
23 is Jeff Schultz. Jeff, are you on the line?

**NEAL R. GROSS**

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

1 MR. SCHULTZ: Yes, I'm here.

2 CHAIRMAN MELIUS: Oh, okay. Go  
3 ahead.

4 MR. SCHULTZ: Thank you for the  
5 opportunity, everybody, to speak tonight. My  
6 name is Jeff Schultz and I'm in Westminster,  
7 Colorado.

8 I'd like to comment tonight on the SEC  
9 Petition 192 regarding neptunium-237 exposure  
10 at the Rocky Flats plant. My document's  
11 recently been made available on the internet.

12 The title of the document is  
13 Validation of Rocky Flats Plant Radionuclide  
14 Inventory and the Historic Data Using the SWEPP  
15 Assay Data and it's dated August 2004.

16 The abstract document states that,  
17 "This report presents the results of a  
18 descriptive statistical analysis of isotopic  
19 characteristics of radioactive waste stored at  
20 the Idaho National Engineering and  
21 Environmental Laboratories Radioactive Waste  
22 Management Complex."

23 In the body of the document there's a

**NEAL R. GROSS**

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

1 section 4.1.4 neptunium. And the document  
2 states, "At least some of the SWEPP waste drums  
3 contained neptunium-237. However, neptunium  
4 quantities are not measured or calculated by  
5 the PAN/gamma system. Neptunium data are only  
6 available when the SGRS absolute system is  
7 used.

8 Of the SWEPP graphite waste drums,  
9 only four were assayed using the absolute gamma  
10 system, hence, data on neptunium is very  
11 limited."

12 Section 4.2.4 states that,  
13 "Measurable quantities of neptunium-237 were  
14 found in all but four waste drums for which  
15 there was SGRS data."

16 Section 4.3.4 states, "Since there  
17 were only neptunium data for 14 mixed metal  
18 waste drums, plotting of the histograms is not  
19 useful."

20 Section 4.5.4 states no neptunium  
21 data were available for organic setup waste.  
22 Section 4.6.4, "no neptunium data were  
23 available for special setups weight."

**NEAL R. GROSS**

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

1           From this document it's clear that  
2 waste shipments to INL were being scrutinized  
3 for the content of neptunium-237 in this 2004  
4 document.

5           Further, they were using a  
6 statistical approach to guess what amount of  
7 neptunium-237 was used from a fraction of data  
8 sampled from the drums that were surveyed with  
9 the SGRS system.

10           A coworker of ours on a crew in  
11 Building 371, who was assigned to survey drums  
12 with a Canberra SGS system in 2002,  
13 [identifying information redacted] task was to  
14 survey legacy drums which had been in storage  
15 for many years in the plant.

16           By [identifying information  
17 redacted] account some of the drums had no  
18 labels, other had labels that deteriorated  
19 making them illegible. Some drums were  
20 re-labeled with information as to what they  
21 thought was in those drums at that time.

22           In the process of surveying the drums  
23 with this SGS system, they did a step where they

**NEAL R. GROSS**

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

1 actually opened the lid of the drum and took a  
2 gas sample from inside the drum.

3 During one of those tests,  
4 [identifying information redacted].

5 The fumes from the drum had caused  
6 [identifying information redacted]. The  
7 fumes were probably generated from radiolytic  
8 decay of the plastic bags, the chemicals and the  
9 radiation all doing their work in the waste drum  
10 over that period of time.

11 [Identifying information redacted].

12 But [identifying information  
13 redacted] does remember operating the SGA  
14 system and finding neptunium-237 in some of the  
15 drums that [identifying information redacted]  
16 surveyed. And [identifying information  
17 redacted] has one document in [identifying  
18 information redacted] possession that shows  
19 the survey of a drum and neptunium-237 was  
20 present in that drum in that 2002 period.

21 [Identifying information redacted]  
22 also commented that some of the drums  
23 [identifying information redacted] surveyed

**NEAL R. GROSS**

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

1 and repacked contained waste from the 1969  
2 Mother's Day fire that occurred in Building 776  
3 and Building 777.

4 And this is a testament that waste was  
5 store in these drums at the Rocky Flats Plant  
6 for a very long time. 1969 waste was still  
7 sitting in drums.

8 Our workers contend that detection of  
9 neptunium at the site was largely missed since  
10 this is very weak gamma and it's merely lumped  
11 in with the other gamma signatures and it shows  
12 up in the total plutonium count.

13 And that they weren't really tasked  
14 with looking for neptunium. There was no  
15 reason to look for it. Only the real modern SGS  
16 equipment that was brought to the site around  
17 the year 2000 could distinguish between  
18 plutonium and neptunium. Reliable neptunium  
19 detection in the old days would have required  
20 the use of a spectrometer.

21 The Rocky Flats plant had many barrel  
22 storage areas. Drums were constantly moved  
23 around by workers between 90-day satellite

**NEAL R. GROSS**

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

1 storage areas.

2 A shell game was conducted, so that  
3 drums in these storage areas wouldn't violate  
4 the storage time limit of 90 days in these  
5 so-called temporary storage areas.

6 So when the 90 days was up drums would  
7 start being moved from one area to another.  
8 Materials in suspect corroded drums were  
9 repacked into new drums over the years.

10 When a new requirement was instituted  
11 to install carbon filters on all the drums to  
12 relieve a possible problem of hydrogen build-up  
13 in the drums and possible explosions, a project  
14 was started and around 10,000 drums were  
15 re-lidded with new lids that had a threaded  
16 opening where they could install the carbon  
17 filter.

18 Many drums had to be surveyed and  
19 repacked over the years to comply with  
20 plutonium limits dictated by the waste sites to  
21 allow our shipments. So the drums were handled  
22 a lot.

23 As we ran out of space in the

**NEAL R. GROSS**

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

1 designated storage areas and because of  
2 extended periods of waiting for the website to  
3 open and a period of time where shipments to the  
4 INL area were curtailed by the governor of Idaho  
5 new drum storage areas had to be created because  
6 the main drum storage areas were full.

7 So drum storage started being pushed  
8 into the process rooms where the people were.  
9 And as workers, we had to work around these hot  
10 drums and we had to be shined by these drums on  
11 a daily basis.

12 This caused a lot of exposure to  
13 employees. Some of these drums contained  
14 neptunium as proven by the fact that neptunium  
15 is showing up at the waste sites.

16 I'm in the process of trying to find  
17 another coworker who works at the Savannah  
18 River plant. He was quoted by another employee  
19 as saying that waste shipments received at the  
20 Savannah River plant from the Rocky Flats plant  
21 were surveyed at Savannah River and they were  
22 found to have neptunium in them.

23 And this occurred in the time period

**NEAL R. GROSS**

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

1 of the early 2000s when Rocky Flats was closing  
2 and shipping their waste around. When the  
3 plant finally closed, the equipment used for  
4 the pre-1984 time period when neptunium work  
5 was done, that equipment was demolished and  
6 removed.

7 In the process of removing this  
8 equipment, ventilation duct work that went to  
9 this equipment and the work of the equipment  
10 itself exposed our workers to neptunium  
11 contamination that was left behind.

12 This equipment went into waste crates  
13 or into cargo containers ultimately shipped to  
14 the Nevada Test Site. And this material is  
15 really only surveyed for plutonium, uranium,  
16 and americium. They, again, did not count the  
17 neptunium present.

18 I just wanted to ask the Board Members  
19 to consider this evidence that Rocky Flats  
20 workers were exposed to neptunium-237 well into  
21 the 2000s when the plant was closed and  
22 demolished and consider extending our SEC  
23 further out to the closing date. And thank you

**NEAL R. GROSS**

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

1 again for the opportunity to comment this  
2 evening.

3 CHAIRMAN MELIUS: Okay. Thank you.  
4 And we will follow-up on this and, obviously,  
5 NIOSH is here in the audience, too, and they're  
6 actively evaluating Rocky Flats. And also our  
7 contractor is here, so this information will be  
8 available, obviously, to them for follow-up  
9 also. So again --

10 MR. SCHULTZ: Thank you.

11 CHAIRMAN MELIUS: -- we appreciate  
12 the thoroughness of your follow-up. That  
13 was --

14 MR. SCHULTZ: Thank you.

15 CHAIRMAN MELIUS: -- helpful. Good.  
16 The other person I have listed who wanted to  
17 make comments on the phone is Dr. Dan McKeel.  
18 Dr. McKeel, are you on the line?

19 DR. MCKEEL: Yes, I am. Can you hear  
20 me?

21 CHAIRMAN MELIUS: Yes, we can very  
22 well.

23 DR. MCKEEL: All right. Well, good

**NEAL R. GROSS**

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

1 afternoon to the Board Members and all  
2 assembled. I'm Dan McKeel. I'm the General  
3 Steel Industries and Dow Madison SEC  
4 co-petitioner.

5 First off, I certainly will sincerely  
6 thank the Board for tasking SC&A to review the  
7 Dow Madison Appendix C Revision Number 1 that  
8 was issued on April 3rd of 2014.

9 I'd ask that this be done twice and I  
10 certainly appreciate that it now is going to be  
11 done. As was stated this SC&A review is  
12 absolutely necessary, the first step toward  
13 NIOSH issuing a Program Evaluation Report for  
14 Dow even though Director Hinnefeld tells me  
15 that the PER for that site is being prepared.  
16 I don't know how far along it is.

17 But my remarks tonight mainly address  
18 processing of a revised GSI Site Profile, which  
19 is Appendix BB, Rev 1 that Dr. Ziemer mentioned  
20 in his TBD-6000 Work Group report earlier this  
21 afternoon.

22 I would note that a GSI Program  
23 Evaluation Report based on GSI Appendix BB, Rev

**NEAL R. GROSS**

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

1 1, which was issued June 6, 2014, has been  
2 stopped pending release of SC&A's review which  
3 was just released a few days ago for Appendix  
4 BB, Rev 1.

5 The dose reconstruction Subcommittee  
6 at its 10/29/14 meeting declined to make a  
7 detailed review of four completed GSI dose  
8 reconstruction cases based primarily on the  
9 future availability which was said to be  
10 tomorrow by Mr. Mauro of SC&A's review of  
11 Appendix BB, Rev 1.

12 So that document was not available for  
13 the Subcommittee Members to review. The SC&A  
14 memo we're talking about was drafted by Drs.  
15 Robert Anigstein and John Mauro of SC&A.

16 The dose reconstruction Subcommittee  
17 Members on October the 29th were assured by John  
18 Mauro that the SC&A finds were minor and would  
19 not require changes in dose reconstruction  
20 practices for GSI. SC&A stated the main  
21 changes involved language tweaking primarily.  
22 And this was also suggested today by Dr. Ziemer.

23 Acting chair Wanda Munn, for the dose

**NEAL R. GROSS**

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

1 reconstruction Subcommittee assured the  
2 Members that all dose reconstructions  
3 shortcomings and NIOSH four methods had been  
4 dealt with from the previous Rev 0 of Appendix  
5 BB which came out in June of 2007.

6 The Board DFO, Ted Katz, admitted that  
7 these older methods were now outmoded. And he  
8 declared, and I'm quoting him, "This committee  
9 is done with these cases."

10 Should this unfortunate decision  
11 stand, no GSI completed dose reconstruction  
12 will have been reviewed by the DRSC. All of  
13 this was really shocking to me because I'd been  
14 asking Ted Katz and DRSC chairs for years about  
15 these GSI case reviews with completed dose  
16 reconstructions without getting any  
17 satisfactory answers on why no cases had been  
18 reviewed, what the case numbers were et cetera.

19 Anyway, I want to now turn to the  
20 comment about my part in Appendix BB, Rev 1.  
21 The SC&A review of the revision of Appendix BB  
22 also address in part, an extensive critique  
23 dated July the 16th, 2014, that I had made of

**NEAL R. GROSS**

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

1 the revised DCAS GSI Site Profile.

2 I received my copy of the  
3 Anigstein-Mauro SC&A memo on November the 3rd  
4 and then wrote an eight-point initial reaction  
5 memo to all Board and TBD-6000 Work Group  
6 Members the same day.

7 My concerns were initially, besides  
8 some of the content and the findings of the SC&A  
9 report that even though SC&A was reviewing my  
10 work as well as that of Dave Allen and NIOSH,  
11 my name was not actually mentioned in the report  
12 title, the body text or in the references of the  
13 SC&A memo.

14 However, they did quote findings of  
15 mine, but they refer to me as the GSI  
16 co-petitioner throughout.

17 So despite these allusions to my work,  
18 my White Paper, which was 87 pages, critiquing  
19 Appendix BB, Rev 1, which was posted on the DCAS  
20 website for three-and-a-half months before the  
21 SC&A review was released was not cited in the  
22 text of in the references in their 10/29 GSI  
23 Site Profiles review memo.

**NEAL R. GROSS**

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

1 I observed in reading through the  
2 content of the body of the report that SC&A had  
3 cherry-picked and briefly mentioned a few of my  
4 many objections to the Allen DCAS 6/16/14  
5 Appendix BB paper.

6 I equated this tactic to DCAS's Dave  
7 Allen's throw them a bone technique. Mr. Allen  
8 admitted using this strategy as demonstrated by  
9 email for the Hooker Electrochemical site that  
10 was obtained by the site petitioner through a  
11 FOIA request. DCAS director Hinnefeld later  
12 apologized to the Board for these actions on the  
13 part of his DCAS personnel.

14 Further review of the 10/29  
15 Anigstein-Mauro Appendix BB, Rev 1 review memo,  
16 and this is the most important thing I'll say  
17 to you tonight, showed that there were eight new  
18 SC&A findings.

19 Several of which will require  
20 extensive new modeling and dose recalculation  
21 by NIOSH. An example, which I also pointed out  
22 in my Appendix BB, Rev 1 review was that GSI  
23 radiographers during the radium 226 area were

**NEAL R. GROSS**

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

1 also exposed to the betatron beam and activated  
2 high nickel steel castings with respect to  
3 photons and betatron beam neutrons.

4 NIOSH had not included those  
5 important doses from the betatron to GSI  
6 radiographers during the radium 226 era. So  
7 SC&A noted they had to be added.

8 Also SC&A differed with NIOSH and Dave  
9 Allen on skin beta doses from the betatron and  
10 said that those doses needed to be resolved as  
11 well, and so on.

12 The remedies and resolution of these  
13 eight new SC&A findings on Appendix BB, Rev 1,  
14 would likely occupy several more meetings and  
15 White Papers to be resolved completely.

16 Please recall the 13 SC&A findings on  
17 Appendix BB, Rev 0 from 2007 took seven years  
18 until January of 2014 to be considered to be  
19 completely resolved by the TBD-6000 chair as  
20 stated in his report to the Board earlier this  
21 year.

22 For the record, the correct full  
23 citation from my White Paper dealing with

**NEAL R. GROSS**

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

1 Appendix BB, Rev 1 is as follows. The URL, the  
2 link to it is  
3 <http://www.cdc.gov/NIOSH/ocas/gsi.html>. And  
4 this is part of NIOSH docket 140 for the GSI AWE  
5 Illinois site.

6 The full citation on the DCAS web page  
7 is submission by Daniel W. McKeel, Jr., M.D.,  
8 GSI SEC 1005 co-petitioner. And the title is  
9 Critique of GSI, Appendix BB, Rev 1 by Dave  
10 Allen, DCAS, 6/6/14 and it's a pdf two megabyte  
11 87 page file.

12 In light of all this, I feel even more  
13 strongly that the Board has been seriously  
14 misled by the TBD-6000 Work Group including the  
15 SC&A and NIOSH members on the finality of  
16 resolution of the original 13 findings of  
17 Appendix BB, Rev 0, both leading up to and  
18 during the final nine to eight vote for GSI SEC  
19 105 on 12/11/12.

20 And this misleading has continued  
21 even afterwards. Even today it is abundantly  
22 clear that all GSI Site Profile dose  
23 reconstruction findings from the Rev 0 June

**NEAL R. GROSS**

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

1 2007 version are not fully resolved.

2 NIOSH and DCAS have more details to  
3 work through. And for the same reasons, I  
4 believe the D.R. Subcommittee Members were  
5 misled on October 29th by SC&A and John Mauro.  
6 The new findings are not all minor and cosmetic,  
7 far from it. More dose calculations are  
8 required by NIOSH.

9 Finally, I note the SC&A memo was  
10 included as a discussion paper for this  
11 meeting. During the Work Group reports, Dr.  
12 Ziemer mentioned he had seen the SC&A Appendix  
13 BB, Rev 1 review.

14 He did not mention that SC&A was  
15 tasked by the Board and the DFO to also review  
16 my detailed White Paper on that same Rev 1,  
17 Appendix BB document.

18 Finally, I sincerely and humbly ask  
19 all Board Members to please read all three  
20 papers, Appendix BB, Rev 1 issued 6/6/14, the  
21 Dan McKeel critique of Appendix BB, Rev 1 issued  
22 on July the 16th, 2014 and the Anigstein-Mauro  
23 SC&A memo about Appendix BB, Rev 1 that was

**NEAL R. GROSS**

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

1 issued on October the 29th, 2014.

2 Thank you very much and I appreciate  
3 you're letting me address you. Thank you.

4 CHAIRMAN MELIUS: Thank you. Is  
5 there anybody else on the line that wishes to  
6 make public comments? Okay. If not, I  
7 believe that concludes our public comment  
8 session and concludes our meeting. So we will  
9 talk to everybody again after the holidays.

10 MR. KATZ: Thank you, everyone, for a  
11 productive meeting.

12 (Whereupon, the above-entitled  
13 matter went off the record at 5:46 p.m.)

14

15

16

17

18

**NEAL R. GROSS**

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