

UNITED STATES OF AMERICA

CENTERS FOR DISEASE CONTROL

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NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

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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

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PAUL L. ZIEMER, Member
TED KATZ, Designated Federal Official
REGISTERED AND/OR PUBLIC COMMENT PARTICIPANTS

AL-NABULSI, ISAF, DOE
ADAMS, NANCY, NIOSH Contractor
BARRIE, TERRIE*
BLAZE, D=LANIE
BURGOS, ZAIDA, NIOSH
CRAWFORD, CHRIS AFRANK@, 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

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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,

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1 which is on the NIOSH website.

2 Roll call. We have no topics for
3 which there are conflicts, so I'm not going to
4 address conflicts for Board Members. So we're
5 just going to run through roll call. And let's
6 just go alphabetically from the top. There are
7 a few Members that -- we're having feedback
8 here, I think -- who I know are going to be
9 absent.

10 (Roll call.)

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

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

20 And we have a number of people in the
21 public who have already signed up, by send --

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1 sent me emails, but you don't -- the rest of you
2 don't need to send emails or what have you.
3 We'll get to you after we finish with people in
4 the room.

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

13 CHAIRMAN MELIUS: Okay. Thank you,
14 Ted. And we'll start, as usual, with a NIOSH
15 update. Stu Hinnefeld.

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

19 I always -- I try to start with program
20 news on these updates, and sometimes I don't
21 think of very much news, probably because it's

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1 not news to me, because it happens to me every
2 day. But since our last meeting, we have
3 mainly outreach activities to talk about.
4 We've done a number of them, either -- well,
5 really in conjunction, mostly in conjunction
6 with the other agencies.

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

19 So certain members of our staff
20 present certain sections or certain topics.
21 Staff from ATL present other topics, and then

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1 there's some working sessions for people to
2 become more familiar with our website and where
3 to find information.

4 The idea behind this is that these
5 people then can be resources for their
6 constituencies back at home, and can be sources
7 of information for those folks back at the
8 facilities.

9 So it went pretty well. ATL does a
10 nice job of setting that up, and we've --
11 typically get very positive comments. They do
12 an attendee assessment, essentially a course
13 assessment thing at the end.

14 Pretty consistently, we get pretty
15 high marks about the usefulness, people, you
16 know, really happy to be there and they thought
17 the information was presented well and they
18 enjoyed it.

19 So we did go through that in
20 September. And then there were several Joint
21 Outreach Task Group meetings in the months

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1 since the last Board meeting, in Richland and
2 Spokane -- that was one trip for the two
3 locations, Rochester and in Paducah, just a --
4 I guess it's about three weeks ago now.

5 So those are most -- that's most of the
6 news that I thought of to put on the slide.
7 Getting into the claim, or the statistics, I
8 won't get into -- spend a whole lot of time on
9 these. They're on the handouts, and I think
10 they were probably in information you received.

11 The claims are, continue to go up at
12 about -- we continue to get about 200 a month,
13 new -- maybe slightly less than 200 a month of
14 new claims. We have a kind of a constant flow
15 of reworked claims.

16 Typically when people get an
17 additional cancer, they're sent back for
18 rework. So in combination of the new and
19 reworks, we're probably around 250 a month that
20 we get.

21 And we continue to send cases back.

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1 These are the various categories. The 1,200
2 cases still with us, I believe, a number of
3 those are cases where the initial draft is in
4 the hands of the claimants, and we're waiting
5 for the close, either doing a close-out
6 interview or going to get the OCAS-1 form back.

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

10 So those are -- that's how the game's
11 -- you know, we've -- that's kind of been our
12 sort of inbox for a while now. We're not -- we
13 have certainly timeliness objectives, in terms
14 of getting cases done, I think 90 percent of the
15 cases within five months of getting all the
16 information we need to do it.

17 And so we're not making -- we don't
18 really have an objective to reduce the number
19 in the inbox. We just want to make sure we're
20 timely in the response to the claims, as timely
21 as we can be.

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1 Here is the breakdown of Probability
2 of Causation, how the -- these are ones done
3 from DRs. This is just the DR statistic. It
4 doesn't take into account cases that were
5 compensated through the SEC process.

6 As I recall, that's either 28 or 29
7 percent. I did the arithmetic and -- but I
8 didn't write it down. Or I don't -- I wrote it
9 down, but not with something I have with me. I
10 think it's like 28 or 29 percent have been
11 successful through dose reconstruction.

12 Again, a lot of the -- a number of the
13 cancers that tend to be successful with,
14 through dose reconstruction, like lung cancer
15 in particular is an SEC cancer, and so as you
16 add additional SEC Classes, you don't have
17 those, you know, those don't come to dose
18 reconstruction so you don't get those
19 successful dose reconstructions when they're
20 paid through the SEC.

21 This is our chart, our long-term chart

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1 of submittals versus production. It doesn't
2 change much. The last data point really
3 shouldn't be on there. That's a partial
4 quarter.

5 These are quarterly data, and there is
6 -- there was no precipitous drop in claims
7 recently. That's just a partial quarter, and
8 we were close enough to the meeting and getting
9 the meeting materials ready that it was a little
10 hard to re-run.

11 So we said, well what the heck, I'll
12 just explain it. That's a, that's only a
13 partial quarter. There's no, there was no
14 precipitous drop in claims recently.

15 Here's status of the first 5,000
16 claims and how they break out. Nothing's much
17 different there. This slide caught my
18 attention because -- and if you look at the
19 claims at NIOSH, in the first 10,000, there are
20 20 DRs in process, and three are initials.

21 And that bothered me a little bit,

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1 because I knew that we had, a while ago, we had
2 a number of claims that were initial even though
3 they had low numbers because they were CLL
4 claims, that CLL originally referred to us.
5 And so we gave them a claim number, even though
6 DOL shouldn't have referred them to us, because
7 CLL wasn't -- you know, chronic lymphocytic
8 leukemia wasn't covered.

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

16 And I saw this slide and I said, you
17 know, that was quite a while ago. That seems
18 like we shouldn't have those. So I looked
19 those up. Excuse me a minute.

20 Two of the cases were pulled before
21 being completed. Either the claimant opted

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1 out of the process or died, unfortunately,
2 before the claim was submitted. And it was
3 closed for years, seven, eight, nine years,
4 until a survivor either was identified or
5 decided to pursue the claim.

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

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

19 The Fernald site, we had SEC decision
20 debate. We -- typically we don't pend claims
21 when we have an SEC claim, you know, petition

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

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

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

18 Okay. These are our DOE response
19 numbers. I do not have the comparison to last
20 month but I could probably find them if I need
21 to. These really look pretty good to me. We

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1 don't have any sites, I don't think, that are
2 particularly problematic. And the 256 is, I
3 think, a really pretty low number, considering
4 how many claims we get all the time.

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

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

18 Well, we're pretty much through that
19 process now. So the petitions from now on will
20 probably be, for the most part, 83.13
21 petitions. So, I think that was it. Yes, I

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1 guess it's not going to take me out of it, but
2 I can get out of it over there.

3 So, are there any questions?

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

6 MR. HINNEFELD: Yes, the --

7 CHAIRMAN MELIUS: -- SEC issues.
8 Dave?

9 MEMBER KOTELCHUCK: I was just
10 curious. I mean, you -- for administrative
11 reasons you separate out the DR and SEC cases.

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

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

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1 potential, what fraction of them are, in fact,
2 compensated?

3 MR. HINNEFELD: Well, there might be
4 some statistics on the DOL website that might
5 answer that. I'm not familiar with them. The
6 information that we have, I think I have a slide
7 back here, you can see in the second major side
8 where you have all the sub-bullets, there are
9 some 3,351 cases for SEC Cohort, Special
10 Exposure Cohort.

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

19 It has happened that when they go to
20 final adjudication they take another look at
21 the case and they have a different diagnosis.

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1 And so it may, essentially, fall off the SEC.

2 So that is a pretty good approximation. So if
3 you would add that number, the 3,351 to -- oh,
4 I'm sorry, to the 10,073 --

5 MEMBER KOTELCHUCK: Oh, okay.

6 MR. HINNEFELD: -- you would have an
7 approximation of -- but then you've got to add
8 the same -- got to add it to the 35,667 also.

9 MEMBER KOTELCHUCK: Right.

10 MR. HINNEFELD: So you'd have an
11 approximation of the fraction, the ones that
12 got to us. Now, once an SEC Class is added, we
13 never see any more claims from that site because
14 the Department -- and it's an SEC cancer, the
15 Department of Labor just pays them.

16 MEMBER KOTELCHUCK: I see.

17 MR. HINNEFELD: So the best
18 information about how they're -- I think would
19 be on the DOL website. I think they have some
20 statistics about site-specific outcomes there.

21 MEMBER KOTELCHUCK: Oh, very good.

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1 I will do that. I will check that.

2 MR. HINNEFELD: Okay, my handy
3 assistant Kato has just sent -- that was
4 probably inappropriate, wasn't it? In Part B,
5 according to the DOL -- let me see what I'm
6 looking at, there have been 92,609 cases filed.
7 And it looks like there are 42,000 cases that
8 were paid. So that's a little less than 50
9 percent.

10 MEMBER KOTELCHUCK: Well, it's close
11 to 50 percent, just --

12 MR. HINNEFELD: Yes. And, now that
13 -- well Part B, though includes silicosis and
14 --

15 MEMBER KOTELCHUCK: Beryllium.

16 MR. HINNEFELD: -- berylliosis.

17 MEMBER KOTELCHUCK: Right.

18 MR. HINNEFELD: Beryllium disease.

19 So --

20 MEMBER KOTELCHUCK: Nevertheless,
21 it's much larger than the number you had, than

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1 the DR number.

2 MR. HINNEFELD: It's much larger than
3 the 28 percent that is done through dose
4 reconstruction, yes.

5 MEMBER KOTELCHUCK: Okay, thank you.

6 CHAIRMAN MELIUS: Yes, Paul?

7 MEMBER ZIEMER: Stu, my question is
8 on the workshop that you held, and you described
9 the types of individuals who participated.
10 Can you give us an idea of the actual numbers
11 of people who participated in the --

12 MR. HINNEFELD: It was about 30.

13 MEMBER ZIEMER: About 30?

14 MR. HINNEFELD: Yes. Slightly less,
15 I think.

16 MEMBER ZIEMER: And is that covered
17 by your budget, in terms of their travel and so
18 on, or do --

19 MR. HINNEFELD: Yes, yes.

20 MEMBER ZIEMER: Okay.

21 MR. HINNEFELD: Yes. We pay their

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1 travel, and for certain attendees, we provide
2 wage replacement.

3 CHAIRMAN MELIUS: Any other
4 questions for Stu? Any of the Board Members on
5 the phone wish to ask questions?

6 MEMBER FIELD: No, not at this time.
7 Bill.

8 CHAIRMAN MELIUS: Okay. Yes, Henry
9 has a question though, here.

10 MEMBER ANDERSON: Yes. Stu, you
11 have here that you've completed 131 of the SEC,
12 and ten of them are with the Board. Are there
13 any that you've completed that aren't with the
14 Board?

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

17 MEMBER ANDERSON: Yes, okay.

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

20 MEMBER ANDERSON: Yes, right. Okay.

21 MR. HINNEFELD: -- that we have not

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1 presented to the Board yet, I think. Bomber
2 will give the numbers later on --

3 MEMBER ANDERSON: Okay, yes.

4 MR. HINNEFELD: -- but there are some
5 we are working on now that we've not presented
6 to the Board, but --

7 MEMBER ANDERSON: Right.

8 MR. HINNEFELD: -- everything where
9 we've finished an Evaluation Report, it's
10 either in the Board or it's been -- it's with
11 the Board or it's been dispositioned by the
12 Board.

13 MEMBER ANDERSON: Okay. Thank you.

14 CHAIRMAN MELIUS: We'll reveal that
15 in greater detail some time between now and
16 midnight tonight. Okay. No further
17 questions? Okay, thank you, Stu. We'll work
18 on coming up with some more to that.

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

21 MR. CRAWFORD: Good morning. I'm

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1 Frank Crawford, a health physicist with the
2 Department of Labor. And let's see if we can
3 get -- yes. Sorry.

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

13 MEMBER KOTELCHUCK: Yes, I know. I
14 know. And often people ask, well what fraction
15 of the cases submitted are compensated? And I
16 never have been able to say, other than the DR,
17 which is about 30 percent, right? I think it's
18 about 30 percent.

19 MR. CRAWFORD: Yes.

20 MEMBER KOTELCHUCK: Yes.

21 MR. CRAWFORD: Yes. Also, before we

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

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

18 By our count, then, that is DOL, we
19 have about 175,000 cases filed, and almost 11
20 billion in total compensation paid to date.
21 This is where the numbers start differing a

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1 little.

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

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

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

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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

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1 21,700 versus about 9,200 DR cases.

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

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

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

17 So if they're accepted first by an SEC
18 and then ask for medical benefits, and
19 therefore a dose reconstruction, they're less
20 likely to be approved than somebody who has gone
21 the other way, through the dose reconstruction

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1 process and has had significant exposure. So
2 I think that's what's going on there, but --

3 MEMBER RICHARDSON: I'm sorry. I'm
4 a little confused.

5 MR. CRAWFORD: Right.

6 MEMBER RICHARDSON: You're saying
7 that half the claimants who are covered under
8 an SEC are nonetheless having a dose
9 reconstruction by NIOSH?

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

17 MR. HINNEFELD: Just one other point,
18 the medical benefits is for a cancer that's not
19 an SEC cancer. So in other words, the claimant
20 would have more than one cancer. One would be
21 an SEC cancer, and that would put them into the

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1 SEC and they'd be compensated through SEC.

2 With another non-SEC cancer, their
3 successful claim for the SEC cancer will not pay
4 for medical benefits for that other cancer. So
5 they have to have a successful dose
6 reconstruction to have medical benefits paid
7 for the non-SEC cancer.

8 MEMBER RICHARDSON: So in this case,
9 that number refers to the Probability of
10 Causation under a calculation where the target
11 organ may not have been the primary -- may not
12 have been an SEC cancer?

13 MR. HINNEFELD: Correct. It would
14 not have been an SEC cancer.

15 MR. CRAWFORD: But both are evaluated
16 for the PoC. In other words, if a person had
17 a lung cancer and a prostate cancer, they
18 qualify for the SEC solely on the lung cancer,
19 of course. But if they ask for medical
20 benefits for the prostate cancer, then when the
21 case goes back to NIOSH for a DR, both cancers

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1 are evaluated de novo, as if there had been no
2 SEC.

3 MEMBER RICHARDSON: I'm still
4 confused why you would do that. Isn't that
5 just a lot of time spent by NIOSH to do a dose
6 reconstruction for something which is going to
7 be compensated regardless?

8 MR. CRAWFORD: Well compensated
9 monetarily, but if the prostate cancer, for
10 instance, was treated at great expense --

11 MEMBER RICHARDSON: No, but the lung
12 cancer.

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

15 MEMBER RICHARDSON: Yes.

16 MR. CRAWFORD: Yes.

17 MEMBER RICHARDSON: But you're
18 saying that the calculation is done,
19 nonetheless?

20 MR. CRAWFORD: Using both cancers to
21 be -- I mean, it's only fair, essentially. If

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1 there were no SEC, that person would be
2 evaluated on the basis of both cancers.

3 MR. KATZ: The reason for that is
4 because multiple cancers, there's a
5 statistical treatment that's given -- it's
6 advantageous, if you have multiple cancers, to
7 have all those considered when they do the PoC.

8 So that's why they reconstruct the
9 doses for all the cancers, including the one
10 that's covered by the SEC. Because for each
11 primary cancer, there's a statistical
12 treatment that combines those in giving you a
13 total PoC.

14 MEMBER RICHARDSON: And that's going
15 to help them with medical compensation?

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

18 MEMBER RICHARDSON: For the medical
19 compensation of the --

20 MR. KATZ: Exactly. Exactly.

21 MEMBER RICHARDSON: -- non-covered

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1 cancer.

2 MR. KATZ: Exactly. So that's just
3 beneficial for them.

4 MR. CRAWFORD: Then I think we can
5 leave this slide. No surprises here. Our top
6 four work sites still generating new Part B
7 cases are Savannah River, Hanford, Y-12 and
8 K-25.

9 This slide, which is perhaps a little
10 difficult to read, but shows basically two
11 things of interest, I think. One is that DOE
12 site cases are slowly declining, in general,
13 and that AWE cases are slowly increasing.

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

18 Stu has already mentioned outreach
19 events, which DOL, of course, participates in
20 and sponsors, through the Joint Outreach Task
21 Group. This slide is rather small, but -- has

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1 small text, but these are some of our recent
2 meetings. I don't think there's any point in
3 going through them unless a Board Member cares
4 to ask. They're all on the website. And as
5 you can see, there are quite a few meetings.

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

13 Now on the Santa Susana site, which is
14 being discussed later today, just as some
15 background information, we already have
16 combined B and E claims -- or cases, rather,
17 1,000, approximately, of which NIOSH has
18 already completed a DR of 240 of them.

19 We have final decisions on 500 such
20 cases, which is an interesting thing, but I'm
21 not sure of the discrepancy between those two

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1 numbers. But as it -- okay, earlier SECs,
2 right. And then we have 200 Part B approvals,
3 and 200 Part E approvals.

4 And that's the last slide, I think,
5 that needs to be presented. The rest is, as I
6 said, general information about claim-filing
7 and qualifications. Any questions?

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

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

14 CHAIRMAN MELIUS: Oh, okay.

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

16 CHAIRMAN MELIUS: Put him on the
17 spot, huh?

18 MR. LEWIS: Yes. All right, good
19 morning, everyone. I'm Greg Lewis with the
20 Department of Energy. And of course, Pat
21 Worthington and Isaf Al-Nabulsi are also here

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1 with me. I guess while Stu is getting the
2 slides up -- I was going to -- oh, I guess there
3 again. Thank you.

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

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

20 So the most important, you know, front
21 lines that we have in terms of responding to

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1 these records requests are, you know, with the
2 POCs. You know, some of you all who took the
3 tour at the ETEC facility yesterday yet Phil
4 Rutherford who was our primary POC.

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

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

21 He knows what was done, where it was

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

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

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

20 So often we have to go to a number of
21 different locations to pull together those

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

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

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

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1 So we will look at gate logs when we
2 have them, sign-in sheets, badging records.
3 If they were on-site and went to medical, or
4 happened to be badged for dosimetry, we'll
5 check those type of locations. But often times
6 we won't have a formal employee, you know, human
7 resources employment record for those folks, so
8 we have to be as creative as we can.

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

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

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1 you know.

2 And those listed there, some are, you
3 know, just starting. Most are kind of in the
4 tail end, or we're kind of doing the final stage
5 of the research but we are supporting NIOSH and
6 the contractors on those sites.

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

16 I think the numbers, there used to be
17 200 and something buildings there, and I think
18 they mentioned there's somewhere around 20
19 buildings there that used to do DOE work.

20 So there's very little left compared
21 to what they used to do, but we were able to show

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1 the group the layout, how the site is
2 configured, the difference between Area IV,
3 which is the facility that's covered by this
4 program, and then Areas I, II and III, which
5 were NASA and Air Force sites, which are not
6 covered.

7 So we were kind of able to show the
8 layout, some of the buildings, what different
9 processes were done and what's there now. So
10 hopefully it was helpful to you all.

11 And then of course, document reviews,
12 due to, you know, security and classification
13 concerns, there are, you know, certain sets of
14 documents that we have to review.

15 We've committed to do this. We have
16 a security plan that kind of lays out what we
17 do and how we do it. The average turnaround
18 time for documents reviewed by headquarters is
19 about eight working days.

20 It's not always that quick out at the
21 sites because they're not always able to juggle

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1 their resources and their staff to accommodate
2 the reviews, and also because the headquarters
3 reviews are typically NIOSH-drafted reports or
4 Board-drafted reports and they're shorter,
5 whereas out at the sites we could be talking
6 about hundreds of documents that are thousands
7 of pages so it can be quite a workload for the
8 sites.

9 We -- you know, when we get a
10 large-scale request, we will try to work with,
11 you know, the requester or NIOSH, the Board,
12 whoever it is, to determine at least a path
13 forward to completion, what the priorities are,
14 what we should work on first.

15 And we'll provide a time frame. And
16 if that time frame is not workable for the Board
17 or NIOSH, we can bring in assistance from
18 headquarters sometimes, or try to work out
19 alternate pathways.

20 And in fact, with -- recently with
21 Savannah River, there was a very large request

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1 for declassification, and given the staff and
2 resources at Savannah River, they were going to
3 struggle to do that in the time frame that was
4 needed on your end, so we've sent a large group
5 of those documents up to DOE headquarters in
6 Germantown.

7 And so folks can come in and work on
8 them there. So as they're being reviewed and
9 declassified, there will be a collection at
10 headquarters that can be used to help draft the
11 reports. So things like that, we do try to come
12 up with solutions that meet your all's needs.

13 And then facility research, you know,
14 and that's kind of the smallest of our
15 responsibilities in terms of workload, but it
16 is extremely important, particularly with
17 respect to the AWEs.

18 When questions are raised, and often
19 those questions can come from NIOSH research
20 into either a Site Profile or SEC, they might,
21 you know, come across documents that suggest

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1 the facility should be covered for an
2 additional time period, or they can't find
3 evidence that work was done during some parts
4 of the covered time period. We'll work
5 together with DOL to pull together documents
6 and do some research into those facilities.

7 And then I just want to mention the
8 SERT. I think I've mentioned it before, but
9 again, this was our big accomplishment last
10 year, bringing this on line. SERT is the
11 Secure Electronic Records Transfer System.

12 It's an electronic system that DOL,
13 NIOSH and DOE are all a part of. It allows us
14 to send requests for documents, and then, you
15 know, upload the responses and send them back
16 instantaneously.

17 So it's two-factor authentication,
18 which is basically a complicated way of saying
19 it's the highest standard in terms of the
20 protection of private information. I know
21 that, you know, there's been many high-profile

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1 hacking incidents and data releases and things
2 like that, so two-factor authentication is the,
3 you know, is sort of the gold standard for
4 protecting information.

5 So it allows us to quickly and
6 efficiently send and receive information with
7 these groups. It has cut down the time to
8 respond by probably about ten days or so for
9 each claim. And it also allows all of the
10 different agencies to track and manage their
11 responses and requests, you know, cohesively,
12 so everyone has the same numbers.

13 And then both Chris and Stu have
14 mentioned outreach. Again, we do participate
15 in the Joint Outreach Task Group meetings. And
16 we've had quite a few meetings this fall and
17 we'll be having a few more in the winter and
18 spring.

19 And then I also want to mention the
20 other program that we work on at DOE that isn't
21 directly tied to EEOICPA, but it, you know, I

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1 kind of consider it a sister program. It's our
2 Former Worker Medical Screening Program.

3 We provide free screenings to all
4 federal contractor and subcontractor workers
5 at DOE sites. Again, that's not the AWEs, but
6 at all DOE sites, you're eligible for a free
7 screening. We work to provide you with that
8 screening close to your house.

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

17 And then, of course, for this area,
18 the two programs that would cover the Los
19 Angeles area are our Supplemental Screening
20 Program for all production workers and our
21 Building Trades National Medical Screening

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1 Program for the construction workers.

2 And with that, questions?

3 CHAIRMAN MELIUS: Paul, go ahead.

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

11 MR. LEWIS: Thank you. And we know
12 these tours are important, so any time -- you
13 know, we're always happy to work with our sites
14 to facilitate these tours for you.

15 MEMBER ZIEMER: And Isaf, too, is
16 here. So include all of the DOE folks that are
17 here.

18 CHAIRMAN MELIUS: Any other -- Brad,
19 you don't have a -- usually you have something
20 you want to pin Greg down for.

21 MR. LEWIS: Taking it easy on us.

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

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

14 MR. LEWIS: No, well they seem to be
15 coming fast and furious.

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

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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

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1 reconstructions.

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

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

13 Generally we see those three subtasks
14 in the first initial report, and Subtasks 4 and
15 5, which are fairly time-consuming, not
16 unexpectedly, sometimes come afterward.

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

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1 monitored but had been exposed.

2 At that time there was a considerable
3 discussion with respect to who would be covered
4 by the designation construction trade workers.
5 We specifically included laborers and
6 mechanics, masons, carpenters, electricians,
7 painters, pipefitters, boiler-makers,
8 millwrights, sheetmetal workers, iron workers,
9 insulators. And that's just a partial list.
10 That's not all-inclusive.

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

18 That was issued on 2006, and that was
19 the founding document which we have used since
20 then in order to address these issues
21 surrounding this particular group of workers.

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1 I think I went too far. No, I didn't.

2 All right. At the time that this model was
3 provided for us, PER-14 was issued to
4 reevaluate the claims that had already been
5 done at ten sites, where external coworker
6 models had already been looked at.

7 Those are the ten sites; they are
8 Hanford, PNNL, Kansas City, LANL, Pantex,
9 Portsmouth, Savannah River, Weldon Spring and
10 Oak Ridge Labs, Y-12.

11 Those were not the only sites, of
12 course. There were four other sites for whom
13 coworker studies had been published prior to
14 the issuance of OTIB-52 in 2006. Those claims
15 had already been reevaluated, however, under
16 other PERs.

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

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1 The timeline is fairly
2 straightforward. I think we covered that
3 reasonably well. In 2007 was when PER-14 was
4 issued first, and it's been under evaluation of
5 one sort or another since then. In 2012, SC&A
6 had its draft review of the entire PER, and in
7 July of that year their six findings were
8 discussed at length, and eventually, just
9 recently this year, all were resolved.

10 Our Subtask 1 issues, assessing the
11 circumstances that necessitated the need for
12 the PER to begin with. You'll recall that's
13 the basis for Subtask 1 from our first slide.

14 During facility modifications, we
15 might have had exposed construction trade
16 workers who hadn't been monitored. The
17 exposures might be different from other
18 radiation workers, and the assignment of
19 coworkers to unmonitored construction trade
20 workers needed to be claimant-favorable.

21 The empirical data ratios were

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1 developed from both external and internal
2 doses, by monitored workers to all monitored
3 workers, using data from seven major DOE sites,
4 which are listed there. The results were the
5 basis for the OTIB-52 guidance.

6 Subtask 1 focused on both external
7 dose, using -- deriving deep-dose coworker
8 adjustment factors of 1.4 from the empirical
9 data that was available. A shallow dose was
10 bounded by the workers' doses, by the AM
11 workers' doses, and the 95th percentile of
12 coworker data could be used without having to
13 apply an adjustment factor, for the shallow
14 dose only.

15 In the internal dose, only the Hanford
16 coworker intakes need be multiplied by a factor
17 of 2. For all the other sites, the internal
18 dose was going to be assessed using the same
19 method that's applied to all other workers.

20 I apologize for these slides where we
21 give you the finding information. You know, we

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1 always have the same process when we are
2 presenting PER information to you.

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

9 So I'm going to have to ask you to bear
10 with us with respect to the way we present these
11 findings. It seems to have worked well in the
12 past. If you don't find that amenable to your
13 needs now, please let us know.

14 We're hoping that providing these
15 slides to you in advance gives you an
16 opportunity to read through this at your
17 leisure, and making them available to the
18 public makes it possible, we hope, for them to
19 be able to address that in the same way.

20 But if you find this onerous for any
21 reason, please let me know what your desires are

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1 with respect to presentation to you.

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

7 The inclusion of the construction
8 trade workers with all monitored workers might
9 obscure the dose differences, and a shallow
10 dose adjustment factor may be required if NIOSH
11 failed to adjust for the construction trade
12 workers' shallow doses.

13 And DR guidance in OTIB-52 for
14 internal dose says the internal dose should be
15 determined using the same method as is used for
16 all the other workers in the absence of internal
17 monitoring data and coworker data. It's
18 unclear what was meant by that recommendation.

19 So these are the types of things that
20 we debate at considerable length in the
21 Subcommittee proceedings. If you have any

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1 question about these that we can't answer for
2 you, please do -- I refer you to the
3 Subcommittee's transcripts, which give you the
4 detailed information about the discussions
5 that were had with regard to them.

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

15 CHAIRMAN MELIUS: Excuse me, Wanda.

16 MEMBER MUNN: Yes.

17 CHAIRMAN MELIUS: I think David
18 Richardson had a question.

19 MEMBER MUNN: Yes, David?

20 MEMBER RICHARDSON: Wanda, if -- just
21 help me understand the first Subtask 1, the

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1 problem was laid out that the construction
2 trade workers might have been exposed but not
3 monitored, and their exposures might have been
4 different from monitored radiation workers.

5 MEMBER MUNN: Yes.

6 MEMBER RICHARDSON: And I thought it
7 was useful, what -- you took one step towards
8 that which was to say that there was some
9 monitored construction trade workers, and you
10 compared them to the monitored radiation
11 workers.

12 MEMBER MUNN: Yes.

13 MEMBER RICHARDSON: But then it opens
14 the question, are the unmonitored construction
15 trade workers like the monitored construction
16 trade workers? How did you answer that
17 question?

18 MEMBER MUNN: Do we have one of our DR
19 experts who had addressed this issue for us?

20 DR. NETON: We have the expert.

21 MEMBER MUNN: There he is.

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

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

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

21 And then there were a lot of people who

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1 we often conceptualize as construction
2 workers, who were employed as subcontractors
3 doing construction work, and they were not
4 monitored.

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

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

21 This TIB-52 was our very, very early

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

6 MEMBER RICHARDSON: But it's --

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

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

14 DR. NETON: Right.

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

18 DR. NETON: Yes.

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

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1 DR. NETON: Yes, exactly. Yes.

2 CHAIRMAN MELIUS: Can I just add -- I
3 think we're going to be coming back to this
4 issue, as Jim described in his presentation,
5 later today, because I think we're sort of
6 re-looking at the whole coworker issue.

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

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

20 And I suspect it's going to be on a
21 site by site basis, but I think we're going to

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1 have to sort of -- I think if we can come to grips
2 with the, sort of the coworker model issue and
3 what the criteria ought to be for evaluating
4 that, I think we'll make progress on this.

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

13 MEMBER MUNN: Subtask 2 was assessing
14 methods and corrective actions. The OTIB
15 requires multiplying external coworker dose by
16 1.4 for the construction trade workers and at
17 Hanford, multiplying by 2. But the claims at
18 other sites where the coworker studies
19 externally were issued prior to 2006 had to be
20 reevaluated.

21 Identifying all the workers that had

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1 been exposed as a member of the construction
2 trades, NIOSH went through NOCTS and all the
3 original DR reports. They used a 31 word key
4 search, and they identified 977 claims that
5 might be potentially affected.

6 They reviewed the list of sites when
7 they established the coworker models, and used
8 the key word list, determining that their
9 screening methods were going to be adequately
10 inclusive and complete.

11 SC&A didn't have any findings under
12 our Subtask 2 review, so we'll take a look at
13 Subtask 3, evaluating the approach for
14 identifying the number of DRs that were going
15 to require reevaluation.

16 To check to see if the 977 potentially
17 affected claimants were going to need a
18 reworked DR, NIOSH had applied the screening
19 criteria of confirming that a claim was a
20 construction trade worker, because the key word
21 search doesn't always do that appropriately, to

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1 verify that the external coworker dose, or in
2 the Hanford case, the internal dose, was
3 assigned in the original dose reconstruction.
4 To screen the claims based on the ability to
5 raise a PoC that was equal or greater than 45
6 percent, to ensure that 30 IREPs were
7 performed, and that would automatically be
8 triggered by an original PoC of 36.8 or 29.0
9 from Hanford, any claims with PoCs less than the
10 trigger value, to determine whether any other
11 PERs might increase that dose.

12 So under Subtask 3, we had two
13 findings, one of which was conditional. The
14 first of those findings, which was Number 5 for
15 these purposes -- remember, we had four under
16 Subtask 1, Number 5 was the assertion that the
17 PER was incomplete and that the extent of the
18 screening and evaluation of the universe of
19 those 977 claims was not fully discussed in the
20 PER.

21 So they asked -- indicated they didn't

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1 feel NIOSH had identified the actual number
2 that were eligible for PER dose adjustment
3 factors. We did resolve that. We looked at it
4 closely, and the criteria that would -- they'd
5 used to request, that NIOSH would use to
6 request, was shown there with the 977 totals,
7 and how those were broken down.

8 It was acceptable with the
9 explanation that was given. And the
10 conditional, which we had indicated was Number
11 6, would -- may be highly restrictive in
12 addressing the problems of these unmonitored
13 workers and the uncertainty of the fate of the
14 claims that had been adjudicated before the
15 issuance of a coworker model.

16 I read that badly, but you recognize,
17 I trust, what the conditional finding was
18 concerned with. It's one of the issues that
19 we, again, discussed at considerable length but
20 were able to resolve satisfactorily.

21 Subtask 4 gets to be the sticky wicket

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1 where you get into real audits. Referencing a
2 finding that we discussed earlier, Finding 5,
3 in respect to the possible, potential failure
4 to identify that adequate number of claims out
5 of the 977, it was determined that regardless
6 of what the number was, SC&A felt that they
7 should have one case from each one of the ten
8 sites that had been impacted by the PER.

9 And again, those sites are listed
10 there. They're the same, I believe, as the
11 ones you saw listed in Subtask 1.

12 Timeline for this crucial Subtask 4
13 began in 2012 when SC&A was asked to review one
14 case from each of those 10. In addition to
15 that, we also asked them to evaluate the site
16 TBDs and workbooks that were applicable to what
17 we were doing here, to make sure that they had
18 been properly updated and that they fit the
19 recommendations for construction trade
20 workers.

21 So during their review, the

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1 contractor determined that there were no
2 reworked cases at four of the ten sites, and so
3 for those ten -- for those four sites, Kansas
4 City, Pantex, PNNL and Weldon Spring, they were
5 going to need to be limited to just verification
6 that the TBDs and workbooks had been updated.
7 They didn't actually have cases to look at.

8 In 2013 we received SC&A's draft of
9 their subtask for review, and later that year,
10 we had, at Subcommittee meetings, discussed
11 their findings and were able to resolve all of
12 the findings from them.

13 Here is Subtask 4's review of the
14 sample sets, the DRs that were looked at by the
15 PER. Out of the 977, as you can see in the first
16 table there, the selection criteria that were
17 applied, the first of those items was NIOSH
18 requesting that the case not be returned for a
19 new DR. There were 620 of those.

20 The cases that were requested to be
21 returned based on some other PER other than 14

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1 that we were working with, there were 221 such
2 cases out of those 977. The cases that were
3 requested to be returned for a new
4 reconstruction were 52 in number, and there
5 were 84 cases that had been returned to NIOSH
6 prior to completing the PER evaluations.

7 Underneath, the selection criteria
8 for the site are listed for you for each of those
9 ten sites, so that you get the breakdown two
10 different directions, if you read the criteria
11 and the breakdown shown by site.

12 The findings that we had, Findings 7,
13 8, all the way to 21, but because of the number
14 of sites that were involved, many of these
15 findings were applicable to more than one site,
16 and so some of them were grouped together.
17 We've done that grouping as we go through here
18 in this presentation, and you'll see them.

19 Finding Number 7 -- and remember,
20 we're under Subtask 4 here, this is the actual
21 audit process that we're looking at, SC&A found

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1 many of the cases identified as requiring
2 rework didn't meet all the requirements of the
3 selection criteria.

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

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

17 Subtask 4, case reviews, involved an
18 audit of six reworked cases from -- one each
19 from Savannah River, X-10, Portsmouth, LANL,
20 Hanford and Y-12.

21 That review focused just on the doses

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

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

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

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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.

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1 The correction factor was one during
2 this period and wouldn't impact the dose. And
3 we had a file indicating that the impact of the
4 finding on the case outcome didn't change the
5 level of compensation, so that was resolved.

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

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

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1 And when the case was reassessed by
2 the contractor, the technical documentation,
3 and recommended that -- they recommended the
4 case be closed. We agreed it was appropriately
5 resolved.

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

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

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1 And the response indicated that the
2 requirements had been built in through the tool
3 which was used by the dose reconstructors, and
4 that was found to be the case and it was closed.

5 That's a full review of what we've
6 done with PER-14 and where we are right now.
7 Questions?

8 CHAIRMAN MELIUS: Gen?

9 MEMBER ROESSLER: This was a lot to
10 absorb, but I do have one question on Slide 8,
11 and it appears on other slides too. It seems
12 that Hanford internal doses are different than
13 some of the other sites.

14 On Slide 8, you talk about -- you say
15 only Hanford coworker intake rates needed to be
16 multiplied by a factor of 2. What's the
17 difference at Hanford? What makes that site
18 different? Is it because they started
19 employment earlier and --

20 MEMBER MUNN: No, not entirely.
21 It's the scope of the activities at Hanford more

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1 than anything else. The level of -- I should
2 say the scope, also, of the type of materials
3 that were handled. If anything was going to be
4 handled at all, it was undoubtedly passed
5 through the workforce at Hanford.

6 And because of the types of materials,
7 because of the level of activity, as well as the
8 periods of activity, this decision was made
9 relatively early that a dose correction factor
10 of 2 was going to be implemented at the Hanford
11 site. I believe that has been done across the
12 board.

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

15 DR. NETON: I could just elaborate a
16 little bit on that. These were, you know, just
17 empirical data sets that we had, you know,
18 construction trades versus regular workers,
19 and using the available data, it just came out
20 that way. We really made no judgment as to why
21 that was particularly true.

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1 Hanford was the only one of the sites
2 we evaluated, though, that did have that
3 difference. I'm not sure I really understand
4 why it existed there, but that's the way we
5 treated it. It was just purely based on
6 empirical evaluation.

7 CHAIRMAN MELIUS: Any other
8 questions? If not, I have a -- it's more of a
9 comment than a question. Findings 9, 10, 11
10 and 16, and then later on in -- towards the end
11 in Findings Number 19, 20 and 21, the -- it seems
12 that we're referring findings back to the other
13 site, individual site documents, or to
14 individual Site Reviews to be addressed.

15 And I think -- again, it's not a fault
16 of the Procedures Committee but, you know, we
17 do these reviews on multiple levels, and we've
18 always had problems with when things get
19 referred, or assuming that, you know, another
20 Work Group or that NIOSH will address it, or
21 someone will address the site-specific

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1 finding.

2 And I think we -- in this case, we have
3 a number of these sites that are currently under
4 active review. We have some that are under
5 inactive review. I mean, Brad's doing, I
6 think, still working on some stuff at Pantex.
7 We have Hanford, which we're actually mostly
8 focusing on SEC issues still, and I won't go
9 through the whole list, Kansas City, and so on.
10 And I think we just need to make sure that this
11 all gets communicated and that NIOSH also be
12 aware of these issues and SC&A also.

13 It's not clear to me that these,
14 either in the case where there's been a problem
15 found or where it's been the construction
16 worker adjustment is subsumed under
17 instructions for doing individual dose
18 reconstruction, that these get, you know,
19 properly evaluated and reviewed.

20 They may be, they may not, and I think
21 we just sort of need to formalize that process

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1 and make sure there is some follow-up on these
2 issues. Dave?

3 MEMBER KOTELCHUCK: Okay. If I can
4 get through, I can do this.

5 So, I'm not quite sure where this
6 leaves us. Have -- would you say that the PER
7 audit process has been completed for the
8 construction workers, or are there next steps,
9 and what are they?

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

15 MEMBER KOTELCHUCK: Thank you.

16 MEMBER MUNN: You bet.

17 CHAIRMAN MELIUS: And I think my
18 comment was saying that, you know, the PER has
19 been -- review has been completed but we --
20 there are findings that still need to be
21 addressed in other venues or other groups and

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1 so forth. And so we should not lose track of
2 that.

3 MEMBER MUNN: Yes, our Chair says yes
4 but.

5 CHAIRMAN MELIUS: I mean, we have a
6 similar problem with individual, you know, dose
7 reconstruction reviews where we find a Site
8 Profile issue or something, and we just need to
9 make sure we connect back rather than coming,
10 you know, ten years later finding --

11 MEMBER LEMAN: Right.

12 CHAIRMAN MELIUS: -- discovering the
13 problem again.

14 MEMBER LEMAN: So in addressing your
15 question, who has that responsibility?

16 CHAIRMAN MELIUS: We do.

17 MEMBER MUNN: Yes.

18 MEMBER LEMAN: I mean, how are we
19 going to keep track of it is what I'm asking.
20 I mean --

21 CHAIRMAN MELIUS: Well, we --

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1 MEMBER LEMAN: -- is somebody going
2 to follow this?

3 CHAIRMAN MELIUS: I think all the
4 Board Members have some responsibility for all
5 the sites here. And I certainly took note of
6 Hanford.

7 MEMBER LEMAN: Should it be a
8 continuing agenda item or?

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

11 MEMBER LEMAN: Yes.

12 MR. KATZ: Let me just add to what Dr.
13 Melius is saying. So I generally, when one of
14 these findings comes up, that we're going to
15 refer, from whatever Subcommittee or Work Group
16 to somewhere else, generally either I or the
17 Chair will send an email to the Chair of the
18 group it's being referred to, saying this
19 finding, and provide -- I'll provide a
20 transcript for the discussion as well.

21 This finding is being transferred to

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

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

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

19 That tracking system, actually, is
20 great for just this problem, because that
21 finding sits there unresolved for all to see

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1 until it is resolved. And that way we won't
2 lose anything.

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

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

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

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1 very carefully applied in all of the tools that
2 are used by the dose reconstructors.

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

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

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

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

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1 I think, as we've talked at the last
2 Board meeting and a little bit on the last Board
3 meeting call, we've been working -- the SEC
4 Review Group's been working with Jim Neton,
5 NIOSH, and SC&A on addressing both sufficient
6 accuracy issues but with more of a focus,
7 recently, on coworker modeling issues.

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

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

20 So that's all. It's not totally
21 prescriptive, but the idea is to try to get what

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1 are the key factors that will be used in
2 developing and therefore the key factors that
3 would be used in evaluating the coworker
4 models.

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

18 I'm hoping, certainly by the March
19 meeting, I think we'll be able to do that. So
20 that's sort of our target, but there'll be some
21 other iterations as we go along. So let me turn

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1 it over to Jim Neton.

2 DR. NETON: Thank you Dr. Melius. As
3 Dr. Melius said, this is something that's been
4 going on for quite some time now. It started
5 shortly after the release of ORAU Report 53,
6 which was a report that described how to analyze
7 stratified data sets.

8 And SC&A had a number of findings on
9 the statistics and such, and going through that
10 it became apparent that, well let's first get
11 an idea of how we evaluate data to see if it's
12 stratified in the first place, and sort of, not
13 bypass the statistics but talk about in
14 general, how you look at, how you approach
15 coworker data sets.

16 And so we -- I volunteered, and we've
17 been working hard on putting together an
18 implementation guide, we're calling it -- right
19 now it's a draft, on exactly that. What
20 criteria are used to evaluate these data sets
21 that go into coworker models. And we're up to

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1 Rev 3 now, and I will go over that in a second.

2 But before I get into that, I thought
3 it might be useful for me to go over sort of a
4 case study, if you will, of what -- how a
5 coworker model is developed. We use them a
6 lot.

7 We -- almost -- many, many sites have
8 them, and it became sort of obvious to me, or
9 apparent to me, at our Working Group meeting in
10 Idaho that there wasn't a general, you know,
11 general understanding of what we mean, how we
12 go about establishing a coworker.

13 So I'm going to briefly go over -- I
14 have like six or seven slides, and just sort of
15 go over, you know, what -- how is a coworker
16 model developed. I'm going to use the internal
17 dose example because they tend to be the most
18 complicated. External is a little less
19 troublesome.

20 So here goes. So you've seen this
21 before, and this is right out of Report 53.

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1 This is the -- these are the, this summary of
2 the steps that go into an internal coworker
3 model calculation.

4 You start with Box 1 on the upper left,
5 which is the urine data, just a database you get
6 from the site that has all the urine data over,
7 let's say, the history of the plant, from '57
8 to 2007 in this case, is what we're going over
9 today.

10 But we need to do something with that,
11 to apply to workers that didn't have any
12 monitoring data. And we start that by doing
13 this OPOS analysis, this one person, one
14 statistic analysis.

15 We're going to talk about that a
16 little later, but what that means is if you have
17 multiple data points in one time interval, in
18 one year, you need to somehow account for that,
19 group them together so you have one value in
20 that one monitoring period. We'll talk about
21 it a little later.

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

4 The third step is to take those OPOS
5 data, the one person, one statistics data, and
6 generate these distributions. You take the
7 log of the data and you do a cumulative
8 probability plot, and then you look at how they
9 fall on a normal distribution.

10 And from that you can generate the
11 50th and 84th percentile of the data. So that
12 can characterize the data for that one
13 particular time interval, one year, three
14 months, whatever data set you have.

15 The fourth step is where you really
16 start getting more detailed. You take the 50th
17 and 84th percentile excretion rates, what the
18 person was excreting, and you convert that into
19 what they were actually inhaling. That's
20 where the IMBA program comes in. That's Step
21 4.

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1 IMBA, Integrated Modules for Bioassay
2 is a very sophisticated computer program that
3 can take urinary excretion data and say, what
4 were these people actually breathing in over
5 this time period if the exposure was chronic.
6 A key to these coworker models for internal is
7 that, for all the models we've developed so far
8 have been chronic intake models.

9 You use that to generate the 50th and
10 84th percentile intakes, what these people were
11 breathing in, and then you can use that for
12 workers, an unmonitored worker, to calculate
13 what their internal dose was over a certain
14 period of time. I've got some examples.

15 And then, of course, the sixth step is
16 you'd use the dose calculated to the organ to
17 generate some Probability of Causation result.
18 So this would all be -- we take monitored worker
19 data and try to apply it to unmonitored workers.

20 This is what I was talking about.
21 Let's see, Step 3 here is generate the 50th and

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1 84th percentile urine data. I just have an
2 example here of what one of those distributions
3 might look like, where you see the geometric
4 mean and the 84th percentile. You've got 196
5 individual workers represented here that left
6 332 samples in a single year.

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

14 So you have a graph for each
15 monitoring period, and you generate graphs, in
16 this case for Savannah River, from 1955 through
17 2007. These are the distributions of urine --
18 urinary excretion over the entire monitoring
19 history that we have.

20 And this is Table A-3 right out of the
21 Savannah River Site. I think it's in the Site

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1 Profile. I don't think they have a separate --
2 I think it's a TIB. This is a TIB.

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

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

17 And this is where it gets a little
18 tricky to explain, but the blue dots, in this
19 particular case, are the 50th percentile data
20 points from that graph. So that second column
21 there from the left, these are the 50th

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1 percentile data points presented over the
2 monitoring period that we have, for which we
3 have data.

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

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

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

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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.

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1 That's what the excretion would be if
2 the person inhaled plutonium from day one of the
3 plant operations all the way through 2007.
4 That's the combination of an intake from Period
5 1 and Period 2.

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

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

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1 So we won't assign any GSD less than
2 3 for internal exposures. So everyone will
3 have that uncertainty associated with it.

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

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

20 So, that's just a sort of a quick
21 run-through of how a coworker model is

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1 established, just so everybody has a feel for
2 what we've been doing for a long time now, at
3 least in the internal dosimetry world. Is
4 there any questions on that before I move on to
5 the implementation guide?

6 CHAIRMAN MELIUS: Yes, Brad?

7 MEMBER CLAWSON: I just -- all the
8 dots, they represent the whole spectrum of
9 workers, or --

10 DR. NETON: In this particular case,
11 this would be all the workers. Now it could be,
12 if you decide to have some sort of a strata, it
13 would represent the 50th percentile of all the
14 urine values for that particular strata.

15 This is a general model for all the
16 workers, you're right. And we're going to talk
17 about how we might make some decisions about how
18 to partition or stratify these in the different
19 data sets. That's the, sort of the point.

20 MEMBER RICHARDSON: Can I ask you
21 just a follow-up question.

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1 DR. NETON: Yes.

2 MEMBER RICHARDSON: A dot is not a
3 worker but is --

4 DR. NETON: It's the 50th percentile
5 of the urinary excretion of the workers in that
6 year.

7 MEMBER RICHARDSON: A dot represents
8 a year?

9 DR. NETON: Right.

10 MEMBER RICHARDSON: And it's --

11 DR. NETON: In this case --

12 MEMBER RICHARDSON: -- median value
13 of excretion in a year.

14 DR. NETON: Right.

15 MEMBER RICHARDSON: And you had --
16 one slide back you had two colored dots.

17 DR. NETON: Right.

18 MEMBER RICHARDSON: And could you
19 tell me once more the transition?

20 DR. NETON: Well, when you fit
21 chronic exposure models, you like to fit intake

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1 regimes, as we call them, with -- that have
2 similar excretion patterns. So the blue dots
3 is Excretion Pattern 1, the red dots are
4 Excretion Pattern 2. Those were fit as
5 separate chronic intake exposure scenarios.

6 So the blue dots were fit all the way
7 through whatever that number is, 12,000 days
8 post start of the site, through 1990 -- I can't
9 read it from here, 1990 it looks like. So the
10 blue --

11 MEMBER RICHARDSON: Yes. So the
12 origin was 1955?

13 DR. NETON: Right.

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

16 DR. NETON: Right.

17 MEMBER RICHARDSON: -- days or
18 something like that.

19 DR. NETON: Right.

20 MEMBER RICHARDSON: So you're going
21 up. And so that the red, the transition from

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1 blue to red is not related to the two rows of
2 your summary table, 1955 to 1990 and 1991 to
3 2007? That's something different?

4 DR. NETON: No. Well, the
5 transition in 1990 was because you can see there
6 was a -- there's a distinct, an abrupt decrease
7 in the urinary output in 1990. So to fit a
8 continuous chronic exposure model through all
9 of those dots just doesn't seem reasonable.

10 MEMBER RICHARDSON: So, okay. So
11 the -- again, the transition from blue dots to
12 red dots is because of a change in monitoring
13 practice. It's not -- because I thought you
14 were describing it as an assumption about a
15 particular exposure scenario.

16 DR. NETON: Well, it's not a change in
17 monitoring. It's a change in the qualitative
18 look of the plots. I mean, you can see there
19 that there's a fairly abrupt change in the
20 output of the urine. And so --

21 MEMBER RICHARDSON: Well, I mean, you

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1 might, or one might look at it and see that
2 there's two dots, perhaps, that look like
3 outliers and everything else looks like --

4 DR. NETON: Wait, wait. I'm -- now,
5 I --

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

9 DR. NETON: Yes.

10 MEMBER RICHARDSON: -- quirky things
11 in --

12 DR. NETON: But I'm saying, if you
13 look at the red dots themselves, they are about
14 an order of magnitude lower or about a factor
15 of five, I can't tell from here, than the dot,
16 the blue dots. So something happened there.
17 Something is inherently different about the
18 urinary excretion pattern in that second
19 period.

20 This was a qualitative judgment here.

21 This is not quantitative.

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1 MEMBER RICHARDSON: No, I know. I'm
2 just trying -- I was just trying to understand
3 the interpretation.

4 DR. NETON: Right.

5 MEMBER RICHARDSON: That was a
6 post-hoc color coding. And then you assume
7 that there's two different chronic intake
8 patterns --

9 DR. NETON: Correct.

10 MEMBER RICHARDSON: -- in, among, on
11 average, among the workers at the site.

12 DR. NETON: Right.

13 MEMBER RICHARDSON: Commencing --
14 one commencing in 1955 and the other commencing
15 in 19 --

16 DR. NETON: 91.

17 MEMBER RICHARDSON: -- 91.

18 DR. NETON: Correct.

19 MEMBER RICHARDSON: Okay. How does
20 that happen? I guess, you know, I think about
21 an exposure pattern as happening for a worker

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1 but not for the median population.

2 DR. NETON: Yes, well this raises
3 some issues with the model. Now remember, the
4 50th percentile is not the same person in every
5 particular year.

6 MEMBER RICHARDSON: Right.

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

13 Yes, it's -- this is the way we've been
14 doing it. I'm not saying it's perfect. But
15 again, you are applying this to unmonitored
16 workers, not -- this is the experience of the
17 monitored population. Now you're trying to
18 apply this to people who had no monitoring data
19 at all, and what is their exposure experience.

20 And if you think of the excretion dots
21 as sort of representative of the air

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1 concentrations in the plant, I think you can see
2 that -- in this case, it's a little different
3 because I do believe that the red dots are lower
4 because of a change in the technology.

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

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

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

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1 then you have one individual for the whole site.

2 Yes, I'm not sure that's possible.

3 MEMBER RICHARDSON: Okay.

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

8 DR. NETON: Right.

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

14 DR. NETON: Correct.

15 MEMBER ZIEMER: But --

16 DR. NETON: Yes.

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

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1 DR. NETON: Right.

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

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

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

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

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

14 DR. NETON: Right.

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

18 DR. NETON: Yes.

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

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1 that large population --

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

3 CHAIRMAN MELIUS: -- which I think is
4 what, sort of what David was getting at, maybe
5 not on an individual --

6 DR. NETON: Yes.

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

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

16 DR. NETON: Right.

17 CHAIRMAN MELIUS: -- you know.

18 DR. NETON: I'm not trying to imply
19 that this is the right way to go, or one size
20 fits all here. I was just trying to say, if
21 this were a stratified subset, and we knew, for

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1 instance, that these were maintenance workers,
2 and they were stratified out, this is how we
3 would go about trying to establish what their
4 unmonitored colleagues' exposure experience
5 was. I don't want to belabor this too much.

6 MEMBER KOTELCHUCK: Dave Kotelchuck.
7 Let me ask you, this -- these data points are,
8 of course, coming out from the IMBA program,
9 right? These are --

10 DR. NETON: No. These are actually
11 excretion data points that we received from the
12 DOE, or AWE in some cases.

13 MEMBER KOTELCHUCK: Oh okay. So
14 these are the excretion points?

15 DR. NETON: These are urinary
16 excretion values we have in a database.

17 MEMBER KOTELCHUCK: Okay.

18 DR. NETON: Of the actual exposed
19 workers, sorry.

20 MEMBER KOTELCHUCK: Suppose -- but
21 suppose you were to follow, not one worker as

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1 a representative, but --

2 DR. NETON: Ball worker?

3 MEMBER KOTELCHUCK: Well, it could be
4 a -- but just a few dozen, you should be able
5 to, if you will, visually see that there is
6 really a transition going on. There should be
7 some kind of tailing off.

8 DR. NETON: It may be, but those would
9 be more demonstrable in the higher exposure
10 levels. And we're trying to get the 50th
11 percentile established here, and those tend to
12 be down into the weeds.

13 They'll monitor 300, 400 workers in a
14 year, and you'll see that the 50th percentile
15 worker, who was monitored, is already bouncing
16 around the detection limit.

17 Yes, there's going to be workers up in
18 the 95th percentile that were more heavily
19 exposed, and you could do individual dose
20 reconstructions, but in this particular case
21 are going to be dose reconstructions using

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1 missed dose, for the most part.

2 We've been down this path before about
3 --

4 MEMBER KOTELCHUCK: Yes.

5 DR. NETON: -- can we really use
6 individual workers, and I'm pretty convinced,
7 at least, that it's -- it would be almost
8 impossible.

9 MEMBER KOTELCHUCK: Individual
10 workers OPOS.

11 DR. NETON: Well to take OPOS data as
12 an individual worker and reconstruct
13 everybody's dose, individually, would be
14 really, really difficult.

15 MEMBER KOTELCHUCK: Okay.

16 DR. NETON: Oftentimes you only have
17 one sample a year on these people, and now
18 you're saying well, I can do more with that than
19 I really can.

20 You know, there's some substance
21 here. Chronic exposure, the annual values

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1 that were taken can be used to bound those
2 chronic exposure scenarios. I mean, you know,
3 those are inherent assumptions but I think that
4 we've sort of gotten through that in the past,
5 and that part, I think, is okay.

6 What I'm going to talk about next is
7 really, you know, how we determine which data
8 points are used for which sets of workers.
9 That's sort of the thrust of the talk. Maybe
10 I complicated things a little more here than I
11 expected to. But I just wanted people to be
12 aware of, this is what we're talking about, how
13 -- so. Okay. Any other questions? Henry?

14 MEMBER ANDERSON: Are you using the
15 median value or are you using the mean value?

16 DR. NETON: Median.

17 MEMBER ANDERSON: Median?

18 DR. NETON: Median value.

19 MEMBER ANDERSON: Got it. Because
20 that would help you adjust for the change of the
21 limit of detection. Because although -- I

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1 mean, what I was going to say is if you have a
2 change in the limit of detection, you could
3 apply the same limit of detection from the
4 earlier years to the later years.

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

9 DR. NETON: Yes. Well --

10 MEMBER ANDERSON: It -- as long as
11 that median is above the limit of detection, I
12 mean, if in a given --

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

14 MEMBER ANDERSON: Is it? Is it
15 typically, in the earlier years, also --

16 DR. NETON: In the very, very early
17 years, it's above the detection limit. As you
18 get more contemporary, maybe 1970s, 80s, it's
19 almost very often about the detection limit,
20 sometimes even below the detection limit.

21 MEMBER ANDERSON: So you artificially

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1 assign the limit of detection to the value? Or

2 a square root of --

3 DR. NETON: Yes. We have techniques
4 for accommodating for what we call a missed
5 dose, right.

6 MEMBER ANDERSON: Because that --

7 DR. NETON: But remember, each of
8 these values is going to have a geometric
9 standard deviation of 3 associated with it
10 anyways, so.

11 CHAIRMAN MELIUS: Okay. Any Board
12 Members on the phone have questions, before we
13 move on?

14 MEMBER FIELD: No, this is Bill. I
15 thought this was a very helpful presentation.
16 Appreciate it.

17 DR. NETON: Thanks.

18 CHAIRMAN MELIUS: Okay.

19 DR. NETON: Okay.

20 CHAIRMAN MELIUS: Next.

21 DR. NETON: All right. That being

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1 said, now we'll switch gears a little bit and
2 talk about how we ended up with this coworker
3 model draft -- again, I emphasize draft
4 implementation guide.

5 It doesn't say even implementation
6 guide yet, but the idea is that this will end
7 up becoming NIOSH Implementation Guide, I
8 think, 006. You know, we have one for covered
9 exposure, we have one for surrogate data. So
10 this will be the latest in our collection.

11 So I thought the best way, maybe, to
12 go over --

13 MR. HINNEFELD: Excuse me just a
14 minute, Jim. I just wanted to make sure people
15 who are on the phone, we have just left Live
16 Meeting on the presentations. So if you're
17 following on Live Meeting on the phone, you
18 won't see what's on the screen here in the room,
19 but it is on the website.

20 It's called Draft Criteria for
21 Evaluation of Coworker Data. I think it's Rev

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1 3. I think there's a rev -- it's coworker data
2 and Rev 3 is in the title of the file. And
3 that's what's on the screen here.

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

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

18 I mean, we've done some of that. We
19 talked earlier about Report 52, or TIB-52. So
20 we went back to the drawing board, said what
21 really do we need to think about when we're

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1 doing these coworker models?

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

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

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

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

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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

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1 coworker models that pretty much are one size
2 fits all, you know, a full distribution of data.

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

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

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

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1 I always use the example of
2 measurement of neutrons in the early days using
3 film. The film couldn't see neutrons,
4 energies probably below say 500 keV.

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

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

18 And I also included as a footnote in
19 there, it talks about you can use breathing zone
20 air samples. We've never done that yet, I
21 don't think, but it certainly would be a viable

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1 option if you could show the breathing zone data
2 were pretty good, I mean, they were really lapel
3 air sampling, that sort of thing.

4 And then of course, you need to talk
5 about external dosimetry type measurements,
6 that measure beta, gamma, neutron, that sort of
7 thing.

8 So it outlines here sort of the
9 criteria to look at, not all inclusive of what
10 should be evaluated when you have in vitro
11 measurements, in vivo measurements, that sort
12 of thing. I won't read all the criteria, but
13 they're in there. And then the last section
14 talks about external.

15 So here we're just trying to vet the
16 quality of the data. Is the data useful? The
17 next step goes into the completeness of the
18 data.

19 MEMBER LEMAN: Can I ask --

20 CHAIRMAN MELIUS: Yes, sure.

21 DR. NETON: Yes, maybe I should stop

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1 after each section.

2 MEMBER LEMAN: Is there --

3 MEMBER MUNN: Microphone.

4 MR. KATZ: Use the microphone please.

5 MEMBER LEMAN: Sorry. Is there good
6 compatibility between the time frames the
7 samples are taken? In other words, does the
8 methodology of sampling techniques change from
9 one decade to the next decade?

10 DR. NETON: It can, yes.
11 Definitely.

12 MEMBER LEMAN: And how do you adjust
13 for that?

14 DR. NETON: Yes, well that needs to be
15 taken into consideration, the temporal nature
16 of the quality of the data. And I think it's
17 somewhere in here. Dr. Melius raised that same
18 issue the last time. And you're right, you
19 can't take a 1950s technology -- or,
20 conversely, take a 1980s technology and say
21 that applies all the way back.

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1 MEMBER LEMAN: Well, what I wanted to
2 see was how you adjusted to that, and what you
3 did, and if that's later on, why we --

4 DR. NETON: Well, actually, this is a
5 --

6 CHAIRMAN MELIUS: I was going to say,
7 it's always going to be applied case by case or
8 site by site. So I think it -- we're just
9 trying to get the general areas of
10 consideration that need to be taken into
11 account when developing the model.

12 But it's going to be a -- and certainly
13 there's lots of examples that I can think of
14 where we've taken -- we've either had an SEC
15 because of a problem with an older monitoring
16 method, from a lot of the early ones. There
17 weren't monitoring methods available or they
18 were very crude relative to what would be needed
19 for dose reconstruction.

20 So I think we have a fairly -- a fair
21 amount of experience with that. You know, if

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1 I remember, specifically with Fernald, but I
2 think recently the partial -- the SEC was based
3 on a problem with the --

4 DR. NETON: I think that was the in
5 vivo data at Fernald.

6 CHAIRMAN MELIUS: Yes, right. In
7 vivo data, right.

8 DR. NETON: So yes, this document, I
9 think, it tends to talk about what you need to
10 look at, and why, not necessarily exactly how
11 to evaluate. It's a sort of a general
12 guidance.

13 There is a section here at the end of
14 that, that does talk about looking at the
15 detection limit of the system. For example,
16 oftentimes with thorium measurements you --
17 thorium urinalysis is a very poor measure of how
18 much you expose. It has a very poor detection
19 limit. And so you could inhale a lot of thorium
20 and not be excreting much in your urine.

21 So in those cases, even if you have a

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1 lot of data, you might say well, does my
2 coworker model provide me plausible values? I
3 mean, you could say well it's less than X, which
4 is a very high number, but is that really a
5 reasonably accurate value?

6 So you need to take that into
7 consideration as well. So that's the sort of
8 -- it's sort of scripted out here. The in vivo
9 section does talk about using the progeny, the
10 -- not measuring the radionuclide directly
11 because sometimes, like thorium doesn't have
12 any usable photons, so you start using some of
13 the daughter progenies.

14 And you have to think about the
15 implications of that, and are they in
16 equilibrium or are they not, and if they aren't,
17 how do you adjust it, that sort of thing. So
18 there's a lot of things that need to be
19 considered.

20 And I wouldn't want to begin to cover
21 each and every one of those in this document.

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1 So this is sort of a general road map. Okay.

2 Any more questions on data adequacy?

3 Okay, data completeness, this is
4 where you need to look at to see if the data
5 actually measured -- had a reasonable handle on
6 the measure -- on the exposed population. Did
7 they monitor enough people, and enough people
8 by job category, for example, of the people that
9 were exposed?

10 I think I called this a gap analysis,
11 looking for, you know, first temporally by
12 years. Do you have data for every year? If
13 not, there are years missing, you need to figure
14 out why they're missing.

15 Maybe there's good reason for it, the
16 plant was shut down. If not, maybe rethink
17 about what you can do in those years. But then
18 you need to go back and look and see, are the
19 work categories that were represented in those
20 facilities adequately monitored.

21 I have an example here that came out

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1 at one of the -- you have that table, I think,
2 is down there. Yes. This is a good example I
3 just threw in. I thought it was pretty
4 appropriate. SC&A had mentioned this and I
5 thought, yes, it makes some sense.

6 This is where an SEC was added at the
7 Nevada Test Site. And we, you know, originally
8 our contention was, well we have a lot of
9 monitoring data. We have 290 samples here, of
10 a lot of workers.

11 But when you really do an analysis of
12 the job categories that were monitored, in this
13 particular case more than 2/3 of the samples
14 were taken on the rad safety staff, while the
15 other workers were not very well represented.

16 Now, if one could argue, and make the
17 case that the rad safety staff are the highest
18 exposed, okay. But if that's not the case, now
19 you got a problem.

20 And so that's all this section is
21 trying to say, is you need to look at the data,

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1 and do so qualitatively and quantitatively and
2 establish that, you know, you really can bound
3 these different categories of exposed workers.

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

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

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

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1 CHAIRMAN MELIUS: Can we just stop

2 for --

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

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

8 DR. NETON: Yes.

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

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

21 I don't think, again, we've always

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

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

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

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

20 DR. NETON: Okay.

21 MEMBER RICHARDSON: Where just in the

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1 last period there are -- there's the bulk of the
2 bioassay monitoring for people other than rad
3 safety staff. It's the bottom right hand
4 corner where all of a sudden 73 --

5 DR. NETON: Security?

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

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

14 MEMBER RICHARDSON: Okay.

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

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1 But as I recall, a fairly good
2 analysis that those, that the rad safety
3 workers really didn't, really were not
4 representative of the other people doing the
5 site. And it was more than just sort of a
6 qualitative assessment, it was also looking at
7 the data from a --

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

15 And we're going to talk about that.
16 That's a good segue into this next section.
17 You know, so now that you have the technical
18 adequacy of the data, and you feel like you've
19 got a fairly complete picture of who was
20 monitored and why, and it seems okay, you still
21 need to consider the type of monitoring

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1 programs that were applied to these workers.

2 We outline the three types that we can
3 think of, which are the routine representative
4 sampling of the workers, routine measurements
5 of the workers with the highest exposure, or
6 incident samples.

7 Those are the three major ways that
8 monitoring programs sort of come about, and you
9 need to look at each of those populations and
10 say, were they all -- if you want to combine it
11 into one coworker model, first of all, were they
12 all routine samples, yes or no?

13 If, for example -- and this comes up
14 very frequently, and right now we're discussing
15 this at the Savannah River Site, where building
16 trades workers only monitored on an incident
17 basis whereas everyone else in the plant who
18 were doing routine ops were monitored on a
19 routine basis.

20 Well, it's hard to convince myself
21 right now that you can actually combine those

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1 two into one general coworker model. That's
2 what we're saying. So this section goes into
3 that in some detail about how one needs to look
4 at that.

5 A good way to, of course, reevaluate
6 if there's a routine program is to go look at
7 the radiological control program
8 documentation. It should spell out who was
9 monitored under what frequency and that sort of
10 thing.

11 But then it's -- you have to do a
12 little more than that. You also have to go and
13 make sure that they actually did that. Some
14 sites had very -- well, documents with very good
15 intentions, because of funding or whatever,
16 didn't actually end up following up and
17 collecting the samples that they thought they
18 were. So you need to get some indication that
19 that occurred.

20 So that's all kind of spelled out
21 here. There's a special category that we put

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1 in there, which I think is a special category
2 of routine, although maybe not really, which is
3 people that worked on very short duration
4 campaigns or projects, where it was short
5 enough where they would just take maybe a
6 beginning and an end sample.

7 And those are probably routine in a
8 way because the project was short enough you
9 could use those data for that specific group of
10 workers to reconstruct their exposures. So
11 that's discussed in here to some extent.

12 And the last piece of this,
13 applicability of the monitoring data, I think
14 Stu, if you scroll down to the end, maybe I'm
15 wrong. What else is in here? No, that's not
16 -- I think I covered all that.

17 I meant to say, in the last section
18 under completeness, you also needed to go and
19 look -- we need to look at if you're using data
20 sets provided by the site or epi studies or
21 whatever, you need to kind of make sure that you

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1 have -- the data set has all the monitoring data
2 in it.

3 I mean, if for some reason there are
4 gaps, the computer program didn't collect all
5 the data or it got lost, that needs to be
6 evaluated. And that can be done by going back
7 and looking at some of the original records, if
8 you have them, or some reports that said, in
9 1955 we took 10,000 samples, or by month, it was
10 this.

11 You go in your data base and get
12 yourself a good feeling that you have those,
13 that many samples in there, or the fact that
14 incident samples were always collected
15 separately and aren't in this data base. Well,
16 you need to know that. So that's something
17 that needs to be considered.

18 Okay, any questions on that? I think
19 we're okay. The third section here is the
20 analysis of the data, and this is basically what
21 we just talked about, how one can generate these

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1 distributions using the 50th and 84th
2 percentile to analyze the data. And we would
3 use the 95th percentile of the data.

4 If you had coworker models, all
5 routine, and you had construction workers in
6 there that were routinely monitored, they would
7 be given the 95th percentile of the exposure
8 because they are presumably a much higher, more
9 highly exposed than say a person who was
10 intermittently present in the plant, during
11 things like walk-arounds, security guards,
12 clerks, that sort of thing. They would get the
13 50th percentile.

14 So that's -- this just speaks to that
15 type of a scenario, how you -- what do you do
16 with the data once it's all good to go, so to
17 speak.

18 It talks about this OPOS scenario,
19 where one person, one statistic for monitoring
20 interval, and it refers, actually to Report 53,
21 which is out there, that discusses this OPOS,

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1 has been updated to include this one person, one
2 sample, and the fact that it's a time-weighted
3 average that goes backwards in time, averaging,
4 rather than forward in time, and a little bit
5 about how to deal with negative values.

6 We don't -- we won't use negative
7 values in doing these time-weighted averages.
8 We've come to that conclusion. So that's what
9 this section deals with. It's fairly
10 straightforward.

11 Okay, the final section -- oh well,
12 just one -- the time interval of the modeled
13 data, we talked about this at some length during
14 the Working Group meetings.

15 Oftentimes we have an annual sample on
16 workers, and we'll be using that. But in some
17 cases, when the data are sparse, can you lump
18 some data together? And we feel that you need
19 at least 30 samples in a monitored interval,
20 that one monitored period for good statistical
21 considerations.

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

6 This says here at the end that those
7 intervals should not exceed a three year
8 period, unless there's stringent justification
9 for doing so, and that's where it remains.

10 I originally had five years, but I
11 went and back and checked our original Report
12 53 and it did say three years. So that's -- at
13 least we're now consistent with our own
14 internal documentation. I can't remember all
15 these numbers.

16 Okay. So any questions on that, the
17 analysis section?

18 So now we get to Section 4, which I
19 said is still a little soft. I'm not -- we're
20 not done with this yet, at least in my opinion.
21 You could tell by what I just described that

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1 there's a pretty good process of what needs to
2 be considered on how to stratify the data.

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

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

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

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

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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

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1 when you're looking at a workforce of maybe a
2 thousand people there, that's -- I'm not the
3 sharpest tool in the shed here, but it looks
4 like there's some pretty big gaps in there.

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

9 MEMBER CLAWSON: Population, okay.

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

19 MEMBER CLAWSON: Okay.

20 DR. NETON: So that's all we're
21 trying to convey there.

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1 CHAIRMAN MELIUS: Again, just -- I
2 think I said this a little bit before, but I
3 think what we've been trying to do is what do
4 we need to look at up front before we get into
5 stratification? What information do we need
6 to have, and have evaluated, probably more
7 qualitatively than quantitatively?

8 But -- and with, you know, a fair
9 amount of judgment and a fair amount of
10 information about the site. It's always going
11 to be specific to the site.

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

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1 particular site.

2 And so I think if we can sort of
3 systematize and get a better set of guidelines
4 on what we need to look at, I think it becomes
5 then easier to decide, is 30 the right number
6 or, you know, and some of these other sort of
7 more statistical issues.

8 At least we have sort of a --

9 MEMBER ROESSLER: You need a
10 threshold.

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

18 And I think the other will follow from
19 that. And I actually think, as the results of
20 our Work Group discussions, some of those
21 issues that we were going back and forth on, on

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1 OPOS and so forth have become less troublesome,
2 so to speak, or less of an issue.

3 So I think it's the, sort of the right
4 way to go. And again, many of these factors
5 probably were considered in developing
6 coworker models, they just weren't made
7 explicit in terms of how it was presented to us.
8 Gen?

9 MEMBER ROESSLER: We have a Board
10 with a wide range of perspectives and
11 background knowledge on this subject, and I
12 think it's really important at this point to
13 help move this forward, that Board Members do
14 submit written comments to Jim in the next
15 couple of weeks. I think that's the most
16 important step in moving this forward.

17 CHAIRMAN MELIUS: Loretta?

18 MEMBER VALERIO: I guess my question
19 is, the coworker models that we're looking at
20 right now are based on chronic exposures,
21 that's correct?

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1 DR. NETON: Yes.

2 MEMBER VALERIO: I would assume all
3 of these sites had projects that were short
4 duration, which you did address. At any point
5 do you anticipate that a coworker model for
6 acute exposures would be established?

7 DR. NETON: I didn't cover it in my
8 discussion, but the document does allow for it.
9 Incident-driven coworker models may be
10 appropriate, particularly in the more current
11 era, when you have very good workplace controls
12 that are -- that can be demonstrated, where
13 there are, you know, continuous air monitors,
14 people frisked in and out of the area, that sort
15 of thing.

16 And so if you're comfortable that you
17 can believe that there were no upset conditions
18 that occurred that weren't caught somehow, and
19 if that's true, then I think you could use an
20 incident-type model.

21 But you -- and I think it says in

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1 there, you have to be very careful about that.
2 You know, your documentation has to be almost
3 impeccable to be able to do that, but I think
4 it's a -- could be allowed for, particularly
5 post 1990, where, you know, you have, almost
6 everybody is supposed to be on a monitoring
7 program if they had a 100 millirem potential
8 exposure for internal, those sort of things.

9 And, you know, but you always have to
10 allow for some gaps and technology shortfalls
11 and stuff, so you may be able to do an
12 incident-based model in that scenario.

13 CHAIRMAN MELIUS: Other comments or
14 questions? Any Board Members on the telephone
15 have comments or questions at this point?

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

20 DR. NETON: What was that, Bill? I'm
21 sorry.

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

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

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

8 DR. NETON: Yes, yes. They've
9 crystallized a little more, and there's some
10 more caveats in there, and maybe some scenarios
11 that I wake up at night and think about --

12 MEMBER FIELD: Yes.

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

15 MEMBER FIELD: But it's nice having
16 it down on paper that we can provide comments.
17 Thanks.

18 DR. NETON: Yes, okay.

19 CHAIRMAN MELIUS: Yes. I think the
20 -- I mean, the example of, evolution has been
21 on some of the stratification issues between

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1 incidence-based and routine monitoring and,
2 you know, when is that appropriate, when do they
3 need to be separated and so forth.

4 So, but there's been some changes.
5 But it's, again, getting it down in writing, I
6 think, is what's -- you know, what, as Jim said,
7 is what's most important.

8 DR. NETON: I think what's changed,
9 most significantly, is if you recall early on,
10 we were trying to come to grips with some
11 practical level of significance and difference
12 between models.

13 We were kind of approaching it from
14 the backwards situation where we were looking
15 at this 100 millirem dose, and then I proposed
16 this model of using the full distribution
17 versus the 95th.

18 That's all sort of by the wayside
19 right now, because frankly, none of it seemed
20 to work. And I like this approach better where
21 you just identify, do you need to stratify, yay

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1 or nay, and then go ahead and do it if the
2 conditions are such that it need be.

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

13 And so that has to be taken into
14 account also. I think what -- as Jim was
15 saying, we were -- we tried -- we started
16 dealing with this on the sort of statistical
17 level, so the problem we got hung up on was just,
18 you know, and some of what we did on sufficient
19 accuracy, what was helpful for us to
20 understand, but it's just very hard to -- it
21 gets very complicated.

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

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

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

19 They're fine, theoretically, and in
20 general the data supports it, but when you go
21 to then apply it to individuals, it just, the

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

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

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

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

21 MEMBER RICHARDSON: Right, where

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

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

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

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1 the world on its head.

2 MEMBER ANDERSON: Like we did
3 yesterday, when we had one badge for five slots.
4 But then we loaned our badges --

5 CHAIRMAN MELIUS: I -- okay. I
6 wasn't aware of that.

7 MEMBER ANDERSON: So we have personal
8 experience.

9 DR. NETON: In our part we call that
10 cohort badging.

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

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

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1 a coworker model and what data that that's based
2 on.

3 If we have, you know, we're missing
4 lots of years on everybody, and a very small
5 percentage of the workforce has been monitored,
6 and there's a lot of variability, and there's
7 high exposures and so forth, then I think we
8 have to have more stringent criteria in terms
9 of whether we -- how good is the coworker model,
10 because, you know, to do that.

11 And in some ways it's a statistical
12 judgment, but I just don't think we can get
13 there very easily. I think it's more going to
14 be judgment, but we need to be able to look at
15 that. Andy?

16 MEMBER ANDERSON: Yes, I was just
17 looking at this and thinking in terms of, do you
18 see us being able to, in a general sense,
19 convert this into a bit of a checklist?

20 I mean, when we get your SEC and you
21 say, well, you know, here's how much data there

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1 is there, and we believe we can only do this,
2 you know, we're denying an SEC because we can
3 use a coworker model, then we have to start to
4 try to qualify -- is that useful?

5 Can you convert this, in a general
6 sense, into, you know, a checklist like we've
7 done with some of the -- I mean, you can't, I
8 think --

9 DR. NETON: Yes. I would certainly
10 entertain any suggestions to do so.

11 MEMBER ANDERSON: Well, that's -- I
12 don't know. I was -- but that's what I was
13 talking to the --

14 DR. NETON: But yes, we talked about
15 that earlier, you know, a table or something
16 like that to -- and that's possible. I mean,
17 it would be a general checklist because again,
18 we're not trying to cover this --

19 MEMBER ANDERSON: A descriptive
20 checklist, yes --

21 DR. NETON: We're not trying to cover

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1 this --

2 MEMBER ANDERSON: -- like the
3 30-number or what are the characteristics that
4 you're hoping to fill here, rather than just
5 saying we're going to -- and here's the model
6 we're going to use, and we -- I mean, that's --

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

10 MEMBER ANDERSON: No, no. It
11 wouldn't be --

12 DR. NETON: -- qualitative judgment.

13 MEMBER ANDERSON: -- you have to meet
14 these, but it would be helpful as a descriptive
15 thing when we're looking at these, to say you're
16 going to -- I was looking at and I'm trying to
17 -- I don't know if I could do that, but I'm
18 asking you to do it.

19 DR. NETON: I think I -- it could be
20 done.

21 MEMBER ANDERSON: Yes, okay.

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1 MEMBER ZIEMER: Yes, I don't think
2 it's quite a checklist but we -- these are
3 criteria, and I think we would expect NIOSH and
4 SC&A both to look at data sets, and examine how
5 each of these issues was addressed for a given
6 situation or a given site. So if that's a
7 checklist, it --

8 MEMBER ANDERSON: Well, that's what I
9 meant.

10 DR. NETON: Follow -- yes.

11 MEMBER ZIEMER: We have other
12 criteria that we use, like the surrogate data
13 issue. And it's not quite a checklist, but you
14 have to say, how did you evaluate against these
15 criteria?

16 DR. NETON: That's true.

17 MEMBER ZIEMER: And then we have to
18 examine whether or not we feel that that's met
19 some sort of bar or a test level, you know.

20 DR. NETON: Not unlike what we do for
21 surrogate data. I mean, there are four or five

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1 criteria, and we drill down through them and
2 say, okay, this -- is this met, is this met, is
3 that met, is --

4 MEMBER ANDERSON: I think your
5 categories here fit that --

6 DR. NETON: They do.

7 MEMBER ANDERSON: -- process. So I
8 don't think you're missing anything.

9 CHAIRMAN MELIUS: Okay. The
10 heartburn question, or the one that'll keep Jim
11 up at night, and Stu, is, well, we've come up
12 with these criteria, guidelines, whatever we
13 want to call them, what does this say about past
14 coworker data sets?

15 DR. NETON: I've already thought
16 about that.

17 CHAIRMAN MELIUS: Yes. And I think
18 -- and again, it's -- you know, is it worth --
19 you know, when should we go back? Do we need
20 to go back and, you know -- can we then --
21 because I suspect, as I'm pretty sure that a lot

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1 of these, you know, criteria or guidelines,
2 whatever you want to call them, have been taken
3 into account.

4 We may not have all -- may have been
5 not documented to us, or the documentation may
6 not be as explicit as we thought, but -- or might
7 want now, but it's, it may still be there, and
8 they may not. But we've changed, you know, the
9 criteria on stratification, so to speak.

10 That may be more of an issue, but it
11 may not. I don't know. I don't know what
12 situations -- again, because often some of the
13 practical issues about a site, particularly
14 would the employment records support a
15 differentiation between different types of
16 workers, you know, may, you know, sort of have
17 obviated stratification.

18 So, and they may already be SECs or
19 whatever. But I think we can cross that
20 bridge, and Jim will have a few sleepless
21 nights.

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1 DR. NETON: That's one thing that
2 I've been thinking about. You just mentioned
3 it, Dr. Melius, is that many of the coworker
4 models that we developed early on, the sites
5 have become SECs for very large portions of
6 where the models apply.

7 CHAIRMAN MELIUS: Yes.

8 DR. NETON: And then what does that
9 mean in terms of sufficient accuracy, you know,
10 that kind of thing for the non-presumptive
11 cancers that we're reconstructing. I'm
12 wrestling with that right now.

13 CHAIRMAN MELIUS: Yes, yes.

14 MEMBER MUNN: But it's still unlikely
15 that there are any salient criteria that
16 haven't been a part of the conversation. The
17 fact that they aren't a part of our written
18 documentation doesn't mean that they haven't
19 been considered and addressed in some way. But
20 -- yes, we still don't know what they are.

21 CHAIRMAN MELIUS: Yes. Yes, that's

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1 what I was saying. I think the, maybe the more
2 relevant question is have they been
3 consistently applied.

4 MEMBER MUNN: Yes.

5 CHAIRMAN MELIUS: And I think that's
6 -- I think that's what we found, for example,
7 I think, with surrogate data, was that we -- and
8 even with the SEC evaluations, we -- there was
9 nothing new in either of those documents, in
10 terms of what had been done, but there were, you
11 know, a few sites that, where those that there
12 had been, you know, some pretty significant
13 inconsistencies in our approach.

14 And some of that's just time. Some of
15 it's, you know, information, what was available
16 at one time and not at another and, you know,
17 over the 102 meetings, we -- the Advisory
18 Board's decision-making has certainly changed
19 or evolved. Evolved, that's a better word for
20 it.

21 MEMBER MUNN: Absolutely.

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1 CHAIRMAN MELIUS: Okay. Any other
2 questions, comments? Okay. I saw you sitting
3 on the edge of your seat there. We're in --
4 we've been so much trouble recently or
5 something that we have two lawyers here today
6 to keep an eye on us.

7 MS. LIN: So if any Board Member felt
8 compelled to submit a written comment
9 addressing this document or this, the
10 application of it, please coordinate with Ted
11 Katz so we can preserve the Board's
12 deliberative process.

13 CHAIRMAN MELIUS: Well, that was
14 easy. Yes. We've got a few minutes. Any
15 items we can do, or work items we can do quickly?
16 Meeting times?

17 MR. KATZ: Meeting times? We can do
18 that. Yes, sir. So, let me just remind you
19 all of what we have already scheduled. Yes,
20 I'm sorry. Thank you.

21 So what we already have scheduled is,

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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.

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1 MEMBER ANDERSON: Okay.

2 MEMBER VALERIO: And July is the 23rd
3 and 24th?

4 MR. KATZ: July 24th -- right, for
5 now, yes, 23rd through 24th, that's a Thursday,
6 Friday, I believe, so that's as far as it would
7 go. So --

8 CHAIRMAN MELIUS: And both of those
9 -- the next two in-person Board meetings we have
10 to decide on a location that --

11 MEMBER ANDERSON: Exactly, yes.

12 MR. KATZ: Right. Well, for the one in
13 March, we should decide today.

14 CHAIRMAN MELIUS: Yes, definitely.

15 MR. KATZ: Right. So we talked about
16 Richland is a possibility, for Hanford. I
17 mean, the other two sites that come to mind,
18 well at least one that may be right, I'm not
19 sure. I'm always a little unsure, but I
20 thought -- last I heard, Rocky Flats might be
21 ready by March. Has that changed?

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1 MR. RUTHERFORD: I don't know that
2 it's changed. We have four or five issues that
3 are open, and we have papers out on three of
4 those, with another paper coming out shortly,
5 probably within a week or two weeks.

6 And the only issue that's outstanding
7 is this data falsification issue, which we're
8 waiting for formal release of documents by the
9 FBI. And that's kind of up in the air, that
10 one, you know, because I just don't know, you
11 know, that's another agency, and how quickly
12 they're going to get those released, so.

13 MR. KATZ: Okay. But then it sounds
14 like there's plenty of -- be plenty of material
15 for a Work Group meeting and --

16 MR. RUTHERFORD: Oh yes.

17 MR. KATZ: -- without that, and
18 depending on what comes of that, there may be
19 good fodder for the Board meeting.

20 And so anyway, we have those two.
21 Kansas City, my sense is that that's -- there's

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1 still a lot of work ongoing and that's not going
2 to be ready by then.

3 CHAIRMAN MELIUS: Hanford, my
4 understanding is there's active data that has
5 been gathered, and is in process, and there's
6 potential for Board action.

7 MR. RUTHERFORD: Yes. Yes, in fact
8 there's been interviews, data captured, and
9 there's another data capture actually
10 scheduled right now for early December. And
11 there is an open issue that could drive some
12 action for the March meeting.

13 MR. KATZ: So we have one bid from
14 Brad for Hanford. Any reason -- anyone, any
15 reason not to go to Richland?

16 We'll need to settle it today, because
17 the process of making arrangements, that's got
18 to get going.

19 CHAIRMAN MELIUS: Well, let's talk,
20 throw Rocky into that. What I'm not sure about
21 is how connected these issues are, in terms of

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1 decision-making. The Hanford one, the one I
2 know about, is -- should be relatively
3 straightforward.

4 MEMBER FIELD: Can your hear all
5 that?

6 CHAIRMAN MELIUS: And it's a single
7 issue, but the Rocky ones, I'm not sure where
8 the data falls, but how that ties in to some of
9 the other issues and what will be --

10 MR. RUTHERFORD: Well if you -- yes.
11 If you look at the years associated with the
12 potential falsification, I mean, it lines up
13 with the years that we're looking at with other
14 issues.

15 CHAIRMAN MELIUS: Oh, okay.

16 MR. RUTHERFORD: So, I mean, they're
17 all roughly in the same time period that we're
18 looking at, you know.

19 CHAIRMAN MELIUS: And I think the
20 other, maybe another consideration is that
21 where we hold the meeting doesn't preclude the

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1 Board taking action on the site. I think it's
2 as much, do we need -- where have we been
3 recently and where do we -- where would we,
4 might benefit from further input.

5 We haven't been -- I think we've been
6 to Rocky a lot more recently than Hanford.

7 MR. KATZ: Yes. It's been a few
8 years for Hanford.

9 CHAIRMAN MELIUS: Yes. Since we've
10 visited Wanda there.

11 MR. KATZ: Yes. And Josie, yes.

12 CHAIRMAN MELIUS: And I'm not sure
13 which one is easier to get to at the end of
14 March, or get out of, I guess is the --

15 MR. KATZ: Well, Wanda made
16 assurances, previously, that Hanford would be
17 fine, Richland would be fine in March.

18 CHAIRMAN MELIUS: Yes, well Brad
19 claims it never snows in Idaho Falls either.
20 Hanford? Yes, okay. Sounds good.

21 MR. KATZ: Okay. Let's do that,

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1 then. Very good. Thanks. That's helpful.
2 So we've settled that. Now, just for
3 scheduling further out, so I have, for the next
4 teleconference, again, the last meeting now
5 scheduled, the latest meeting is July 23rd
6 through 24th.

7 We need a teleconference, and
8 ballpark, you know, timing for that would be
9 September 21st, that week. But it can fall on
10 either side of that week, too. September 21st
11 is about the right timing. So look at that week
12 first. If that week's not good, then we can go
13 before or after, too.

14 MEMBER MUNN: I suggest the previous
15 week, the week of the 14th.

16 MR. KATZ: You're not available the
17 week of the 21st, is that what you're saying,
18 Wanda?

19 MEMBER MUNN: No, I could do it.
20 Just September, but it seems the preceding week
21 might be a little easier.

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1 CHAIRMAN MELIUS: Okay. Anybody
2 have problems with either week, I guess is --
3 David, do you have issues with --

4 MEMBER KOTELCHUCK: No, I was looking
5 --

6 CHAIRMAN MELIUS: The other David,
7 but you should --

8 MEMBER KOTELCHUCK: Oh, excuse me.

9 CHAIRMAN MELIUS: Yes, but --

10 MEMBER KOTELCHUCK: I was looking at
11 my -- the -- I was looking at Rosh Hashanah and
12 Yom Kippur for some of us.

13 CHAIRMAN MELIUS: Yes, that's the
14 week of the 14th. I've got it on my calendar.

15 MEMBER KOTELCHUCK: Thirteenth, 14th
16 is Rosh Hashanah, so that Yom Kippur would
17 occur, if somebody will help me --

18 MEMBER MUNN: On the 23rd.

19 MEMBER KOTELCHUCK: Pardon?

20 MEMBER MUNN: On the 22nd.

21 CHAIRMAN MELIUS: 22nd, 23rd.

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1 MEMBER KOTELCHUCK: Oh good. Okay.

2 MEMBER MUNN: One of the reasons I was
3 suggesting the preceding week.

4 MEMBER KOTELCHUCK: 22nd, 23rd, yes
5 there it is.

6 MR. KATZ: Okay. So recall, this
7 just a teleconference. It's just that 11 a.m.
8 call.

9 MEMBER KOTELCHUCK: Right. So
10 Monday would certainly not -- Monday the 21st
11 is not --

12 CHAIRMAN MELIUS: Yes.

13 MR. KATZ: Yes.

14 MEMBER MUNN: Yes, it is.

15 MR. KATZ: Yes. It's just a call,
16 and it's -- we can either do it Wednesday,
17 Monday, whatever.

18 MEMBER KOTELCHUCK: That's good.

19 MEMBER MUNN: Yes. Wednesday would
20 be September 16th, the preceding day.

21 MR. KATZ: Well, the week of -- okay.

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1 MEMBER KOTELCHUCK: That would work,
2 the 16th.

3 MR. KATZ: So is that good, the 16th?

4 MEMBER RICHARDSON: The 16th is not
5 good for me.

6 MR. KATZ: No, no, not good. But
7 what about the --

8 MEMBER RICHARDSON: I can do anything
9 else, but --

10 MR. KATZ: -- following week, the
11 23rd?

12 MEMBER MUNN: 23rd?

13 MR. KATZ: Is that a --

14 CHAIRMAN MELIUS: Of September?

15 MR. KATZ: Yes. Teleconference.
16 Is that good with everybody? Dave?

17 MEMBER KOTELCHUCK: One second.
18 Looks good.

19 MR. KATZ: Looks good, he says.

20 CHAIRMAN MELIUS: Okay.

21 MR. KATZ: Okay. So let's do that.

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1 Bill Field, is that okay with you, too?

2 MEMBER FIELD: Yes, that works fine.

3 Thanks.

4 MEMBER KOTELCHUCK: The usual time?

5 MR. KATZ: Yes, 11 a.m. Eastern time.

6 MEMBER KOTELCHUCK: Okay, so that's
7 September 23rd, 11 a.m.

8 MR. KATZ: Okay. And then for the
9 next in-person meeting, the right ballpark is
10 a year from now, November 2nd, the week of the
11 2nd, the 9th, the 16th, that's the ballpark.
12 Get it in before Thanksgiving for sure.

13 MEMBER ANDERSON: Not the first week.

14 MR. KATZ: Not the first week. So
15 the week of the 9th, maybe?

16 CHAIRMAN MELIUS: We've got
17 Veteran's day in the middle of that week,
18 Wednesday.

19 MR. KATZ: Of the 9th?

20 CHAIRMAN MELIUS: Yes.

21 MR. KATZ: It's on a Wednesday?

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1 CHAIRMAN MELIUS: It's the 11th, yes.

2 It's always on the 11th.

3 MR. KATZ: Always on -- okay.

4 CHAIRMAN MELIUS: It's one of the
5 holidays we actually support on the actual day.

6 MR. KATZ: The actual day, right,
7 regardless of what day of the week.

8 CHAIRMAN MELIUS: There's the 4th,
9 and Christmas and a few others, but --

10 MR. KATZ: What about the week of the
11 16th?

12 MEMBER ANDERSON: Of November?

13 MR. KATZ: Yes.

14 MEMBER ANDERSON: That would work
15 better for me. Towards the end of that week.

16 CHAIRMAN MELIUS: So 18th, 19th or, I
17 mean --

18 MEMBER MUNN: Wednesday and
19 Thursday.

20 CHAIRMAN MELIUS: Wednesday,
21 Thursday or --

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1 MEMBER MUNN: Eighteenth and 19th,
2 yes, that would be --

3 MR. KATZ: Eighteen, 19 are we
4 saying? Okay. And Bill, on the phone?
5 November 18th --

6 MEMBER FIELD: That sounds good.

7 MR. KATZ: Okay, super.

8 MEMBER KOTELCHUCK: Now this is the
9 -- are we talking about --

10 MR. KATZ: This is an in-person
11 meeting, November 18th and 19th of next year.
12 Okay. Okay, that takes care of scheduling.

13 CHAIRMAN MELIUS: It's also the
14 September, you know, may be, I mean -- not to
15 predict anything politically, or not to let
16 politics intrude on our efforts. Okay.

17 MEMBER KOTELCHUCK: This meeting's
18 going to be done for --

19 CHAIRMAN MELIUS: Absolutely.
20 Absolutely. It's -- that's -- I mean, will
21 last for a whole fiscal year. I mean, I'll be

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1 meeting through the following September before
2 we get out of there.

3 MR. KATZ: Okay. That's -- we've run
4 out of time.

5 CHAIRMAN MELIUS: When I was in
6 NIOSH, I had somebody who was trying to get out
7 to the crab processing places out in Kodiak, and
8 I think spent about a month in Alaska trying to
9 do the -- make the trip.

10 Okay, why don't we take a break? A
11 reminder, we do have, if you have nothing more
12 to do after you eat your lunch, you can look at
13 the public comments from the last meeting,
14 because we'll be going over those.

15 And then also prepare your Work Group
16 report, and any -- or reports, and Subcommittee
17 reports, and also you might want to look at both
18 the NIOSH schedule for reports that they -- that
19 went around from what, with what Ted sent out.

20 And then SC&A sent out their updated
21 scheduling and so forth as a separate email,

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1 that I believe everybody's --

2 MR. KATZ: Right.

3 CHAIRMAN MELIUS: -- gotten. So we
4 can try to be prepared. And -- but the
5 highlight of the afternoon, get all prepared,
6 the highlight will be the first -- at 1:30, so
7 be on time, LaVon Rutherford will give us his
8 SEC update.

9 MEMBER MUNN: Cliffhanger.

10 CHAIRMAN MELIUS: Cliffhanger, lots
11 of questions, should be a very volatile session
12 so be prepared. You don't want to miss it.

13 MR. KATZ: Sharpen your knives.

14

15 (Whereupon, the above-entitled
16 matter went off the record at 11:56 a.m. and
17 resumed at 1:36 p.m.)

18 CHAIRMAN MELIUS: Welcome back and
19 we'll now move on with our agenda. Let me check
20 on people on the line. Okay.

21 MR. KATZ: I'm getting to you.

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1 CHAIRMAN MELIUS: I'm only doing it,
2 he said like it was good advice. And I'll now
3 let the Designated Federal Official do his
4 designated duties.

5 MR. KATZ: Thank you. Thank you very
6 much. Just checking, first, roll call. I
7 know who's in the room. Everyone's in the room
8 who was here before. But on the line, Bill, are
9 you with us again?

10 DR. FIELD: I'm present --

11 MR. KATZ: Dr. Bill?

12 DR. FIELD: -- and attending.

13 MR. KATZ: Super. And we were
14 missing before Mr. Griffin, is he still
15 missing? Is he on the line? Okay. And how
16 about Dr. Poston? Okay. So that takes care
17 for roll call then.

18 CHAIRMAN MELIUS: Is Dr. Lockey here?

19 MR. KATZ: Lockey, we knew.

20 CHAIRMAN MELIUS: Yes, but if you do
21 the roll call --

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1 MR. KATZ: Okay. And Dr. Lockey, are
2 you on the line?

3 No Dr. Lockey either.

4 CHAIRMAN MELIUS: Okay.

5 MR. KATZ: And let me just a couple
6 other things. Remind folks who've joined us on
7 the phone to mute your phones. Press *6 if you
8 don't have a mute button, that'll mute your
9 phone. And press *6 again to take it off of
10 mute. But please keep it on mute except when
11 you're addressing the group.

12 CHAIRMAN MELIUS: Public comment.

13 MR. KATZ: And one other thing.
14 Exactly, public comment. Thank you, Dr.
15 Melius. We have a public comment session that
16 begins at 4:30 and goes at least until 5:30 or,
17 well, until 5:30 or until we run out of public
18 comments. That comes before.

19 So for people who've joined us in the
20 room, there's a sign-up book outside. If you
21 want to make public comment during the public

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1 comment session, please sign the book.

2 For people on the line, you don't need
3 to sign in. We will get to folks on the line
4 after we've gotten through everyone who's in
5 the room here during public comment session.
6 And that's it. Thank you. Dr. Melius.

7 CHAIRMAN MELIUS: Yes. And just one
8 more thing on public comment. I'm not sure
9 we'll do it today, but there will be a
10 presentation on Santa Susana at 4:00 and
11 immediately following that presentation we
12 will start the public comment period. So if it
13 starts a little early, that would be fine.

14 MR. KATZ: Yes.

15 CHAIRMAN MELIUS: Yes. Good. And
16 now I'd like to introduce the highlight of the
17 meeting, the SEC petitions status update. LaVon
18 Rutherford, I believe it is.

19 MR. KATZ: Yes.

20 MR. RUTHERFORD: Thank you. It's
21 nice to be the highlight, that's for sure. I'm

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1 going to give you a Special Exposure Cohort
2 update and then I'm going to take all the
3 drillings and the questions that you guys are
4 going to have afterwards.

5 All right. The purpose, obviously,
6 as we do the -- I'm usually loud enough anyway,
7 but that's okay. We do this at every Advisory
8 Board meeting. We give the update of
9 upcoming SEC petitions and existing petitions,
10 petitions that are in different phases. This
11 gives the Board updates and allows them to
12 prepare Work Group meetings and other Advisory
13 Board meetings.

14 Okay. As of October 28th, we had a
15 little bit of an increase here in the number of
16 petitions we received. We're up to 222. We
17 have four petitions in qualification process.

18 If you recognize that we went quite
19 some time without receiving a petition and here
20 recently we've gotten, I think, about six in the
21 last four or five months. And you can see the

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1 status on the existing petitions. We have two
2 that are in the evaluation process right now.

3 The petitions that are in
4 qualification: Westinghouse Electric
5 Corporation, Bloomfield -- this is for the
6 residual period at Westinghouse. It is going
7 to qualify. I will let you know that. And
8 there is some, you know, we have found some
9 issues with, not the petition, but in our early
10 reviews of documentation, we actually found
11 indication there may have been work involved at
12 Westinghouse Electric Corporation. During
13 this residual period they did some work for
14 Fernald.

15 And so we have actually provided that
16 documentation to the Department of Labor so
17 they can evaluate if those actually should be
18 covered operational years instead of residual
19 years.

20 SEC 220 is for Y-12. This is 1944 to
21 '45. You guys, I think everybody knows that we

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1 already have an SEC for 1944 and '45 period.
2 Therefore, it's highly unlikely this
3 petition's going to qualify. The only way this
4 petition would qualify is if they presented
5 evidence that incidents such that, you know,
6 exposure -- I mean, so -- I can't think of the
7 word. What's the right word I'm looking for?
8 Presence. There. It's such a heavy word,
9 presence. If we had a incident, such as
10 criticality or something like that, that
11 ultimately we could move from the 250 days to
12 presence. They haven't provided that on this
13 one, so it's unlikely that it would qualify.

14 Lawrence Livermore National Lab, this
15 is the post-SEC years at Lawrence Livermore.
16 This is in the early stages of qualification,
17 but it does look like it will qualify.

18 And then we just recently got a Grand
19 Junction Operations Office. We're just now
20 going through that. Most of you will remember
21 we're already evaluating those years at this

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1 time anyway.

2 Two petitions that have qualified and
3 we're moving forward with the evaluation: Dow
4 Chemical Corporation. This is actually here
5 in California, 1947 to '57. We are almost
6 finished with this evaluation at this time. We
7 did get slowed up a little bit with some funding
8 issues at OSTI, you know, to look at some of the
9 documents that Dow had there.

10 But this Evaluation Report should be out within
11 the next month or two. Anyway, it says January
12 2015, but that's -- you know, hopefully we'll
13 get those documents sooner than that.

14 Idaho National Laboratory, this
15 evaluation's been ongoing. There's been a lot
16 of work going on both with the Site Profile work
17 and concurrently the SEC evaluation that's
18 going on at the same time. We expect to
19 complete that evaluation by February 2015.
20 There's still, obviously, going to be a lot of
21 work going on with that one.

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1 And then Kansas City Plant, we
2 presented that some time ago. The Board has
3 been reviewing that, and the Board Work Group
4 and SC&A. There's been a lot of activity with
5 that one was well: interviews, on-sites and
6 data captures and such.

7 We have a number of sites that have
8 portions of their petition evaluation that are
9 open. They still need to be resolved.
10 Fernald, we have 1984 to 1989. I think they're
11 getting very close to closing things out at
12 Fernald.

13 Grand Junction's Operations Office,
14 the '75 to 2006. This one will be presented.
15 We are going to present an addendum or revision
16 depending on how that lays out at the March
17 Board meeting.

18 Hanford, as mentioned earlier in the
19 meeting, there's been a lot of work going on
20 with the '84 to '90 period at Hanford. And we
21 hope to be able to take some action on that one

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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

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1 shortly and we should be able to have a Work
2 Group meeting. After SC&A's had a period of
3 time to review that neptunium report, we ought
4 to be able to have a Work Group meeting.

5 Sandia National Lab-Albuquerque,
6 this, again, we're looking at the 10 CFR 835
7 implementation at the site. It has slipped
8 somewhat, mainly because of the priorities that
9 we have with other activities. Obviously, new
10 SEC petition evaluations, because of the 180
11 days, are going to take precedence. And so
12 certain things, we adjust priorities based on
13 that, based on what the Board is currently
14 really wanting or looking at. And so the
15 post-'94 period at Sandia has slipped a little
16 bit.

17 Santa Susana Field Laboratory, I
18 think I will let Dr. Hughes handle this one
19 later on.

20 And Savannah River Site, continues to
21 be a lot of activity at Savannah River. We were

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1 slowed down considerably because of
2 classification reviews on documents. I think
3 we've got that issue -- or at least we've got
4 a path forward worked out. And we should get
5 some of the documents and things released here
6 soon so we can start making some progress there.

7 St. Louis Airport Storage Site, this
8 one's kind of in limbo, mainly because we
9 presented our evaluation. And maybe what we
10 ought to do is, you know, we indicated the
11 '72-'73 period, 1984-'98 period, we felt dose
12 reconstruction was feasible.

13 It might be appropriate at the next
14 Board meeting or, you know, if there's too much
15 on the Board meeting, maybe during the Board
16 conference call, that I provide a status
17 update, you know, and basically get things
18 moving on that period again.

19 And potential 83.14s, again, these
20 have been on the plate for a while, mainly
21 waiting on a litmus claim that we could move

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1 them forward. There's really no claims that
2 are being negatively affected by this, us
3 waiting, because there are no claims, you know,
4 in that period. 1945 to 1948, that was the old
5 Z Division at LANL. It's now
6 Sandia-Albuquerque. And as soon as we get a
7 litmus claim, we'll move that forward.

8 The Dayton Project was a facility
9 designation change so we had a limbo period of
10 nine months. However, currently all the
11 claims are covered by another, existing SEC, so
12 we have no litmus claims there as well. And
13 that's it. Questions?

14 CHAIRMAN MELIUS: Yeah, Paul.

15 MEMBER ZIEMER: LaVon, on St. Louis,
16 can you remind us when the original petition
17 came to us and what action did we take?

18 MR. RUTHERFORD: Yeah, I can do a
19 brief reminder on that because I don't --

20 MEMBER ZIEMER: I don't need all the
21 details but --

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1 MR. RUTHERFORD: I was the one who
2 presented it, so I know a lot of it. That
3 actually -- it's probably been, I don't know,
4 four or five years ago that it was presented
5 originally. We recommended adding a Class
6 during the operational period. There was a
7 period of time, basically, the site was a
8 storage site. They had some of the K-65
9 materials, the African ores that were stored
10 out there for a very brief time. Some worker
11 was doing some raffinates. We ultimately
12 added a Class for that operational period.

13 Then there went to a stagnant period
14 where it was basically closed down, and then
15 they went through a clean-up period in the
16 1972-'73, I think, timeframe. And then there
17 is additional clean-up work that went on later
18 on, if I remember correctly. That may not be
19 totally, you know, accurate, but it's generally
20 in that manner.

21 And what we found was, during the

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1 '72-'73 time period, or during, you know, those
2 later years, we had additional information.
3 We had monitoring data that allowed us to dose
4 reconstruction. But there was never a formal
5 recommendation by the Board on that period.

6 MEMBER ZIEMER: Okay. That was
7 really what my question was. Maybe Dr. Melius
8 remembers. So it was that latter period, and
9 did we send it back for some review or did we
10 do anything?

11 MR. RUTHERFORD: No.

12 MEMBER ZIEMER: We didn't take action?

13 MR. RUTHERFORD: Yeah, there was a
14 period of time, you know, that we didn't take
15 action on some of the residual periods and
16 things like that. And this was kind of a
17 residual period. And there was never really a
18 follow-on on that one.

19 CHAIRMAN MELIUS: What's a kind of a
20 residual period@?

21 MR. RUTHERFORD: Well, when I say

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1 Akind of a residual period,@ I mean, because
2 there was some remediation work that went on in
3 that period as well, in addition to that
4 residual period.

5 CHAIRMAN MELIUS: Okay. And have we
6 had SC&A review that?

7 MR. RUTHERFORD: I do not believe so.

8 CHAIRMAN MELIUS: Okay. So, maybe
9 it's not appropriate to do it today, but if you
10 think you have enough information, maybe we can
11 get this moving ahead.

12 MR. RUTHERFORD: Okay.

13 CHAIRMAN MELIUS: Is there enough
14 information in the Evaluation Report to form
15 the basis for evaluating the residual period,
16 or is there additional information that's not
17 in the report?

18 MR. RUTHERFORD: No, I think it's all
19 there. I think. And all the supporting
20 documents are referenced and such.

21 CHAIRMAN MELIUS: Okay.

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1 MR. RUTHERFORD: If you would like, I
2 could put --

3 MEMBER ZIEMER: Well, I was wondering
4 if there was an actual recommendation from
5 NIOSH and if we just chose not to act. And did
6 we specifically choose not to act?

7 MR. KATZ: I think we just covered --

8 MEMBER ZIEMER: Or did we just forget
9 to act or what happened? I just don't
10 remember, but I can attribute that to my age.
11 But somebody needs to know what happened.

12 CHAIRMAN MELIUS: Well, LaVon is
13 fairly young.

14 MEMBER ZIEMER: I don't need to know
15 today, but I'd like a follow up on --

16 CHAIRMAN MELIUS: When he was a high
17 school senior, he went to the same football
18 games I was going to in Cincinnati, in '83.

19 (Laughter.)

20 MR. RUTHERFORD: What I can do is
21 provide the Board and SC&A, basically, a

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1 summary of, you know, where we were when and,
2 you know, the dates and also point to --

3 MR. KATZ: The transcript.

4 MR. RUTHERFORD: -- the documents and
5 such.

6 MR. KATZ: Well, and the transcript
7 from the Board meeting.

8 MR. RUTHERFORD: Oh yes, exactly.

9 MR. KATZ: But basically the
10 transcript -- so it wasn't set aside to be
11 addressed later, but the Board only
12 specifically took the action that was being
13 recommended, which was to add the Class for the
14 operational period. And it just wasn't spoken
15 to.

16 MR. RUTHERFORD: Right. Okay.

17 MEMBER ZIEMER: But there was another
18 recommendation. That's --

19 MR. KATZ: Well, there was a
20 recommendation, but it wasn't spoken to, is
21 what I'm saying. The Board didn't speak to it.

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1 CHAIRMAN MELIUS: So, what I would
2 suggest is that for the Board call, the next
3 call, can you put together a short presentation
4 on the residual period?

5 MR. RUTHERFORD: Yes, I can.

6 CHAIRMAN MELIUS: And then we'll do
7 that and we can either take action at the Board
8 call or we can refer it on for additional --

9 MR. RUTHERFORD: Yes.

10 CHAIRMAN MELIUS: We can either
11 accept the recommendation or we can refer it on
12 for further review. And I think that would
13 probably be a better way of doing it. Does
14 everybody agree?

15 MR. RUTHERFORD: Yes.

16 MEMBER ZIEMER: Thank you.

17 CHAIRMAN MELIUS: Okay. Yes, thank
18 you on that.

19 Other questions for LaVon? So LaVon,
20 could you just sort of go over what is going to
21 be available for the March meetings?

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1 MR. RUTHERFORD: Yes.

2 CHAIRMAN MELIUS: And I hope the
3 transcriber --

4 MR. RUTHERFORD: Can you pull that
5 back up, please?

6 CHAIRMAN MELIUS: -- listens very
7 carefully here and keeps track of this.

8 MR. RUTHERFORD: I'm waiting for my
9 presentation to come back up again so I can go
10 back. No, actually, we will be presenting Dow
11 Chemical Walnut Creek Petition Evaluation
12 Report. We will plan to present the Idaho
13 National Lab Evaluation Report. The Grand
14 Junction Operations Office, we plan to present
15 that as well.

16 Then I expect action to be taken on
17 Hanford. Some kind of action at least. I believe
18 so, anyway.

19 There potentially could be action on
20 Rocky Flats, just depends on the release of
21 documents and where the Work Group goes on that

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1 one. So there's four or five, anyway.

2 CHAIRMAN MELIUS: Okay. What is the
3 timing on Grand Junction?

4 MR. RUTHERFORD: When will the
5 addendum or the evaluation revision, whichever
6 way we end up going, when will that be out?

7 CHAIRMAN MELIUS: Yeah.

8 MR. RUTHERFORD: January/February
9 timeframe.

10 CHAIRMAN MELIUS: Okay.

11 MR. RUTHERFORD: That --

12 CHAIRMAN MELIUS: Go ahead.

13 MR. RUTHERFORD: I was going to say,
14 that report actually would've been out earlier,
15 but in our additional reviews we found some
16 thorium sources that were not previously
17 recognized that we need to look at that.

18 CHAIRMAN MELIUS: I'm just trying to
19 determine are there any of these that are
20 straightforward enough that would be done in
21 time for our January conference call?

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1 MR. RUTHERFORD: Well, I'll see if
2 Jim agrees with me. I think Dow Walnut Creek
3 would be pretty -- yeah, I think Dow Walnut
4 Creek would be pretty straightforward enough.
5 I think it'll be ready.

6 CHAIRMAN MELIUS: Well, when?
7 Because our call is early in January.
8 That's --

9 MR. KATZ: Very early in January.

10 CHAIRMAN MELIUS: Yes. So it would
11 have to be before the holidays.

12 MR. RUTHERFORD: No, that's not going
13 to work.

14 MR. KATZ: Yeah, I don't think so.

15 CHAIRMAN MELIUS: Okay. That's
16 fine. Just checking. So, Dow, Idaho, Grand
17 Junction and Hanford, okay.

18 Any other questions for LaVon, here,
19 now that he's got us confused? Okay. You're
20 off the hook for now.

21 Okay. We now have our Board work

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1 session. And we've completed part of it. So
2 we will start with the public comment session
3 from our last Board meeting.

4 And you all should have gotten two
5 documents, one is the summary spreadsheet and
6 the other is the transcripts that sort of back
7 that up and provide a little bit more detail on
8 that.

9 And I will go through this relatively
10 briefly, but feel free to interrupt me or if you
11 have questions and so forth. There were a
12 number of first comments had to do with Simonds
13 Saw and Steel. And there was some questions
14 about the basis for the dose reconstruction and
15 the follow-up clean-up there. Those have been
16 addressed and responded to.

17 MR. KATZ: Which document?

18 CHAIRMAN MELIUS: It's a
19 spreadsheet.

20 MR. KATZ: A spreadsheet, Excel.

21 CHAIRMAN MELIUS: And it's got a

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1 funny name to it. Yes, what is BPCP? Board --

2 MR. KATZ: Board public comment
3 session, or whatever the -- comment
4 presentation.

5 MEMBER ZIEMER: Oh, it's a
6 spreadsheet. I've got it.

7 CHAIRMAN MELIUS: Okay. Then we
8 have a set of three comments regarding the Santa
9 Susana site. And those have all been
10 addressed, including some follow-up I think
11 we'll probably hear about a little bit later
12 today.

13 There's some questions on the INL site
14 and comments from one of the people at that
15 meeting. And, again, I think these are all
16 straightforward in terms of being addressed.

17 There's actually a whole series of
18 comments on INL that we heard, which were, as
19 I recall, very helpful in terms of further
20 background on that site. And we'll probably be
21 talking more about it. It was quite a long

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1 comment, as you may remember.

2 Okay. Then we have some general
3 comments, some comments on Hooker, General
4 Steel Industries and on Dow Madison. And these
5 are being followed up on or in the process of
6 being followed up on.

7 Some comments on the Blockson site,
8 which was more of an issue having to do with DOL
9 and sort of a facility designation. There was
10 another comment on the Blockson site and,
11 again, sort of a what-if, procedural issue,
12 which, again, I think was addressed actually
13 right at the meeting by LaVon.

14 And there was some additional
15 follow-up reported from the April Board
16 meeting. It was something new. You're adding
17 Boulder, Ted?

18 MR. KATZ: It was probably commented
19 on that we would follow-up on that.

20 CHAIRMAN MELIUS: Oh, okay. Okay.
21 That's the first I've seen. Longer term

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1 follow-up. But, again, there was a follow-up
2 to some comments made at the April Board meeting
3 and a conference call and NIOSH and ORAU had
4 followed up and addressed that.

5 So any Board Members questions or
6 comments on that? I think the level of
7 documentation's good and -- okay. I don=t
8 think we need any further action on that.

9 Now we'll move onto Subcommittee and
10 Work Group reports. Josie's not here. The
11 first one I have on my list, which was off the
12 website, is on Brookhaven. I don't think
13 there's much going on there. Henry, do you --

14 MEMBER ANDERSON: Nothing.

15 CHAIRMAN MELIUS: Nothing. I think
16 it's --

17 MEMBER MUNN: -- there's no meeting.

18 MEMBER ANDERSON: No.

19 CHAIRMAN MELIUS: Fernald, Brad?

20 MEMBER CLAWSON: On Fernald, we've
21 really got one outstanding issue that we're

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1 still working on. That's the thorium. That's
2 in SC&A=s hands. They're supposed to have a
3 paper for us in about a month or so.

4 CHAIRMAN MELIUS: Okay. And that's
5 on schedule, John?

6 MR. STIVER: Yes, it is.

7 CHAIRMAN MELIUS: Okay. Well,
8 Hanford, we've talked about there's some active
9 evaluation going on and data gathering
10 regarding some issues out at Hanford. And we
11 will be doing a follow-up there.

12 So we can expect a Work Group meeting
13 before the March meeting. And I expect we'll
14 be in a place to take action at the March meeting
15 on that. I think that I understand from both
16 Sam and from talking to Arjun about that.
17 Thank Sam for his communication on that one.

18 Idaho, Phil?

19 MEMBER SCHOFIELD: There are --

20 MR. KATZ: Use the mic, please.

21 MEMBER SCHOFIELD: Oh, okay. There

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1 are more worker interviews scheduled in about
2 a week and a half that will hopefully shed a lot
3 more light on some of the areas that we're kind
4 of weak on. And that's really where we stand
5 at this point.

6 CHAIRMAN MELIUS: Okay. And then we
7 have the SEC Evaluation Report for March, so
8 that will pull that together. Okay. And
9 we've been assured that that's on schedule?

10 MR. RUTHERFORD: Yes.

11 CHAIRMAN MELIUS: Okay.

12 MR. RUTHERFORD: But it's on schedule
13 now. There's always things we can come up
14 with. I would like to point out this is a very
15 unique situation in that we have a Site Profile
16 review going on at the same time that an SEC
17 evaluation is going on. So it has been a
18 coordination trick, I can tell you.

19 CHAIRMAN MELIUS: Well, and it's also
20 combining two sites and --

21 MR. RUTHERFORD: Yes.

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1 CHAIRMAN MELIUS: Yeah, which were
2 initially evaluated as separate sites and now
3 have been combined.

4 MR. RUTHERFORD: Actually, we have to
5 separate them from -- initially, the idea was
6 that they thought they were going to be able to
7 do it as one petition. It's going to be two
8 petition evaluations. The second petition
9 evaluation will be for the Argonne Lab itself
10 because, regulation-wise, we can only do it by
11 site, you know, for a single site.

12 So we've got a petitioner providing a
13 second petition for that separate site, which
14 will qualify and we'll move it forward. So I
15 guess I should have mentioned that earlier.

16 CHAIRMAN MELIUS: Yeah. Yeah.

17 (Laughter.)

18 MR. RUTHERFORD: I apologize for
19 that. I forgot about that, I guess.

20 CHAIRMAN MELIUS: Okay. Got me
21 confused. So what's the timeframe on the

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1 second petition?

2 MR. RUTHERFORD: It will not be ready
3 for the March meeting, but it should be shortly
4 thereafter just because we're doing data
5 gathering for both sites.

6 So, the interviews, the data captures
7 and all are going on concurrently. I just
8 don't think that, from a schedule standpoint,
9 we'll be able to produce both of them at the same
10 time in order for the March meeting.

11 CHAIRMAN MELIUS: Okay. So, don't
12 go away.

13 MR. RUTHERFORD: I'm not.

14 CHAIRMAN MELIUS: Do they overlap?
15 What extent do the petition evaluations
16 overlap, in terms of --

17 MR. RUTHERFORD: Years, are you
18 talking about or --

19 CHAIRMAN MELIUS: Years, operations?

20 MR. RUTHERFORD: Well, it's not clear
21 yet. And this is, again, this is really

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1 difficult because this facility sits inside of
2 the main facility --

3 CHAIRMAN MELIUS: Yeah, right.

4 MR. RUTHERFORD: And also this is very
5 similar to Y-12. If you remember back when we
6 did the early years at Y-12, we had facilities
7 at Y-12 that were turned over to Oak Ridge
8 National Lab and they were doing work with
9 calutrons and cyclotrons.

10 And, so, in this situation, you've got
11 working going on at Idaho that it's actually
12 being done by the Argonne crew, but at the Idaho
13 facility. So there's a lot of little nuances
14 that are going to make it difficult.

15 CHAIRMAN MELIUS: Okay. Yeah. I'm
16 also thinking, in terms of the review, where
17 we've essentially combined the Site Profile
18 reviews, and now we're separating them out
19 again.

20 MR. RUTHERFORD: Yeah, right.

21 CHAIRMAN MELIUS: Yes. Yes.

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1 Thank you, LaVon. K-20, gaseous
2 diffusion plants. Phil, anything to report on
3 them?

4 MEMBER SCHOFIELD: Nothing to report
5 this time. We're kind of a little in the dark
6 here for recently, but we need to get a meeting
7 put together and try and get those closed out
8 if at all possible.

9 CHAIRMAN MELIUS: Yeah, it's the Site
10 Profile.

11 MEMBER SCHOFIELD: This is the Site
12 Profile issues.

13 CHAIRMAN MELIUS: Kansas City,
14 Josie's not here. Brad, do you want to?

15 MEMBER CLAWSON: Yeah, we've had
16 quite a bit of data capture up through there.
17 Matter of fact, it was just a little while ago.
18 We're proceeding on with the work on it. We're
19 waiting kind of, and it's in NIOSH's court to
20 respond that they have to put their mark in the
21 sand, but we've had some good data capture up

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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.

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1 MEMBER CLAWSON: No, I could be wrong
2 on that but, you know, we're proceeding on, so
3 we're trying to get into where we can get into
4 a Work Group and then move on from there.

5 CHAIRMAN MELIUS: And does SC&A have
6 anything to add or -- Joe?

7 MR. FITZGERALD: Yeah, we're still in
8 the issue resolution. I mean, we're
9 identifying issues as we go. There's new
10 issues that weren't covered in the ER that we
11 have now identified.

12 So, this is a transition period where
13 we've gone from the ER to one of actually the
14 Work Group and SC&A identifying issues,
15 bringing them to the floor. It's being done in
16 conjunction with NIOSH, so there's a lot of
17 interchange. But, how should I put it, the
18 dust hasn't really settled on what the issue
19 slate is, but we're getting close to having
20 that. So we should be able to --

21 CHAIRMAN MELIUS: And as you're

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1 identifying issues, are you sort of separating
2 out SEC issues from Site Profile issues?

3 MR. FITZGERALD: That's, I mean,
4 that's the process. I think, really, in a lot
5 of the research and interviews and everything,
6 we've done a lot. It's directed to sifting out
7 what may have been Site Profile issues earlier
8 in the year to ones that are standing as
9 potential SEC issues.

10 CHAIRMAN MELIUS: Okay.

11 MR. FITZGERALD: And that potential
12 part is taking some time to really get a feel
13 for it.

14 CHAIRMAN MELIUS: And some of the
15 potential ones may not be fully addressed in the
16 SEC Evaluation Reports?

17 MR. FITZGERALD: That's right. And
18 that means you're doing fundamental research
19 onsite. So this is new stuff that's really
20 being looked at.

21 CHAIRMAN MELIUS: Okay.

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1 MR. KATZ: So the next product will be
2 an SC&A evaluation review.

3 CHAIRMAN MELIUS: Right. And, yeah,
4 so there'll be an SEC evaluation review and
5 that'll be the basis for a Work Group meeting.
6 Okay. Good. Lawrence Berkeley?

7 MEMBER ZIEMER: NIOSH is still
8 reviewing information from the most recent data
9 captures there. And I was just checking my
10 emails, and I didn't get to the right one, but
11 Dr. Hughes is here. But I believe she
12 indicated to me that it will probably be early
13 next year, maybe January, before NIOSH finishes
14 the last White Paper. And she's nodding yes,
15 that that's correct.

16 Now, we have several White Papers
17 already that have been prepared earlier and
18 those have actually been also reviewed by SC&A,
19 but we're waiting for this final group of White
20 Papers so we have all the issues from Lawrence
21 Berkeley. And then we'll have an opportunity

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1 for SC&A to review those and then we will meet.

2 CHAIRMAN MELIUS: Okay. Thank you,
3 Paul.

4 Linde. Gen, is there anything?
5 We're done, right? So that should be inactive?

6 MR. KATZ: Yes.

7 CHAIRMAN MELIUS: Okay.

8 MR. KATZ: It's inactive.

9 CHAIRMAN MELIUS: It doesn't say so
10 on the website.

11 Okay. LANL? Mark's not here. I
12 don't know if there's any -- yeah. You had it
13 on your --

14 MR. RUTHERFORD: Yeah, I think I
15 provided the update. We're working that 10
16 CFR. 835 implementation with this site and we
17 just got all the information from them back in,
18 I think, October.

19 And so we should be able to move
20 forward here and provide something to the Work
21 Group. You know, I don't know, I don't want to

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1 commit to a date, but it'll be soon because
2 they're still reviewing how much information we
3 got. Okay.

4 CHAIRMAN MELIUS: How about an, you
5 know, an estimate?

6 MR. RUTHERFORD: A couple months.

7 CHAIRMAN MELIUS: Okay. It's in the
8 transcript.

9 MR. KATZ: I think we got him.

10 CHAIRMAN MELIUS: We'll remember.

11 Okay. Mound. Josie's not here
12 also. Brad, do you have any update? I'm not
13 sure there's much activity there.

14 MEMBER CLAWSON: There hasn't been
15 much activity at all on that.

16 CHAIRMAN MELIUS: Have we completed
17 the Site Profile? I don't recall.

18 MEMBER CLAWSON: No, we --

19 CHAIRMAN MELIUS: Oh, here, Jim
20 has --

21 DR. NETON: There's still a hold up on

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1 our issuance of the review of the external dose
2 section of the Site Profile due to
3 neutron-photon ratio issues.

4 CHAIRMAN MELIUS: Oh, right.

5 DR. NETON: Dr. Taulbee's working on
6 that and his schedule's been pretty full, but
7 I think it's high on his priority list right
8 now.

9 CHAIRMAN MELIUS: Okay. Nevada Test
10 Site. Brad?

11 MEMBER CLAWSON: Yeah, we've got a
12 Work Group meeting coming up on that, I believe,
13 December 3rd. And all of these are Site
14 Profile issues.

15 SC&A has reviewed the matrix. We've
16 just got to sit down with NIOSH and basically
17 close out the Site Profile issues. That should
18 be it for Nevada Test Site.

19 CHAIRMAN MELIUS: Good. Thank you.
20 When I saw the announcement on the Work Group
21 meeting, I expected it to get recalled, that it

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1 had the wrong name on it. We hadn't seen Nevada
2 Test Site for a while, so thanks for keeping
3 that moving, Brad, and everybody involved in
4 that.

5 X-10, Oak Ridge National
6 Laboratories. Gen?

7 MEMBER ROESSLER: Dr. Taulbee's not
8 here and I've been waiting for word from NIOSH.
9 Does anybody else have any update on that?

10 MR. RUTHERFORD: Yeah, we completed
11 everything with the petition evaluation
12 before. This is now, there was a post period
13 after the SEC period that we were looking at
14 additional works and exotics and things.

15 And we went and retrieved a number of
16 log books that identified air sampling and
17 such. We've been working through those. We
18 also got into the difficulty of getting the
19 documents released from a classification
20 standpoint, so that slowed us down. But we
21 have all the documents now and we can move

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1 forward with that.

2 The problem we got is, to be honest,
3 is resources. We're balancing priorities
4 right now. And, you know, if we see something
5 that's clearly looks like it's going to be an
6 SEC issue, we'll move that to the forefront.

7 But right now, we're working through
8 all those documents and, hopefully, we'll have
9 something to the Work Group. I'm not going to
10 commit more than in the next six months.

11 CHAIRMAN MELIUS: Okay.

12 MR. RUTHERFORD: I just looked and
13 November, December, January are rough right
14 now.

15 CHAIRMAN MELIUS: Okay. No, I
16 think, as I recall, when we did the original SEC
17 evaluation there was uncertainty as to whether
18 there was uncertainty as to whether there would
19 be other ones sort of going forward there. I'm
20 not sure I'm remembering the competing
21 priorities discussion, but at least the general

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1 basis for it, you said. Gen, do you have
2 anything to add or is that --

3 MEMBER ROESSLER: Thank you. No,
4 we're just waiting.

5 CHAIRMAN MELIUS: Okay. Pacific
6 Proving Ground, Dr. Lockey isn't here. I don't
7 believe there's been a meeting or --

8 MR. KATZ: No.

9 CHAIRMAN MELIUS: Okay. All I do is
10 keep getting emails about when is the site
11 visit. I'll probably get more of those.

12 MEMBER MUNN: You know, we all want to
13 go.

14 CHAIRMAN MELIUS: Dr. Lemen's going
15 to be out in that general area later this month,
16 Australia and Indonesia. So maybe you can take
17 a sail over them.

18 MEMBER LEMEN: I may just drop by.

19 CHAIRMAN MELIUS: Yes.

20 MEMBER LEMEN: Then they won't have
21 to have a site visit. I'll just go over.

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1 CHAIRMAN MELIUS: No, well --

2 (Simultaneous speaking.)

3 CHAIRMAN MELIUS: Okay. I skipped
4 over Pantex.

5 MEMBER CLAWSON: Yeah, we had a Work
6 Group meeting, along with Fernald here, about
7 a month, month-and-a-half ago. Everything on
8 Pantex is pretty well taken care of, the Site
9 Profile issues.

10 But we still have the neutron-photon
11 ratio issue that, I believe, has been our
12 overarching issue several times. And that's
13 the only thing that we have left on that.

14 DR. NETON: Actually, we decided not
15 to use the neutron-photon ratio approach at
16 Pantex because of some issues that we had with
17 that. And we're now redeveloping a coworker
18 model just based on the actual neutron dose
19 distributions. And that's in the works. It's
20 a couple months out. Yeah, and these are for
21 non-SEC cancers because Pantex is an SEC --

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1 after a certain period of duration of the
2 covered period.

3

4 CHAIRMAN MELIUS: Okay.

5 MEMBER CLAWSON: So once we have that
6 paper, we'll finish up Pantex.

7 CHAIRMAN MELIUS: Okay. Good.
8 Thank you both. And, Jim, we'll also remember
9 a couple months out.

10 Pinellas?

11 MEMBER SCHOFIELD: We haven't done
12 much on Pinellas right now. It's kind of like,
13 just like the gaseous diffusion plants, and
14 we'll hopefully get together and close that one
15 out. I don't think there's a whole lot left on
16 that that we have.

17 CHAIRMAN MELIUS: Jim's going to
18 complicate things.

19 DR. NETON: Well, this is going to
20 sound like a broken record about Pinellas, but
21 there's only issue remaining at Pinellas,

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1 outstanding, and that's the reconstruction of
2 tritide doses. And we're still trying to
3 figure out whether they filtered the smears
4 before they measured them or not, which, if they
5 did, causes some issues with trying to
6 reconstruct the tritide exposures.

7 That's a little bit out, though, on
8 the schedule and that's one of those
9 prioritization-type issues. I think it's out
10 into January next year. So early next year,
11 it's on schedule, is my recollection.

12 CHAIRMAN MELIUS: What's involved in
13 finding that out?

14 DR. NETON: I think there's some more
15 interviews that have to be done. They're
16 searching through the health physics
17 documentation, the records. Because we just
18 have one indication that they did filter these
19 samples. But there's got to be some other
20 health physics documentation to substantiate
21 that somewhere, why they did that in the first

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1 place, you know, or maybe they didn't and
2 there's other documentation to address that.

3 CHAIRMAN MELIUS: Okay. Thanks for
4 the explanation.

5 Rocky Flats I think we've already
6 pretty much addressed. Probably should have a
7 Work Group meeting between now and the --

8 MEMBER MUNN: Meeting in December.

9 CHAIRMAN MELIUS: Oh, it's already
10 scheduled. Okay. Good.

11 Sandia, Dr. Lemen?

12 MEMBER LEMEN: I don't have anything
13 new to report. I'm waiting for Sam. Does Sam
14 got anything new?

15 MR. RUTHERFORD: Yeah, I think I
16 actually talked about that a little earlier,
17 that we did get a number of documents from
18 Sandia, actually, back in September.

19 We are actually supposed to get more
20 documents later on this month. But I think our
21 schedule right now doesn't have us really

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1 completing things until sometime in April of
2 next year.

3 MEMBER LEMEN: So we haven't planned
4 any Board Working Group meetings until after we
5 get data back from them.

6 CHAIRMAN MELIUS: Right.

7 MR. KATZ: Can we go back to Rocky
8 Flats? Is that Rocky Flats you said we have a
9 meeting in December? No, we have a Dose
10 Reconstruction meeting in December.

11 MR. RUTHERFORD: Nevada Test Site.

12 MR. KATZ: Nevada Test Site and
13 Fernald. Those are in December. No Rocky
14 Flats meeting in December. We have not
15 schedule a Rocky Flats, because I've not
16 contacted Mark about this.

17 MEMBER MUNN: I thought he had
18 scheduled.

19 MR. KATZ: No. We have NTS on the
20 3rd, Fernald on the 4th and Dose Reconstruction
21 on the 8th. That's it.

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1 CHAIRMAN MELIUS: Okay.

2 MR. KATZ: Anyway. I just wanted to
3 get that straight.

4 CHAIRMAN MELIUS: Savannah River,
5 Mark isn't here. And I think we're waiting for
6 some NIOSH reports?

7 MR. KATZ: I think so. Yes, we're
8 waiting on NIOSH. Well, SC&A's been working on
9 matters too. I don't know whether they have a
10 report coming out too.

11 CHAIRMAN MELIUS: Yes, we have an
12 SC&A report that we're waiting for for the SEC
13 evaluation, which is a coworker.

14 MR. KATZ: Exactly.

15 MR. RUTHERFORD: And we were waiting
16 for a number of documents to be released from
17 the site from classification review. Now that
18 those documents are slowly coming out, we'll be
19 able to finish up some other papers that we're
20 working on.

21 CHAIRMAN MELIUS: Timeframe?

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1 MR. RUTHERFORD: Let's see what Dr.
2 Taulbee has in here. I don't see an update on
3 any. I'll have to get back with the Board on
4 that one.

5 CHAIRMAN MELIUS: Do you have one?

6 MR. RUTHERFORD: I don't see it.

7 MEMBER ZIEMER: There's a date of
8 March 2015 up there.

9 MR. RUTHERFORD: Oh yeah, March of
10 2015.

11 CHAIRMAN MELIUS: And I also think
12 our sort of coworker guideline issue may impact
13 on this also.

14 Scientific Issues Work Group.
15 David.

16 MEMBER RICHARDSON: Since the last
17 meeting I had a chance to talk with NCRP about
18 -- we had a topic that we were interested in
19 which was biological effectiveness of
20 low-energy photons and tritium. And the NCRP
21 was working on a report on that.

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1 I had some back and forth with them
2 about whether we could get a draft of that
3 report, or at least the first chapters of it,
4 to review. And, unfortunately, they have a new
5 executive director who said that they're not
6 going to release any of the material until
7 publication.

8 They're behind on publication and it
9 had been intended to be out by now. But
10 hopefully by early 2015 there will be a report
11 that's available for us to review on that.

12 And the suggestion, again, had been to
13 get maybe David Kocher to come and at least
14 introduce the report and present sections of it
15 for us.

16 CHAIRMAN MELIUS: Okay. Do we want
17 to do that for a Board meeting or for a Work
18 Group meeting?

19 MEMBER RICHARDSON: I think for a
20 Work Group meeting.

21 CHAIRMAN MELIUS: Okay. Jim, you're

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1 shaking your head. Is it we're doing it for a
2 Board meeting or --

3 DR. NETON: Well, I think it could
4 start as a Board meeting and then eventually
5 escalate it through a Work Group.

6 CHAIRMAN MELIUS: Okay.

7 MEMBER RICHARDSON: Yes, I was hoping
8 we could digest it some and then maybe --

9 CHAIRMAN MELIUS: Okay. SEC Work
10 Group. I think we've got three things
11 underway, if I remember correctly. One is the
12 coworker sufficient accuracy issue which we're
13 already talking about today. And I think you
14 have a pretty good idea where that is.

15 Secondly, we have a SC&A review of a
16 Savannah River coworker issue that I think
17 is -- I can't remember if it's just out from DOE
18 review or where. It's very close. Just got
19 it, okay. I'm still on the bad list for my CDC
20 email. So I will get it when I get back to the
21 office next week.

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1 And then the third issue we have.
2 Once upon a time a long time ago the SEC
3 evaluation group looked at the Dow Madison SEC
4 and so forth. And we now have a follow-up. We
5 have a Site Profile and we have also a PER.

6 So if this is okay with my fellow
7 Subcommittee chair, Work Groups, I think we
8 would like to task SC&A to really review both,
9 the PER and the Site Profile.

10 And my understanding, one, that this
11 is sort of a priority, available resources
12 issue also. And my understanding is that NIOSH
13 now has the timing appropriate, is that true,
14 Stu? At least that's what Ted tells me after
15 talking to you.

16 MR. HINNEFELD: Right. The Site
17 Profile has been revised. So there's a revised
18 Site Profile published, so that's certainly
19 available to review. PER is underway now.

20 MR. KATZ: It's about the come out.

21 MR. HINNEFELD: I mean, we haven't

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1 actually considered all of those. So
2 certainly the Site Profile revision is
3 available for review.

4 CHAIRMAN MELIUS: It seems sensible
5 to me to combine the two. Is that -- I'm not
6 familiar with the PER.

7 MR. HINNEFELD: Well, the PER review
8 typically kind of does the revised Site Profile
9 review anyway. You know, they kind of look at
10 the changes that were done and were the changes
11 to the Site Profile appropriate? I think
12 that's one of the tasks, isn't it?

13 And so to our way of thinking, whether
14 they're combined or not, you know, is kind of
15 irrelevant to us. So I suppose it could be
16 combined as one assignment and then if the PER
17 cases aren't completely worked they would, you
18 know, SC&A would just have to wait until they
19 get that sub-task until the cases are worked.

20 CHAIRMAN MELIUS: Yeah, why don't we
21 get it assigned? Dr. McKeel will rest easier

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1 and we can get this going. And then face this
2 when the review is done, at the appropriate
3 timing we can then decide if all this Site
4 Profile issues, sort of new issues, revolve
5 around the PER. Then, you know, the chair of
6 the Work Group would be glad to send this all
7 over to the Procedures Subcommittee for action.

8 But if there are others, we can sort
9 of work that out when we get to that point.

10 MEMBER MUNN: We're looking forward
11 to your action.

12 CHAIRMAN MELIUS: Our actions. It=s
13 a group decision. Okay. I hope we haven't
14 confused everybody by that.

15 Paul, maybe our hardest working Work
16 Group, TBD-6000.

17 MEMBER ZIEMER: Well, TBD-6000, I
18 want to report on two different facilities.
19 First of all, General Steel Industries. You
20 may recall that Appendix BB, which is,
21 basically, what you might call the Site Profile

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1 for General Steel Industries, Revision 1 of
2 that was issued this past summer.

3 SC&A was tasked to review the revision
4 and they have just completed that review. We
5 just got the review within the last few days,
6 actually. And I believe once NIOSH has a
7 chance to review that and respond, the Work
8 Group will meet.

9 Now, this does also raise the issue of
10 the process of a PER, as well, because there's
11 not a PER for this one yet, either. It was my
12 understanding that NIOSH may be wanting to
13 await the review of this one before they
14 actually issue a PER in case there is an
15 additional revision or two.

16 I'm not sure which is the best way to
17 do this because in the past some of these PER
18 reviews were actually reviews of the revisions
19 themselves.

20 But we have the revision. I think
21 we'll be prepared fairly soon. Although, I

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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.

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1 The other thing I'll report on is
2 Simonds Saw, which is also a TBD-6000. Just
3 within the last few days, I think late last
4 week, we received Rev 2 of what constitutes
5 their TBD. This is not an SEC issued Site
6 Profile and we just received that from NIOSH a
7 few days ago. SC&A will have to review that
8 yet. But just to let you know that that is in
9 the works and at some point we'll have to see
10 if there's any issues yet on Simonds Saw on the
11 Site Profile.

12 CHAIRMAN MELIUS: Okay. Good.
13 TBD-6001, otherwise known as the Uranium
14 Refining Atomic Weapons Employers Work Group,
15 nothing to report?

16 MEMBER ANDERSON: Nothing to report.

17 CHAIRMAN MELIUS: Okay.

18 MEMBER ANDERSON: We've got
19 additional assignment sites, but they're not,
20 I don't think, ready for us to look at yet.

21 CHAIRMAN MELIUS: Okay. Surrogate

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1 Data is in the same position. We have nothing
2 thing active for that. We're not expecting
3 anything to be active about, but you never know.
4 Weldon Spring?

5 MEMBER LEMEN: I have nothing new to
6 report on that.

7 CHAIRMAN MELIUS: What do we have
8 that's old? I don't --

9 MEMBER LEMEN: I don't have anything
10 that's old either, unless NIOSH does.

11 CHAIRMAN MELIUS: We haven't done a
12 Site Profile review there, have we?

13 MEMBER LEMEN: I think everything
14 just kind of stopped after the SEC.

15 MR. HINNEFELD: No, I don't recall
16 any Site Profile issues being open from the SEC
17 process.

18 MEMBER LEMEN: That's correct.

19 MR. HINNEFELD: When we finished the
20 SEC process, I didn't think there were any Site
21 Profile issues left. That's my recollection

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1 anyway.

2 CHAIRMAN MELIUS: Is there a Site
3 Profile review or was it just an SEC review?

4 MR. HINNEFELD: Well, there was --

5 MR. KATZ: Combined maybe.

6 MR. HINNEFELD: Yeah, when an SEC
7 review is done, you know, and the collection of
8 issues are made, sometimes those are parceled
9 into Site Profile issues and SEC issues.

10 And sometimes we'll resolve the SEC or
11 add an SEC Class and get rid of the SEC issues
12 and still have Site Profile issues remaining.
13 But I don't recall that there were any Site
14 Profile issues remaining from the Weldon
15 Springs work.

16 CHAIRMAN MELIUS: But if SC&A, and
17 this is a hypothetical, if SC&A has not done a
18 Site Profile review, then there might be SEC
19 issues. They may have focused just on SEC
20 issues and not focused at all on Site Profile
21 issues, which is why we do separate Site Profile

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1 reviews. And I just don't recall on this one
2 what was done.

3 MR. HINNEFELD: I don't recall
4 either. I don't know that --

5 CHAIRMAN MELIUS: Well, maybe John
6 Stiver has some.

7 MR. STIVER: After the SEC was closed
8 out, I believe we had a meeting in September of
9 2012. And then all the TBDs were revised after
10 that, in 2013, and we have not looked at those
11 yet.

12 I think it's probably, mainly, some of
13 the superficial changes to incorporate the SEC,
14 but I don't know because we haven't really
15 checked on that yet.

16 CHAIRMAN MELIUS: Okay. Should we
17 task or --

18 MR. KATZ: Why not? Why not just to
19 confirm that. If it's superficial, it'll be
20 easy.

21 MR. STIVER: Yes, I mean, it's a

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1 matter of an afternoon. One afternoon looking
2 at it and see if there's anything on it.

3 MEMBER LEMEN: So if you task the
4 SC&A, does that mean should we have another
5 Working Group meeting after that?

6 MEMBER MUNN: It depends.

7 MR. STIVER: In any case there are TBD
8 revisions out there that we have not seen yet.

9 CHAIRMAN MELIUS: Okay. So we'll
10 task SC&A to review those. Okay.

11 MEMBER LEMEN: And then should the
12 Working Group wait until SC&A reviews it and
13 then take action after that?

14 CHAIRMAN MELIUS: Yeah, yeah, NIOSH
15 is going to have to respond to their reviews.
16 And this is down the road a bit, but that --

17 MEMBER LEMEN: I just want to make
18 sure there's nothing from the Working Group
19 you're expecting.

20 MR. KATZ: Nothing yet.

21 CHAIRMAN MELIUS: Nothing yet.

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1 And Worker Outreach, Josie's not
2 here, so I think we'll put that off until the
3 next meeting. And there is some follow-up that
4 we need to do in that, but Josie needs to should
5 be present for that.

6 And then we have our two
7 Subcommittees. Dose Reconstruction Reviews.
8 David?

9 MEMBER KOTELCHUCK: Okay. Well, our
10 last --

11 CHAIRMAN MELIUS: Can you speak into
12 the microphone --

13 MEMBER KOTELCHUCK: Our last
14 teleconference meeting was October 29th, which
15 Wanda kindly chaired in my absence, and much was
16 done. We almost finished 10 through 13.

17 Actually, we have 14 findings
18 remaining in the so-called DCAS sites file. We
19 have a next meeting, as Ted noted, on December
20 8th. And we will finish up the findings at that
21 time and then begin, finally, the 14th set.

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1 And that will allow us also to begin working on
2 the audit report, finally, for 10 through 13.

3 And work is going on on the blind cases
4 and work is continuing on NIOSH work on the 9th
5 up through the 19th set. So that's the report
6 and we're moving along.

7 CHAIRMAN MELIUS: Paul.

8 MEMBER ZIEMER: I'd like to ask my
9 periodic question. And that is, what are the
10 plans to report to the Secretary on the
11 scientific validity? Is that what you were
12 talking about?

13 MEMBER KOTELCHUCK: Yes, that's what
14 I was talking about, the audit.

15 MEMBER ZIEMER: Okay.

16 MEMBER KOTELCHUCK: Oh yes,
17 absolutely. We're behind.

18 MEMBER ZIEMER: Yes. That's okay.

19 MEMBER KOTELCHUCK: We had hoped to
20 begin earlier, but we will do it now and try to
21 expedite it.

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1 MEMBER ZIEMER: I just wanted to make
2 sure I understood that.

3 CHAIRMAN MELIUS: And I will ask my
4 periodic question, which is what about the
5 blind reviews?

6 MEMBER KOTELCHUCK: The blind reviews,
7 we've gone over, I believe, four out of the six.
8 It's been put back on our schedule because we
9 want to get 10 through 13 completed so we can
10 do the report to the Secretary.

11 The blind reviews, as you remember
12 from earlier meetings, for the four cases that
13 we reviewed, the blind reviews were identical
14 or compatible. We haven't moved ahead on the
15 others. We will now be able to, however, when
16 we finish 13.

17 CHAIRMAN MELIUS: Okay. Any other
18 questions, comments, anything from NIOSH or
19 SC&A on that? Okay.

20 MR. KATZ: Well, just to update you,
21 SC&A has been assigned. They're doing six plan

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1 reviews now, additional ones. And they've
2 also been assigned their 21st set of dose
3 reconstructions, which will take them through
4 March. So that's also happened in this
5 interim.

6 CHAIRMAN MELIUS: Procedures Review.

7 MEMBER MUNN: Procedures has not met
8 since I gave you a fairly concise report during
9 our September Board teleconference. We are
10 scheduled for Tuesday, November 25. So we will
11 be meeting later this month.

12 At our last meeting, we had a number
13 of PERs that we looked at and we have a gaggle
14 more that's coming up for us. We also took a
15 look at several OTIBS that we were attempting
16 to close out last time, some of which we did.

17 They included ingestion, inhalation
18 of plutonium and internal dosimetry issues,
19 including some internal doses related to gross
20 alpha and gross beta. But most of our focus,
21 I think, will probably be on PERs during this

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1 upcoming Procedures meeting later this month.

2 CHAIRMAN MELIUS: Any questions or
3 comments? Yes, Paul.

4 MEMBER ZIEMER: Actually, if I might
5 be permitted to ask a question of David on the
6 previous report. We have 21 total reviews we
7 will have finished with this last group, 21
8 groups of dose reconstruction reviews. Is it
9 21?

10 MEMBER KOTELCHUCK: No, we've been
11 working on 10 through 13 sets --

12 MEMBER ZIEMER: Yes, but which ones
13 -- which group is ready for SC&A's completing
14 or --

15 MR. STIVER: Well, we have delivered
16 up through set 19 now. Set 17 were the six
17 additional blinds that Dr. Kotelchuck was
18 talking about that. And since then we've been
19 tasked to do Set 20, which are another
20 additional set of blinds.

21 MEMBER ZIEMER: Okay. But --

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1 MR. STIVER: And then 21 through 30
2 are standard dose reconstructions.

3 MEMBER ZIEMER: Okay. So with
4 those, how many total cases have we reviewed?
5 Is it somewhere around four to 500?

6 MEMBER KOTELCHUCK: Let's see.
7 Total? You mean from the beginning?

8 MEMBER ZIEMER: Yeah.

9 MR. STIVER: The table I put in
10 there --

11 MEMBER KOTELCHUCK: Over 200. I'm
12 just looking at the --

13 MR. KATZ: No, no, no. David, John
14 has the numbers. We talked about this
15 recently.

16 MR. STIVER: Yeah, in the review that
17 I sent out to you guys, there's a table on Page
18 15. And the total number of cases up through
19 Set 19 is 468. Findings are nearing completion
20 through Set 13. That still leaves 14 through
21 19 including --

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1 MR. KATZ: So though Set 21 it'll be
2 about 500. That's correct.

3 MEMBER ZIEMER: Okay. So about 500,
4 what I'm trying to get at is to get an update
5 on what percent of the total cases that have
6 been reconstructed have we been able to review
7 and whether our original goal of two-and-a-half
8 percent was even realistic. I have a feeling
9 it wasn't and I don't know if we'll be able to
10 achieve, ever, what we thought we could ten
11 years ago, or more than ten years ago, twelve
12 years ago, and whether or not we should.

13 I don't think we need to do it today,
14 but I'm wondering if the Dose Reconstruction
15 Subcommittee might advise us as to what is
16 realistic, so that we have on record --

17 MEMBER KOTELCHUCK: Sure.

18 MEMBER ZIEMER: Maybe we need a new
19 goal or we have to do more or change the goal.

20 MEMBER KOTELCHUCK: Yeah. I mean,
21 to respond just to what you're saying, I mean,

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1 I've looked at the numbers and we're really
2 running around one percent. Maybe
3 one-point-something, at least half of
4 two-and-a-half-percent. And that's what
5 we've been running and it's been very slow.

6 CHAIRMAN MELIUS: But, I mean, well,
7 we've all talked about this, but it's not a
8 static methodology and it's very complicated.
9 So the methods that were used for the first
10 hundred were different than the last hundred.

11 MR. KATZ: But are we doing it any
12 faster? I don't --

13 CHAIRMAN MELIUS: No. Well, and so I
14 guess the follow-up, and reason for my question
15 was about the blind reviews is, is there a
16 better method that we could be using or a
17 different methodology we should be using that
18 might be more efficient? Or a mix of
19 methodologies and approaches that might be more
20 efficient in terms of assuring the quality of
21 that, but also identifying any remaining

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1 problems.

2 I think most of our problems have been
3 -- at least my estimate is just sort of this fact
4 that you've separated the dose reconstruction
5 reviews from the Site Profile, SEC issues and
6 so forth. We go at them sort of differently.
7 And Procedures and so forth. But is there some
8 way of taking that into account? Is there
9 something else we should be able to do in
10 methodology.

11 But I think to get to that, I think,
12 when we last talked about this, which is
13 probably a couple years ago, was the issue of,
14 one, we needed to have a report to the Secretary
15 or something like that would summarize this, at
16 least for the more recent reviews to be able to
17 evaluate it.

18 And, secondly, the blind reviews
19 would also be helpful in terms of helping to
20 evaluate what other methodologies might be
21 used. Not that we could ever do, you know,

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1 two-and-a-half percent blind reviews, but
2 might point to issues that would come up.

3 So I think we could try to aim for, you
4 know, pulling our -- so really looking at our
5 methodology again as we're doing this audit.

6 MEMBER KOTELCHUCK: Well, as both the
7 chair and also a new person on the Committee,
8 we have not had, with the blind reviews that
9 have been completed and that we've looked at,
10 there seems to be no problem, that we're doing
11 a good job, there is agreement.

12 And the Sets 10 through 13 have been
13 very, very slow. And at least from my point of
14 view, that's most of the time I've been on the
15 group and the Subcommittee, we've been
16 discussing those.

17 And so the push has really been to get
18 those out so that we can begin to work on the
19 audit. I believe we can come back onto the
20 blind review cases fairly quickly. They're
21 small in number and there hasn't been a problem.

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1 So with respect to what the Chairman
2 is saying, we will go back to blind reviews, but
3 we just had to get 10 through 13 off our plate.
4 And that has been, I felt, an imperative,
5 because we could not even begin to talk about
6 the report to the Secretary, which has a high
7 priority.

8 CHAIRMAN MELIUS: I'm not being
9 critical of both the priorities. I was just
10 trying to address how do we address the bigger
11 issue, which Paul raised also. Is there some
12 change? And not to reflect on the work that
13 you've done or the Subcommittee or the people
14 involved in the reviews, but it's been a long
15 time and we need to look at that. And we
16 recognize that we need to at least get that 10
17 to 13 audit, whatever we're calling it,
18 completed as a priority and then be able to move
19 on.

20 MEMBER KOTELCHUCK: I'm not feeling
21 that you're attacking the Committee or

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1 anything --

2 CHAIRMAN MELIUS: Yeah, yeah. Okay.

3 MEMBER KOTELCHUCK: -- but just
4 trying to say how we sort of established
5 priorities ongoing. And getting something to
6 the Secretary, as I've said, is a high priority.

7 CHAIRMAN MELIUS: Yeah.

8 MR. KATZ: And if I could just add
9 something related to Paul's point, to put a very
10 fine point on it. We're falling, despite the
11 fact that we've really thrown ourselves at this
12 harder since -- although we've had some quorum
13 issues at times that have gotten in the way,
14 we're actually losing ground in terms of the
15 difference between where the Subcommittee is in
16 reviewing cases and the SC&A's production
17 reviews.

18 CHAIRMAN MELIUS: Right.

19 MR. KATZ: So we definitely have to
20 have this sort of better thinking about how we
21 go about this in a big sense, so I totally

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1 concur.

2 CHAIRMAN MELIUS: Stu.

3 MR. HINNEFELD: I was going to offer
4 one thing to keep in mind when you talk about
5 the original objective of two-and-a-half
6 percent, or whatever, is that for many years now
7 the Subcommittee has selected cases with PoCs
8 over 40 percent or over 45 percent, which is a
9 very tiny minority of the total cases.

10 I bet that=s far less than
11 two-and-a-half percent of the dose
12 reconstructions we do. And so, you know, based
13 on those facts, that we are only selecting this
14 top tier, if you selected them all, I bet you
15 wouldn't be at two-and-a-half percent.

16 So there's a really fundamental
17 reason here why the Subcommittee, I think,
18 could come back and say it's not realistic,
19 beyond the fact that it's an awful lot of work,
20 it's just not realistic because they're not
21 two-and-a-half percent in the range we want to

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1 look at.

2 CHAIRMAN MELIUS: Yeah, but another
3 take on that would be that because they're, you
4 know, over 40 percent, they probably are more
5 difficult to review. And since you were
6 already prioritized, we're already selected to
7 try to address the problems, but it also makes
8 the work load bigger.

9 MR. KATZ: Right.

10 MR. HINNEFELD: Yeah.

11 CHAIRMAN MELIUS: Yeah, yeah. If it
12 was a random sample, I think we would probably
13 have a lot more done because it would be a lot
14 quicker to do. And that's not to fault the
15 selection criteria, but, again, I think we need
16 to sort of look at what comes out of the audit
17 and what our past experience has been beside
18 this. Are there other approaches we can use?
19 Yes, David.

20 MEMBER RICHARDSON: Well, I mean, I=m
21 going to play the devil's advocate. I mean, I

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1 can't go back 12 years, but I can go back a
2 number of years when we talked about that logic
3 of sampling. And we recognized we were doing
4 stratified sampling, over-sampling certain
5 types of cases, but nonetheless we had our sites
6 set at at least sampling a couple percent of the
7 cases in order to get some coherent picture of
8 the information. And we're well below that
9 target.

10 I mean, so that does force us to kind
11 of reflect about how we can characterize the
12 whole process based on, let's say, one-half of
13 a percent or a one percent sample.

14 The second part was some of the
15 problems we find would be, and these are more
16 difficult cases in a sense, but some of the
17 problems we find seem to be still sporadic,
18 episodic, quality control, sort of, you know,
19 quality assurance issues that I'm not sure, you
20 know, would be uninformative if we would sample
21 other parts. And we just don't know right now.

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1 So there seem to be some of those QA/QC issues.

2 And the third one is we had set our
3 sites at this couple percent sampling issue,
4 but since the ten year review, NIOSH has taken
5 on sampling some cases as well. And I don't
6 remember what your goal was or how many blind
7 reviews or basically reconstructions NIOSH was
8 going to run through, but in a sense there's a
9 shadow program running and also doing this.

10 MR. HINNEFELD: I've forgotten now,
11 but it's maybe one percent. It's not a very big
12 percent.

13 MEMBER RICHARDSON: But it's in some
14 sense we have now, we have two one percent
15 programs going on and that may help us.

16 CHAIRMAN MELIUS: And it might be
17 helpful, when we're ready, is to get a report
18 on the NIOSH review process also when we're
19 ready to be talking about the audit and what
20 should we be doing in terms of methodology. So
21 you could be able to summarize, you know, your

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1 experience, Stu, with doing these reviews and
2 so forth. Okay.

3 MEMBER KOTELCHUCK: I mean, I'm
4 counting on the review for the Secretary as
5 informing us. I mean, I'm looking forward to
6 that, to learn, not just that I have to report
7 to somebody else above me but that it will give
8 us a picture, finally, of where things are
9 slowing down or can be changed to speed things
10 up.

11 CHAIRMAN MELIUS: Yes. Okay. Any
12 other comments on that issue? Okay. Do we
13 have any other Board --

14 MEMBER KOTELCHUCK: Yes, two more.
15 Do you want something on Ames?

16 MR. KATZ: Ames.

17 CHAIRMAN MELIUS: Ames?

18 MR. KATZ: You skipped it.

19 CHAIRMAN MELIUS: Did I skip Ames?

20 MEMBER KOTELCHUCK: We have an Ames
21 Working Group. You skipped us.

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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

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1 better orientation as to quite where we are.

2 He envisions that we need four more
3 White Papers, which he is talking about doing
4 next summer, of 2015. We have not met as a
5 group and we will be having an organizing
6 conference call sometime either in December or
7 January. That's when I'd like to have it.

8 And then we'll proceed in discussions
9 with Tom. I'll share the discussions that I
10 had with him with the rest of the Working Group
11 and we'll see.

12 Obviously, if it will take him until
13 next summer, then we're not going to be able to
14 do very much between now and then, regrettably.

15 CHAIRMAN MELIUS: My recollection is
16 that there was a Site Profile review from SC&A.
17 And so are these White Papers in response to
18 that? That's what I'm trying to --

19 MEMBER KOTELCHUCK: Yes.

20 MR. STIVER: Yeah, I was going to say
21 that we turned in or delivered our review in

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1 August of 2013, our 22 findings on that. So I'm
2 assuming is what is our response. This is
3 non-SEC.

4 CHAIRMAN MELIUS: Yes, yes. They're
5 Site Profile issues that --

6 MR. HINNEFELD: These are for things
7 that are for -- this is in SEC for much of its
8 period and so many of these issues are related
9 to the non-SEC cancer claim dose
10 reconstructions.

11 CHAIRMAN MELIUS: And one of the
12 reasons we held up to do the Site Profile review
13 was so NIOSH could then focus some resources on
14 being able to address these Site Profile
15 issues. So that I think the schedule makes
16 sense in those terms, so. I just wanted to get
17 that on the record.

18 MR. KATZ: Okay.

19 CHAIRMAN MELIUS: Did I miss anybody
20 else? Did the website have any other failures?

21 MR. KATZ: No, that's good.

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1 CHAIRMAN MELIUS: Yes.

2 MR. KATZ: Blockson, there's no
3 activity right now.

4 CHAIRMAN MELIUS: Yeah. I'm not
5 sure if Blockson needs activity does it?

6 MR. KATZ: There'll probably be a PER
7 at some point, which is why I'm not making it
8 inactive.

9 CHAIRMAN MELIUS: Okay. We'll wait.
10 Good. Any other things Board needs to do?

11 MR. KATZ: No, I think that does it.

12 CHAIRMAN MELIUS: Okay. Then we
13 will break until 4 o'clock.

14 I'm reluctant to try to move up the
15 Santa Susana because we have people scheduled
16 to come in and I don't want to -- though some
17 people are here, I'm concerned that other
18 people might come in around 4 o'clock given --

19 MEMBER SCHOFIELD: And some are going
20 to call in later.

21 CHAIRMAN MELIUS: Yes. We have

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1 people later, so, yes. Because I think our
2 presentations, I think, will go on a little
3 longer, at least a half-hour, but just a guess.
4 So we will start back up here promptly at 4
5 o'clock.

6 (Whereupon, the above-entitled
7 matter went off the record at 3:00 p.m. and
8 resumed at 4:02 p.m.)

9 CHAIRMAN MELIUS: Okay. We'll
10 reconvene now. And my schedule here. So I'm
11 not sure. Phil, do you have anything you want
12 to say to start or should we just go into -- I
13 could use his --

14 MEMBER SCHOFIELD: I think we should
15 just go ahead and get started.

16 CHAIRMAN MELIUS: Okay.

17 MEMBER SCHOFIELD: The only think I
18 do have is just one brief thing. I really
19 appreciate DOE and all the people at the
20 facility yesterday for arranging the tour. I
21 think that was very educational for us.

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1 CHAIRMAN MELIUS: So what we'll do is
2 we'll start. Dr. Hughes will do a presentation
3 from NIOSH. Then we'll hear from SC&A, John
4 Stiver, and then we'll hear from the
5 petitioner.

6 And at some points there may be after
7 presentations, some questions from the Board
8 Members, but then we will, after that, after
9 hearing from the petitioner, we will go into the
10 public comment period. So let's do that. So
11 we'll start with you, Lara. Welcome. Haven't
12 seen you for a while, so --

13 DR. HUGHES: Yes.

14 CHAIRMAN MELIUS: -- good to see you.

15 DR. HUGHES: Thank you, Dr. Melius.

16 CHAIRMAN MELIUS: Yes.

17 DR. HUGHES: This is the Santa Susana
18 Special Exposure Cohort Site Profile update.
19 Okay. When we say Santa Susana in the context
20 of this program, we really talk about four
21 separate covered sites.

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1 We kind of treat them as one thing
2 because all the sites share the same operator
3 over the course of time and also share the
4 workforce and most importantly for our program,
5 their dosimetry program, the issues affecting
6 the dosimetry program are shared between all
7 these sites.

8 The first site, the largest, is Area
9 IV of the Santa Susana field laboratory which
10 is covered from 1955 to the present. There are
11 currently two Special Exposure Cohort classes
12 from 1955 through 1964, the Canoga Avenue
13 Facility which is covered 1955 through '60, the
14 entire period as an SEC Class.

15 The DeSoto Avenue facility has a
16 covered period of 1959 through 1995 as well as
17 1998. And it is currently in SEC Class from
18 1959 through 1964.

19 And the Downey Facility has a covered
20 period of 1948 through 1955 and the entire
21 covered period is an SEC Class currently.

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1 Now, those of us who went on the tour
2 yesterday got a nice detailed history of the
3 site. The contractor history is somewhat
4 complicated and I don't want to go into it.

5 All of these sites were non-weapons
6 facilities that did research into nuclear
7 reactors and other nuclear materials. So they
8 were reactor operations.

9 There were about ten different
10 reactors that were built and tested as well as
11 a number of critical test facilities which is
12 kind of, it was a small reactor.

13 And there was a number of nuclear
14 support operations. There was a hot lab
15 facility. There was a small accelerator
16 facility. There was radioactive material
17 handling facility. There were waste handling
18 facilities and so forth.

19 The Work Group for Santa Susana was
20 established in 2008 in response to the Board
21 contractor doing a review of the NIOSH TBD on

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1 the sites. That was done in 2008. There were
2 two SEC Evaluation Reports for Area IV that were
3 delivered to the Board in 2009 and 2010.

4 The first SEC Evaluation Report on
5 Area IV was also reviewed by the Board
6 contractor and the TBD issues and the SEC issues
7 resulting from those reviews were the
8 discussion points in front of the Work Group.

9 The Work Group has met in 2008 and 2009
10 and 2010. And just recently, in 2014, the very
11 last meeting last month was mainly to touch base
12 and kind of reestablish the Work Group.

13 So the issues that were discussed in
14 the past in front of the Work Group included
15 things like the site definition and operations
16 timeline of all four sites, incidents, internal
17 monitoring issues, internal coworker model
18 feasibility and necessity.

19 I forgot to mention with all of the
20 SECs that were established for these sites,
21 were based on defining of internal

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1 infeasibility. So the internal data was a big
2 discussion issue.

3 There was also issues with the
4 external monitoring data, the neutron data, the
5 environmental approach that is outlined in the
6 TBD as well as how we deal with the tritium
7 plumes that are on site and potential work
8 exposures.

9 Currently, the Work Group is
10 discussing the neutron/photon ratio White
11 Paper that was sent to the Work Group in 2010,
12 but that was kind of on hold pending some other
13 issues.

14 What needs to be discussed is the
15 internal coworker model that has been completed
16 by NIOSH in March of 2014. And since I prepared
17 this presentation, the Board contractor has
18 also issued their review of the neutron/photon
19 ratio White Paper. So that's also in front of
20 the Work Group to be discussed soon.

21 There are several NIOSH draft

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1 documents that are ready to release. The
2 external coworker model is in a pending status
3 pending the resolution of issues regarding
4 neutrons. And there's several TBD revisions
5 that are pending resolution of issues and they
6 will be released as soon as those are resolved.

7 So since 2010, NIOSH has done
8 considerable work on the site, although the
9 Work Group has not met. In the last Work Group
10 meeting in 2010 there was discussion on the
11 internal and external coworker model. So ever
12 since then NIOSH has continued the discussion
13 and issue resolution affecting the internal
14 data.

15 Back in 2010 we have been working with
16 a database that was received from Santa Susana
17 from Boeing that we attempted to work into an
18 internal coworker model, however, there were
19 numerous problems.

20 The reason being that this database
21 was not developed for the purposes NIOSH

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1 needed. It was developed for an
2 epidemiological study, so there was some issues
3 with that.

4 So NIOSH has been negotiating with
5 Boeing trying to obtain scanned worker
6 dosimetry records so we could do the data entry
7 ourselves.

8 Also in 2010, NIOSH prepared the
9 neutron/photon White Paper and revised the
10 internal/external and environmental TBDs
11 mainly to include the SEC language.

12 In 2011, the negotiations with Boeing
13 about the worker records continued. And we
14 also, at the same time, tried to resolve issues
15 with the, what we call the Boice database
16 because it was developed for the
17 epidemiological study by Dr. Boice.

18 We found some issues that we decided
19 that we cannot use it for NIOSH purposes of
20 developing internal coworker model.

21 And also in 2011 another iteration of

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1 TBD revisions were completed, but they remain
2 pending resolution of issues with the coworker
3 studies.

4 2012, finally Boeing decided to
5 release the scanned worker records to NIOSH.
6 Those were received in March of 2012 and it
7 consisted of 14,000 files that had to be sifted
8 through and classified.

9 So the data entry from those lasted
10 from May 2012 to January 2013. And the
11 internal and external coworker models as a
12 result of those records were completed and
13 reviewed in 2013.

14 The external model is currently
15 pending and waiting approval once we decided
16 how to approach the issues on neutrons which is
17 something we've been working on in the past few
18 months.

19 So this year the internal coworker
20 model was approved and released in March. And
21 once we decided that the internal model was

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1 feasible, we picked up the issue resolution on
2 the external because that was kind of on a
3 holding pattern pending to see if the internal
4 was going to happen.

5 So the internal coworker model will be
6 known as OTIB-80. It's a plutonium model,
7 uranium model and a gross beta model starting
8 in 1965 which is the end of the SEC Class up
9 until the modern day period.

10 The external coworker model will be
11 known as OTIB-77, currently in draft status.
12 It is a result of an analysis of about 175,000
13 data points and it will consist of a site wide
14 model addressing photon, electron and neutron
15 doses. It will also have a separate model for
16 Area IV and a separate model for the DeSoto
17 facility.

18 The neutron/photon ratio White Paper
19 was developed to provide a bounding approach
20 for unmonitored neutrons for the time span of
21 1956 to 1987.

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1 To do this, we analyzed over 1,000
2 paired neutron and photon measurements around
3 the reactor facilities. There was a lognormal
4 fit data involved which resulted in a
5 neutron/photon ratio of 1.73.

6 The neutron approach that's to be done
7 with the neutron/photon ratio is that it's to
8 be used for a worker that was either employed
9 site wide or had an unknown work location.

10 We've also found that the
11 accelerator, there was a small accelerator
12 facility operated at site only for a short
13 period of time and in cases where a worker could
14 be placed at this facility, the NTA film with
15 a correction factor would actually be useable.
16 But it's not anticipated to be a large part of
17 the neutron approach.

18 As indicated in the NIOSH White Paper,
19 the reactor exposure is to use an N/P ratio and
20 some additional research has indicated that for
21 a situation such as fuel handling or other

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1 nuclear procedures that were done at the site
2 that the reactor N/P ratio is most likely
3 bounding.

4 So our current path forward is to
5 issue the external coworker model to
6 incorporate the neutron guidance and revise
7 TBDs to continue issue resolution with SC&A
8 regarding the coworker models and the neutron
9 approach and address remaining SEC issues and
10 remaining Site Profile issues which regarding
11 to the SEC I think that was mentioned earlier
12 in the SEC updates.

13 There's a question of the year 1965
14 because that was a year that initially
15 qualified for evaluation, however, the Class
16 was only recommended through 1964.

17 So we still owe the Board some kind of
18 decision on what's going to happen with 1965.
19 And with that my presentation is complete. So
20 if you have any questions?

21 CHAIRMAN MELIUS: Okay. Questions?

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1 Yes, Gen?

2 MEMBER ROESSLER: You mentioned not
3 being able to use the Boice database and I can
4 understand why NIOSH data that's put together
5 for dose reconstruction cannot be used for
6 epidemiology. But remind me why it can't be
7 done the other way.

8 DR. HUGHES: Well, we received the
9 Boice database from Boeing and as far as I'm
10 remembering correctly, we were assured that
11 this database was a complete database of all
12 workers, of all internal dosimetry data that
13 there was.

14 However, we also have in our database
15 from the 1960s what's called annual exposure
16 reports. It was reports written by the site
17 that indicated how many workers were monitored,
18 how many urine bioassays they did, how many were
19 positive.

20 And we actually did some kind of
21 quality assurance and we found some

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1 discrepancies that we were not able to resolve.

2 So at this point we were saying that we do not
3 have enough confidence that the Boice database
4 is actually complete.

5 Now, I'm not in the position to judge
6 the epidemiological study that Dr. Boice did,
7 it's just for our purposes, we found some issues
8 that we just said, well, we cannot use this
9 because we're not confident that it's complete.

10 CHAIRMAN MELIUS: Okay.

11 Other -- yes. Henry, you had --

12 MEMBER ANDERSON: No, no.

13 CHAIRMAN MELIUS: Oh, okay. Other
14 questions?

15 MEMBER RICHARDSON: And now that you,
16 if I understand correctly, you received a file
17 which you described as scanned records. And
18 you contracted ORAU to keypunch those records?

19 DR. HUGHES: Well, they were entered
20 into a database format. Each worker at the
21 site had a paper folder that contained the

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1 dosimetry records, the batch readings, the
2 urine bioassay reports from the labs that did
3 the analyses.

4 And during the course of the Boice
5 study, actually, this was all scanned and
6 digitized and it was available in electronic
7 format. So what we got was the scanned raw
8 records of each single worker and that's what
9 we used to extract the internal/external data.

10 It's very much the same thing that we
11 receive for an individual worker during dose
12 reconstruction from the site, except that we
13 receive the entirety of the monitored workforce
14 at Santa Susana.

15 MEMBER RICHARDSON: And when you
16 described it as 14,000 files, is it one file per
17 worker or what makes it 14,000 --

18 DR. HUGHES: Yes.

19 MEMBER RICHARDSON: -- files?

20 DR. HUGHES: Yes. Now, not all of
21 these workers were actually monitored, but

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1 there were that many files. So we had to pull
2 out. Some workers were not actually
3 monitored, but they might have been employed.
4 I'm not exactly sure. There are that many
5 files and each represents a worker, but not all
6 of these did actually contain monitoring
7 records.

8 MEMBER RICHARDSON: Some files were
9 empty?

10 DR. HUGHES: That's correct.

11 MEMBER RICHARDSON: So the
12 contention is that the workforce of radiation
13 monitored workers at the site is 14,000 people?

14 DR. HUGHES: No, it's more on the
15 order of 5,000, I believe. I don't want to say
16 anything wrong. I would have to check my
17 numbers.

18 MEMBER RICHARDSON: And then when you
19 compared that to the annual reports summarizing
20 the number of people who are bioassayed and were
21 radiation monitored in this case now, with the

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1 ORAU data, does it correspond to the
2 expectation?

3 DR. HUGHES: I actually have not done
4 that comparison. However, we do know this is
5 all the site has.

6 MEMBER RICHARDSON: But it's, I mean,
7 I --

8 CHAIRMAN MELIUS: But has it
9 completed?

10 DR. HUGHES: Yes.

11 MEMBER RICHARDSON: Because
12 basically you went back to the scanned files
13 that had been used for the epidemiological
14 analysis which --

15 DR. HUGHES: Yes.

16 MEMBER RICHARDSON: -- your
17 records --

18 DR. HUGHES: Correct.

19 MEMBER RICHARDSON: -- to be
20 incomplete and you reentered them and I guess,
21 it leaves the question now, are they complete?

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1 DR. HUGHES: We hope so, yes. Well,
2 we actually have not gone back and done the
3 comparison. However, what we've done, we've
4 done a comparison with the NOCTS claim files
5 that we received and have --

6 MEMBER RICHARDSON: I mean, it's
7 been -- I mean if some were even --

8 DR. HUGHES: Which is a subset --

9 MEMBER RICHARDSON: -- passed. One
10 is --

11 DR. HUGHES: -- of it, but there was
12 no discrepancy with that, so.

13 MEMBER RICHARDSON: Yes. I mean,
14 one of them is, it's interesting to know whether
15 the effort paid off. Another one that=s --

16 DR. HUGHES: Yes.

17 MEMBER RICHARDSON: -- just
18 interesting. I mean, there have been examples
19 in the past where we thought we had complete
20 data and then we realized that there were gaps
21 and we said there appear to be gaps. And then

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1 further effort went into locating files and
2 there was more, so. I would just, it might be
3 worth --

4 DR. HUGHES: Okay. Yes, the --

5 MEMBER RICHARDSON: Wherever
6 possible trying to reconcile the --

7 DR. HUGHES: Yes, that can certainly
8 be done.

9 CHAIRMAN MELIUS: Okay. Any other
10 questions?

11 MEMBER RICHARDSON: I had a --

12 CHAIRMAN MELIUS: Oh, go ahead.

13 MEMBER RICHARDSON: -- another
14 question. Because the external file had
15 175,000 data points and the neutron to photon
16 ratio was derived from 1,180 paired
17 measurements. So is my understanding that of
18 the 175,000 --

19 DR. HUGHES: No, sorry. That's two
20 completely different things. The 175,000 is
21 dosimetry readings, batch readings, that sort

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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

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1 they were wearing the NTA film badge and if it
2 had a reading, it would be reported in their
3 file. That is correct.

4 MEMBER RICHARDSON: Okay.

5 CHAIRMAN MELIUS: You set? Okay. I
6 couldn't tell if you were writing something
7 down earlier or had another question. That's
8 why I interrupted anyway. Any other Board
9 Members with questioning? Board Members on
10 the phone?

11 If not, I have one comment. First of
12 all, thank you for a very good succinct summary
13 of a long period of time. So it was helpful.

14 One thing I'd say, since, as you know,
15 we're as a Board and NIOSH are dealing with the
16 evaluation of coworker models, and I think it
17 would be helpful as the Work Group and SC&A and
18 NIOSH address these coworker models here, at
19 least keep in mind the kind of implementation
20 guidelines we have.

21 So I just don't want to have to

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1 backtrack on this. So, again, I don't want to
2 sort of hold you to criteria that you haven't
3 seen yet.

4 DR. HUGHES: I have been warned, so.

5 CHAIRMAN MELIUS: Okay. Okay.
6 Okay. Well, not as much a warning as a request.

7 DR. HUGHES: Yes.

8 CHAIRMAN MELIUS: Do the best that
9 you can without having to -- I don't think it
10 affects it, it's as much as I think what you
11 present going forward and so forth. So thank
12 you. Okay. Now, we'll hear from John Stiver
13 from SC&A.

14 MR. STIVER: Thanks. Good
15 afternoon, everybody. I'm John Stiver from
16 SC&A and I'm going to be giving our and the
17 Board's perspective on the various activities
18 that have taken place since the initiation of
19 the TBDs and the reviews and the SEC petitions
20 and so forth since 2006.

21 The first half of the slides really

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1 deal with kind of a timeline of the activities
2 that have happened. It's a very convoluted set
3 of findings and activities, as anybody who's
4 tried to wade through the transcripts from the
5 meetings would attest to.

6 And then after that, I'm going to go
7 ahead and just kind of give you an idea and let
8 you know where we are and how we got there.
9 Kind of give you a thumbnail sketch of what we
10 really believe the issues to be and then where
11 we're headed from there.

12 Lara had given you some of this
13 information. 2006 and 2007, the Technical
14 Basis Documents were first issued. In January
15 through April of 2006 there were a series of
16 five worker outreach meetings. Those have
17 been incorporated into our Site Profile review.

18 And then in June of 2007, SEC Petition
19 93, which was a 83.13, I believe the initial
20 period was from 1955 through the present,
21 basically, including the post-1987 remediation

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1 period.

2 The report was sent to the advisory
3 Board in February of 2008, discussed by the
4 Board in April and June of 2008 and then in
5 August of 2008, we submitted our review of the
6 Santa Susana Site Profile.

7 And, so, this is somewhat unique in
8 that the Site Profile review was conducted in
9 the midst of ongoing SEC deliberations in the
10 petition process.

11 Our review uncovered a total of 39
12 findings. You can see how they're parsed out
13 in the slides based on the different TBDs with
14 most of the findings associated with the
15 internal dose TBD, Number 5.

16 On August 26th of 2008, ten days after
17 we released our review we had the first Santa
18 Susana Work Group meeting. And it's important
19 to note that all the Site Profile findings were
20 discussed, but none were officially closed.

21 Obviously, within a ten day period,

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1 the petitioners hadn't had time to review and
2 comment on our review. There was the issue of
3 ongoing SEC deliberations.

4 And so the findings really discussed
5 in terms, the potential SEC impact. And those
6 that were determined to be Site Profile issues
7 at that meeting were pended until the SEC issues
8 could be resolved. Excuse me, I've got a
9 little problem with my voice here.

10 The Work Group agreed that SC&A should
11 go ahead and combine some of the closely related
12 findings. This was kind of situation where
13 NIOSH was getting hit from several different
14 angles on one given issue. And so we went ahead
15 and prepared a new SEC issues matrix and
16 condensed everything down into a total of 13
17 findings.

18 These are really a mixture of
19 petitioner concerns, issues that were
20 identified by NIOSH and then some of the
21 combined SC&A findings.

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1 And on April 17th of 2009, we had the
2 second Work Group meeting. Oh by the way, this
3 is the issues matrix, it's the 13 findings are
4 the ones that are still in the issues matrix
5 that we're working from today.

6 NIOSH was tasked with several action
7 items for the next meeting which was held in
8 April of 2010. And during that intervening
9 period there was a great deal of SEC activity
10 that took place.

11 Basically, the Board recommended a
12 Class be added to the SEC based on Petition 93
13 which was from January of '55 through December
14 of '58.

15 And then, in November of 2009,
16 Petition 156, which was an 83.14, which was from
17 NIOSH was kind of fast-tracked. It was,
18 obviously, qualified very quickly. January
19 15th, 2010, sent to the advisory Board. It was
20 discussed at the February 9th, 2010, Board
21 meeting that I believe was here at Manhattan

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1 Beach.

2 And then in March the Board
3 recommended another second class be added to
4 the SEC which was from January 1st, '59 through
5 December 31st, 1964.

6 So the combined SEC's basically cover
7 the period of January 1st, '55 through December
8 31st of 1964. And, obviously, the outstanding
9 SEC issues may impact that 1964 end date.

10 April 2010, a third Work Group
11 meeting, the 13 issues were discussed in
12 context of NIOSH's actions from 2009. Also we
13 presented review of the Rev 0, OTIB 77, which
14 was the external dose coworker data set and
15 coworker model.

16 We found five main issues all related
17 to the appropriateness of the Boice database
18 for coworker modeling. NIOSH had some
19 tasking, obviously, to complete the external
20 and internal dose coworker models and to
21 provide updates to the environmental TBDs.

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1 And we were to review those products as they
2 were made available.

3 And in June of 2014, as Lara's
4 mentioned, NIOSH released their White Paper on
5 neutron dosimetry. We began reviewing that
6 and in October of 2010 we were pretty close to
7 completion.

8 However, that was never finished up
9 because of competing priorities regarding some
10 of the other sites that we're dealing with.
11 And let me get to the next -- here we go. Hang
12 on, I think we missed one.

13 Okay. Basically, although NIOSH was
14 busy, you know, collecting data and putting
15 together these coworker models, there was
16 really no SC&A or Work Group activity since 2010
17 until 2014.

18 And in March, NIOSH released OTIB 80
19 which was the internal dosimetry data set. And
20 this used the Boeing database and abandoned the
21 Boice data set. We commenced our review in

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1 July of this year and we're not getting to the
2 point where we're close to completing that
3 review.

4 There were some brief discussions at
5 the April and July 2014 Board meetings and then
6 the fourth Work Group meeting was a
7 teleconference meeting on October 16th, 2014,
8 in which we kind of tried to jump start the SEC
9 finding resolution process, get reacquainted
10 with everything and NIOSH provided some of
11 their updates on the forthcoming work products,
12 OTIB 77 and the environmental TBD revisions.

13 Where do we stand, the issue matrix,
14 the September 24th update of that that was used
15 at meetings posted on the DCAS website at the
16 URL that's listed here.

17 Only one finding was closed. This
18 was Number 9, which is the question of which
19 areas, whether it was going to be Area IV,
20 Canoga Park, DeSoto and Downey, how we should
21 be considered in the SEC and what were the start

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1 dates for the SEC.

2 And our research, Boeing is up here
3 2005, made it pretty clear that before 1955
4 there really were no radiological activities
5 taking place. It was mostly design and
6 construction.

7 And, obviously, the petition was for
8 Santa Susana, Area IV, so the Work Group felt
9 that we could go ahead and close this one out.

10 There's one open combined finding
11 that depends on the internal coworker model.
12 This is Number 10. The adequacy of the
13 internal monitoring program really subsumes
14 five sub-issues related to the completeness of
15 the bioassay data set and how well it correlates
16 to specific radionuclides.

17 The issue of missing radionuclides,
18 those are really the big ones, and then the fact
19 that there was really no internal coworker
20 model. You've got to keep in mind that some of
21 these findings really date back from 2009, so.

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1 There were four open findings that
2 depended on the review of external coworker
3 models. This is Number 1 and the sodium
4 reactor experience incident in 1959. This
5 issue of maybe a technical shortfall in the
6 external radiation monitoring badges.

7 Number 7, identification of workers
8 with blank radiation exposure records. This
9 is a NIOSH generated issue. Those previous 2
10 were petitioner issues.

11 Number 13, this was a combined SC&A
12 finding and this is all related to the external
13 dose coworker model. Mainly, it subsumes
14 three areas of concern, one that there was no
15 coworker model developed at this point.

16 There was the issue of low energy in
17 thermal neutrons and that was really below
18 about the 500 keV cut off the NTA film. And
19 there were some questions regarding the
20 dosimetry response to low energy photons.

21 There are four findings that are open

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1 that depend on revisions to both the internal
2 and the external coworker models. Now, this is
3 the petitioner issue of uranium fires and how
4 those are going to be treated.

5 The sodium burn pit, this is another
6 petitioner issue, whether the facility was
7 adequately monitored and the records are
8 missing.

9 Number 8 was a NIOSH issue. This was
10 about monitoring of firemen who might have been
11 involved with fires or been around the sodium
12 burn pit when activities were going on there.

13 And then Number 11 is kind of
14 broad-based finding, another combined SC&A
15 finding about incidents in general. So
16 there's going to be some overlap here with the
17 sodium reactor experiment and the sodium burn
18 pit.

19 Three findings dependent on the
20 environmental TBDs. This is the issue Number
21 3 of tritium plumes. The workers may have been

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1 exposed to contaminated drinking water on site.

2 The petitioner issue of insufficient
3 air monitoring, and another combined SC&A
4 finding, Number 12, lack of information on
5 environmental exposures in general.

6 This just kind of subsumes two issues,
7 one being the back extrapolation of stack
8 emission data for the years 1971 to 1999 when
9 the measurements were taken to earlier periods
10 from, in this case, would be '64 through 1970.

11 And then also the contaminated ground
12 water impacting onsite drinking water, which is
13 kind of overlapping a bit with petitioner issue
14 Number 3.

15 Where do we stand now? Our review of
16 the June 2010 White Paper on neutron/photon
17 ratios was submitted on October 23rd. So I
18 think NIOSH has had some time to start looking
19 at that.

20 Now, we're just about done with our
21 review of TIB-80. We'll have that probably in

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1 DOE review within another week or two. We're
2 still awaiting the release of TIB-77 and the
3 environmental TBDs. And so, obviously, the
4 open SEC issues are contingent upon complete
5 reviews of all three of these documents.

6 Our next Work Group meeting is going
7 to be happening, I believe, back to back with
8 the Kansas City plant meeting in January of
9 2015. And that really completes my update.
10 If there are questions, I'll entertain those.

11 CHAIRMAN MELIUS: Board Member
12 questions? Oh, Paul.

13 MEMBER ZIEMER: Sorry. John, has
14 SC&A, to your knowledge, examined any data that
15 tells us where the tritium plume is located and
16 where it's migrated to or has NIOSH?

17 MR. STIVER: That's pretty well --

18 MEMBER ZIEMER: Well, actually --

19 MR. STIVER: -- established.

20 MEMBER ZIEMER: -- it was in the
21 report, but I don't recall seeing it.

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1 MR. STIVER: Yes, it's in the TBDs.

2 It's been pretty well-established where the
3 pluming has -- it's really a matter of were
4 workers monitored for that and who --

5 MEMBER ZIEMER: Well, you
6 mentioned --

7 MR. STIVER: -- might expect --

8 MEMBER ZIEMER: -- the drinking
9 water. I'm really asking what evidence there
10 is that it may or may not have?

11 MR. STIVER: Well, we were --

12 MEMBER ZIEMER: Where does the
13 drinking come from on the --

14 MR. STIVER: Well, there's --

15 MEMBER ZIEMER: -- site and where's
16 the plume?

17 MR. STIVER: To my understanding,
18 there was some of the monitoring wells showed
19 contamination.

20 The ones that were kind of downgraded
21 from the reactors or, basically, a neutron

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1 activation with water would produce the tritium
2 and then that would, you know, flow down grade.

3 However, the drinking water wells, to
4 my knowledge, never really showed any
5 contamination. NIOSH, and you guys can
6 correct me if I'm wrong, but I believe this was
7 sort of a kind of a high-sighted approximation
8 to account for the possibility that there was
9 some intermixing with the aquifers that could
10 have contaminated the drinking water wells.

11 And so there was a great deal of
12 discussion about this, I believe, in 2009 in a
13 Work Group meeting. And we were kind of in
14 agreement with them at the time that the well,
15 I think it was Number 34, was a pretty solid
16 estimate to be used in this.

17 But, you know, once again, until we
18 see the revised TBDs, we really can't comment
19 on the adequacy of that.

20 CHAIRMAN MELIUS: Thanks. Any other
21 Board Member questions? David.

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1 MEMBER RICHARDSON: I just had a few
2 clarifying questions. On one of your slides
3 you said one of the open issues that was related
4 to internal coworker models was insufficient
5 correlation of bioassay data to specific
6 radionuclides. What did that mean?

7 MR. STIVER: Well, and I think that
8 was mainly regarding the gross beta and how that
9 would then be correlated to the fission
10 products. This is an issue, I believe, that
11 was raised back in the Site Profile review.

12 But there was that and I think the
13 bigger issue there was the missing
14 radionuclides. You know, the new model
15 basically looks at plutonium, uranium and then,
16 you know, basically mixed fission products.
17 And so that still leaves some others that really
18 are not accounted for --

19 MEMBER RICHARDSON: Okay.

20 MR. STIVER: -- so.

21 MEMBER RICHARDSON: And then on a

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1 subsequent slide, there were four open findings
2 about the external coworker model and one of
3 them was a Tiger Team report indicating
4 inadequate radiation badges. What do you mean
5 by inadequate?

6 MR. STIVER: I think this was related
7 to, I think, it was post-1987 when there was
8 DOELAP accreditation for the film badge
9 dosimetry programs.

10 And I believe this is a petitioner
11 issue that they were concerned that that might
12 have rendered some of the dosimetry
13 questionable.

14 And we were kind of under the
15 impression at the time that we discussed this
16 that at least, you know, during the previous
17 period that probably wouldn't be an issue
18 really because, you know, it was really more
19 about DOELAP accreditation as opposed to
20 whether the badges had some sort of a
21 technological shortfall.

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1 MEMBER RICHARDSON: Okay.

2 MR. STIVER: But once again, until
3 the --

4 MEMBER RICHARDSON: So this --

5 MR. STIVER: -- TBD's released, we
6 can't really close this out.

7 MEMBER RICHARDSON: Okay. So it
8 wasn't a judgment about adequacy or inadequacy
9 of coverage of the badging program --

10 MR. STIVER: Right.

11 MEMBER RICHARDSON: -- but it was a
12 question about the performance of the badges.

13 MR. STIVER: It was more of a
14 performance issue, you know, with the badges.

15 MEMBER RICHARDSON: Okay.

16 CHAIRMAN MELIUS: Okay. Any other
17 Board Members with questions? I have one.
18 I'm not sure if it's for John or for NIOSH, but
19 I just want to make sure I understand the issue
20 of the 1965 SEC, sort of how that fits into this
21 schedule. It's sort of in the background here.

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1 MR. RUTHERFORD: Yes.

2 CHAIRMAN MELIUS: I can't quite tell.

3 MR. RUTHERFORD: Okay. Well, I
4 wanted to, actually, make a clarification
5 anyway. John said that the qualified period
6 actually extended much farther than that. The
7 actual qualified period for the petition ended
8 in 1965. And so, that's why the remaining year
9 that's open is 1965.

10 CHAIRMAN MELIUS: Yes.

11 MR. RUTHERFORD: Okay. And right
12 now, we don't have an SEC issue that would move
13 that forward to extend that Class or we haven't
14 identified one as of yet.

15 And, so, our position was at the time
16 when we added the Class was up through 1964, we
17 made the recommendation to add the Class, but
18 we'd seen nothing at that time beyond 1964.

19 CHAIRMAN MELIUS: It's sort of
20 bureaucratic, but did we actually close out for
21 '65 and --

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1 MR. RUTHERFORD: No, that's, again,
2 another one of the one's that --

3 CHAIRMAN MELIUS: Okay.

4 MR. RUTHERFORD: Yes.

5 CHAIRMAN MELIUS: Okay.

6 MR. RUTHERFORD: All right.

7 CHAIRMAN MELIUS: Okay. But we're
8 expecting that the work that's ongoing --

9 MR. STIVER: Yes.

10 CHAIRMAN MELIUS: -- with the
11 coworker models, I suspect would address that
12 '65 and I think also if we found issues that
13 would extend beyond '65 as part of the Site
14 Profile review, there are other ways of
15 addressing that through the SEC process, 83.14s
16 and so forth. So it wouldn't be ignored, but
17 we do have to address '65 at some point. Okay.
18 Good. Any other questions? Yes, David.
19 Yes.

20 MEMBER RICHARDSON: Can I? And this
21 is, again, just to help me wrap my head around

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1 the -- there were roughly 14,000 electronic
2 images of paper files with radiation dosimetry
3 data provided and that would be either external
4 or internal dosimetry information.

5 Of those there were five or 6,000 of
6 them which were not blank folders, if I'm
7 understanding this correctly.

8 And this pertains to the radiation
9 dosimetry information for workers at all four
10 sites of which the Boice report says there's
11 maybe five or 6,000 people radiation monitored
12 and maybe 42,000 people also employed at those
13 four sites who are not radiation monitored?

14 DR. HUGHES: I'm sorry. I'm having
15 trouble following. Yes, 14,000 files is what
16 we received, each file representing a worker.
17 Not every worker was monitored at all.

18 Some were only monitored for
19 external, and I think the 5,000 might be the
20 internal number. Some were monitored for
21 external and internal --

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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.

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1 DR. HUGHES: -- entirety of the four
2 sites and the --

3 MEMBER RICHARDSON: So the
4 importance of the coworker models as they've
5 been highlighted as issue here, partly relates
6 to the fact that radiation dosimetry
7 information maybe is available for 5,000 out of
8 48,000 or --

9 DR. HUGHES: Well, not all of these
10 40,000 would be covered under this program.
11 This is the entire workforce that was looked at
12 by Boice who did the entire Rocketdyne,
13 Rockwell International workforce at the time,
14 so --

15 MEMBER RICHARDSON: So that might --

16 DR. HUGHES: -- this is one of the
17 issues that currently only Area IV is covered,
18 but there's also Area I, II and III which, you
19 know, the workforce was in all of these areas.

20 But, however, currently, what's
21 covered under this program is only Area IV, so

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1 you would only look at the workers from Area IV
2 follow-up program. So the 40,000 encompasses
3 all workers at all sites, so.

4 MEMBER RICHARDSON: But going back
5 you had described covered periods, I think, at
6 all four.

7 DR. HUGHES: That is correct.

8 MEMBER RICHARDSON: And so it's not
9 possible that you would need to reconstruct
10 doses for somebody who had a non-covered cancer
11 at any of those --

12 DR. HUGHES: Yes.

13 MEMBER RICHARDSON: -- four?

14 DR. HUGHES: Yes.

15 MEMBER RICHARDSON: Okay. I'm
16 sorry. You know, it's --

17 DR. HUGHES: It's --

18 MEMBER RICHARDSON: -- not easy and
19 I'm trying to catch --

20 DR. HUGHES: -- a complicated --

21 MEMBER RICHARDSON: -- myself up --

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1 DR. HUGHES: -- site --

2 MEMBER RICHARDSON: -- on it.

3 DR. HUGHES: -- and with the
4 different areas, it gets very complicated.

5 CHAIRMAN MELIUS: Okay. Phil, then
6 Brad.

7 MEMBER SCHOFIELD: You know, if you
8 read some of the interviews and stuff, people
9 talk about coming up for Canoga, DeSoto and
10 going into Area IV and back and forth between
11 the different facilities.

12 My question is what kind of
13 documentation? Do they have a guard gate with
14 a very good documentation system to know who was
15 coming into Area IV, who wasn't, where they were
16 coming from or in some cases even where they
17 were going?

18 Because you have these people going to
19 these different facilities, including Area IV,
20 but they might have been stationed out of Area
21 II, DeSoto, Canoga. We don't know how some of

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1 these people went back and forth, but according
2 to their interviews, they did go back and forth.

3 DR. HUGHES: Yes, we're aware of that
4 and as far as I know the dose reconstruction,
5 if there is such a situation, tries to address.
6 But, however, mainly we go by the dosimetry
7 records that are available for the worker.

8 Since we don't assign area
9 monitoring, we assign the dose based on
10 internal/external monitoring or in cases where
11 that's not available, using the coworker
12 models.

13 CHAIRMAN MELIUS: Okay. Brad.

14 MEMBER CLAWSON: I'm trying to
15 understand, a little bit like Phil, the area
16 there because as we saw yesterday how
17 everything kind of runs downhill and I'm pretty
18 sure that the contamination that from some of
19 these went elsewhere.

20 How are we able to just look at Area
21 IV? They had other DOE things going on in Area

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1 I. I'm trying to figure out how we're able to
2 just put our hands around Area IV. What's --

3 MR. HINNEFELD: Well, I can just
4 offer that Area IV, if you're talking about
5 Santa Susana Field Laboratory, Area IV is the
6 covered facility. And we didn't make that
7 decision. And so we reconstruct doses that
8 occur on the covered facility. That's what the
9 statute says.

10 Reconstruct doses that occurred on
11 the covered facility. If that covered
12 facility affected a neighbor, the way the
13 statute stands now, that neighbor has no remedy
14 under our program.

15 MEMBER CLAWSON: Okay. But if you
16 were in Area I doing work for DOE, then that
17 tells me that you've got a problem with the
18 covered area. So how do we remedy that?

19 MR. HINNEFELD: That's another
20 agency's decision.

21 MEMBER CLAWSON: Okay. So that's

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1 the Department of Labor?

2 MR. HINNEFELD: Yes, I guess. I
3 think that's Labor.

4 MR. RUTHERFORD: Let me. And
5 recognize, if we have information that there
6 was DOE work going on, I mean, real information
7 documents that there's DOE work going on, we
8 would provide that to the Department of Labor
9 and Department of Labor would make that
10 decision. We've done that I don't know how
11 many times in the past --

12 MEMBER CLAWSON: Okay.

13 MR. RUTHERFORD: -- so.

14 MEMBER CLAWSON: Right. I'm just
15 wanting to understand how we can parcel that up.
16 Thanks.

17 CHAIRMAN MELIUS: Wanda and then I'm
18 going to close comments because we need to move
19 along here. Wanda, do you have a question or
20 comment?

21 MEMBER MUNN: My comment has to do

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1 with how easy it is to confuse what we're
2 talking about when we speak about this site.
3 When people talk about there being four areas,
4 in my mind I'm thinking four areas are Area IV,
5 DeSoto, Downey, et cetera, Canoga and other
6 people who are talking about four areas are
7 talking about Area I, II, III and IV.

8 And I would hope that we'd be very
9 careful in distinguishing that in the way we
10 talk about these things because it's very easy,
11 I think, to find yourself talking about an area
12 on top of a mountain when someone else is
13 thinking you're talking about an area down in
14 the flats at Downey or someplace.

15 CHAIRMAN MELIUS: Thank you. Now,
16 we'd like to hear from the petitioner, Bonnie
17 Klea.

18 MS. KLEA: Is there anyone here who
19 did not go on the site tour?

20 CHAIRMAN MELIUS: Oh --

21 MS. KLEA: Okay.

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1 CHAIRMAN MELIUS: -- lots of us.

2 MS. KLEA: Anyway, my name is Bonnie
3 Klea and I've met some of you before. And I so
4 appreciate you taking another look at Santa
5 Susana. We have so many workers that have not
6 been paid, a lot of families without fathers,
7 a lot of widows.

8 Anyway, I wanted to tell you a little
9 story. I've been working with EPA for 20 years
10 since I was diagnosed with cancer in 1995.

11 I worked at the SRE and I worked in the
12 nuclear area. Wasn't told what they were doing
13 up there, didn't know anything about nuclear
14 because I was so young. But I was diagnosed
15 with bladder cancer 25 to 30 years after I was
16 up there. And that's second only to lung
17 cancer. Lung is number one, bladder is number
18 two.

19 But I just wanted to tell you a little
20 story from the EPA's historical site review.
21 Anyway, this is the reservoir. Here's Area IV.

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1 The reservoir was built in 1919 to
2 capture the water from Area IV, 1919. There
3 was a burrow, flat -- what am I trying to say,
4 fault. There's a fault that runs from here to
5 fill the reservoir and it was built in 1919.

6 In 1954, we found a memo written by the
7 company saying well, they'll build the reactors
8 there and there's no problem if there's an
9 accident, they'll just divert the water.

10 That's what they did. We had, of
11 course, you know, the partial meltdown in 1959.
12 By 1962 we have records of monitors put in the
13 reservoir with high levels of radiation. We
14 have those records.

15 By 1968, they built big concrete
16 diversion paths for all the drainage from Santa
17 Susana to go directly into the river instead of
18 into the reservoir.

19 By 1969 the reservoir was closed.
20 And that reservoir was water served to everyone
21 in the San Fernando Valley. I don't know how

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1 many millions of people there were.

2 We have a little community right over
3 here called Hidden Lake. In the earthquake of
4 '94, the lake was smelly and dirty and they
5 called in a remediation company to clean it.
6 And they said we can't clean it because your
7 sediment is all full of TCE. So we know stuff
8 got off site.

9 And in the 1959 sodium reactor
10 experiment accident, the workers in Area I all
11 had to have their cars repainted. And we have
12 historical interviews with the workers that EPA
13 did and many comments in there about having
14 their cars repainted.

15 And we just had a meeting, just a few
16 weeks ago, with John Pace, who was one of the
17 operators trying to shut down the reactor. And
18 he said they knew the wind data and they knew
19 the releases were going to go all over the San
20 Fernando Valley and Eastern Simi Valley.

21 And they had to release the gases or

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1 blow up the reactor. And so they released the
2 gases for two to three weeks before they could
3 shut it down.

4 But, anyway, I'm grateful that you're
5 here taking another look at the situation. I'm
6 the one that turned in the drinking water data,
7 went to the Health Department and then to our
8 County and found their records that, indeed,
9 Ventura County and Rocketdyne knowingly at that
10 time, gave us water that was contaminated and
11 they knew it, from the wells.

12 And we were in a drought and also
13 during that drought they started recapturing
14 the Area IV water run-off. This is all the
15 nuclear area. And they piped it up to these
16 tanks up here and used it for every rocket
17 engine test.

18 So not only was that water
19 contaminated, it was storm water run-off, it
20 was used to cool down the rocket test and so
21 whatever was in it was airborne again.

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1 Many of the workers are sick, who
2 worked in other areas. And this is Area IV,
3 across the street was Area III. We had all the
4 maintenance workers over here who would come
5 over and clean up spills and fires.

6 In our audience today we have one of
7 the auxiliary fireman's widow who is here and
8 she'll be talking about how her husband was
9 called into the SRE during the accident.

10 And he went in with a fire
11 extinguisher to put out spot fires, didn't know
12 and he had to decontaminate and bury his
13 clothes. And he's died of cancer.

14 So we have that worker who is not
15 getting compensated because he was an engineer
16 over in Area I. And we had DOE operations
17 everywhere.

18 Over here in Area I we had an oil rig
19 that was a drop tower to test the fuel rods so
20 they could practice dropping them into the
21 reactor. We had DOE workers everywhere.

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1 And I worked up here. I don't
2 remember going through a gate. Once I came in
3 through the main entrance I don't remember any
4 other place where we had to show ID to get into
5 Area IV.

6 And during the SRE accident the
7 workers were all sent home. They were heavily
8 contaminated and so they pulled in workers from
9 all the other areas to come in and to help them
10 shut down the reactor.

11 And they threw all the debris from the
12 SRE out in the back lot. And John Pace should
13 be on the phone today to talk about that.

14 So I can't think of anything else that
15 I'm missing. It's a very toxic site. And we
16 found in one of the canyons, somebody used it
17 as a dump and they had barrels that look to
18 similar to what I've seen at Santa Susana where
19 they took barrels of waste and got behind a
20 board and blew them up.

21 They did that in the burn pit. We

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1 found 55-gallon drums in a canyon right off site
2 that all had high powered rifle holes in them.
3 So there's a lot of history and we're still
4 trying to find out everything.

5 But, anyway, thank you again for
6 coming. I can't think of anything else I'm
7 forgetting. And like I say the workers came
8 from everywhere --

9 CHAIRMAN MELIUS: Yes.

10 MS. KLEA: -- the maintenance
11 workers, the fire department was over here, the
12 cafeteria was here. I have a lady whose mother
13 worked for one of the cafeteria companies who
14 provided food. And so the cafeteria was right
15 next to Area IV.

16 And that company's out of business, so
17 her mom who died of lung cancer can't get
18 compensated for that because they can't find
19 the subcontractor. So I'm hoping that you'll
20 get that SEC moved forward. I'm hoping through
21 the whole DOE period, I think it was '89, not

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1 '87.

2 I even know clean-up workers who are
3 sick just from doing the remediation up there.
4 So thank you and I'm hoping and I'm praying --

5 CHAIRMAN MELIUS: Okay, ma'am.

6 MS. KLEA: -- to help some of the
7 widows. Thank you.

8 CHAIRMAN MELIUS: Thank you. Okay.

9 MS. KLEA: Do you have any questions?
10 No?

11 CHAIRMAN MELIUS: I don't think
12 right --

13 MS. KLEA: Okay.

14 CHAIRMAN MELIUS: -- now. Thanks.
15 Okay. Now, we go into a formal public comment
16 period and so I will have Ted tell you the rules.

17 MR. KATZ: Yes, just --

18 CHAIRMAN MELIUS: These are pretty
19 simple, so.

20 MR. KATZ: Yes, very simple. It's
21 just for those of you who have comment, your

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1 comments -- all of the proceedings of these
2 meetings, including this today, are
3 transcribed and published in a transcript on
4 the NIOSH website.

5 So everything you say, verbatim, will
6 be repeated there on the NIOSH website, so if
7 you have private things you talk about about
8 yourself or about another party, all of those
9 will be captured.

10 The material you give about yourself
11 will be published just as you say it without any
12 kind of redaction and without any editing.

13 If you talk about another person,
14 though, that's not here speaking for him or
15 herself, the things you say about another
16 person may be edited, redacted to the extent
17 they need to be to protect that person's privacy
18 because they're not here to state that they
19 actually want this information released to the
20 public. So just to let you know, that's how the
21 transcript for this will be handled.

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1 CHAIRMAN MELIUS: And I would just
2 add, if there's some private personal
3 information or otherwise that you, or you
4 prefer not to talk about certain issues in front
5 of the group, there are people from NIOSH and
6 from SC&A here who would be glad to talk to you
7 or follow-up and so forth.

8 We're not limited to just what people
9 say in the public comment period. And what we
10 get later can be as valuable and is considered
11 as important in terms of what applies to helping
12 address the issues at that site as what's said
13 in the public comment period. So it's not
14 weighed any differently or treated any
15 differently onto that.

16 How we do this is we do go through and
17 I have a listing and I'm going to go in sort of
18 an initial order of what people did. We will
19 first deal with people that are in the room and
20 then we will go on. We take comments over the
21 phone also and we have some people that are

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1 signed up to do that. But first I'll start with
2 people in the room and the first person I have
3 listed is Charlene Roesch.

4 MS. ROESCH: My husband wrote his
5 occupational history before he passed away.

6 My name is Charlene. I'm the widow of
7 James Roesch who worked at Rocketdyne for Santa
8 Susana for over ten years. He died in 1998.

9 The details of his employment, he did
10 many things up there as are listed in his
11 occupational thing that he did. There was a
12 tab that shows where they have the nuclear
13 contamination and so let me just kind of
14 paraphrase or read a little bit. It's kind of
15 hard, so bear with me.

16 In approximately 1957 he was assigned
17 and trained as an auxiliary fireman. His badge
18 number's 219 which I have with me. They had
19 training sessions monthly and he really felt
20 that he benefitted from that.

21 And moving on to 1959, you all know

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1 about the partial meltdown of the nuclear
2 reactor. He was called in as an auxiliary
3 fireman. He was given a hard hat and a fire
4 extinguisher and told to go extinguish spot
5 fires.

6 He went in the building. He
7 described it as being smoky and twisted and the
8 fire was basically out. He saw a little room
9 with a closed door inside the reactor building
10 and went inside. And there were, he called
11 them like tech guys in lab coats and they were
12 doing something feverishly around this area.

13 He thought so maybe later on, maybe
14 something with the fuel rods, he wasn't sure.
15 But when he went in they yelled at him and said
16 what are you doing in here? And he said, well,
17 I'm looking for spot fires. So they said get
18 out of here, there's no fire here.

19 And he left and he continued his job.
20 And then after the fire was all done, they took
21 the boys to the firehouse and had them shower

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1 and shampoo. He said it was creepy because
2 they watched him do it, gave him coveralls to
3 come home in and told us to wash his clothes,
4 which I did.

5 He was diagnosed with multiple
6 myeloma in 1996. I remember him asking the
7 doctor how do you get this, and they said well,
8 one of the ways you get it is nuclear radiation.
9 And he went oh. And that is one of the covered
10 illnesses that we know about.

11 He had tumors all up and down his
12 spine. It was really advanced by the time they
13 caught it on him. And the X-rays, there were
14 a few vertebrae on his neck, especially, that
15 were just shadows on the X-ray.

16 And they didn't know why he wasn't
17 dead or paralyzed at that point. But he went
18 through major chemo, radiation and then a drug
19 called Aredia, which helped to rebuild bones.

20 And for a while he was basically kind
21 of cancer free for a little bit, but they don't

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1 call it really remission. And then it came
2 back with a vengeance and he died in February
3 of '98.

4 And, basically, been denied
5 compensation because he didn't normally work in
6 Area IV. He was a mechanic in Area I, if I
7 remember. And so every time it would come up
8 again, they'd say oh, you have a wonderful case,
9 you know, no problem, you'll get compensation.
10 And then because he's not an Area IV, it was
11 denied.

12 So I thank you for listening. If
13 anybody has any questions. He wrote his
14 history down and he did a lot of things up there.
15 Then the last page shows an article that was
16 done years ago with me holding his auxiliary
17 fireman's badge which I brought if you want to
18 see it. But it's not contaminated. He didn't
19 have it on that day.

20 And so thank you for your attention to
21 this matter. And I certainly hope that things

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1 happen, not only from me, but I've heard a lot
2 of sad stories from other fireman families as
3 we've gone to many of these meetings and it's
4 hard every time we do it.

5 But if people get compensated or at
6 least get recognized for what they did, it would
7 be nice. So I thank you. Any questions?

8 CHAIRMAN MELIUS: Okay. Thank you
9 for --

10 MS. ROESCH: Thank you.

11 CHAIRMAN MELIUS: -- sharing. And
12 the next person I have listed is Lorraine
13 Kurowsky, is it?

14 MS. KUROWSKY: Kurowsky.

15 CHAIRMAN MELIUS: Yes.

16 MS. KUROWSKY: I have a similar
17 story. My husband started to work in the --

18 CHAIRMAN MELIUS: Well --

19 MS. KUROWSKY: -- area quite --

20 CHAIRMAN MELIUS: -- can you get up to
21 the mic and then start over again. I'm --

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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

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1 of meant. I don't know.

2 Then also they were dispersing a truck
3 and my husband worked with this little guy.
4 Just my husband, he's a big guy, 6'5" and he
5 worked with this little guy who was, what, about
6 5-foot.

7 And my husband was going on the back
8 of the truck lifting these, what they called
9 pigs to take them off of the truck, and making
10 sure that it wasn't too heavy for his coworker.

11 So he says, hey, he says you can handle
12 some of these, but I'll stay up here. And he
13 was handling these pigs that I don't even know
14 what they were.

15 But anyway, he would hand them to him.
16 And when he handed it to his co-worker who was
17 this little guy, he handed it to him and it just
18 went off.

19 And then grabbed this Mr. Waco and
20 took him off the site and washed him down and
21 took his clothes and gave him coveralls and sent

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1 him home.

2 And he did get cancer and die of
3 cancer. But they never touched my husband.
4 They never said anything to him. He says, you
5 know, just go on your business and that was it.

6 And yet they said because he had 22.78
7 he wasn't qualified. Well, he died in '01 -- in
8 '03, I'm sorry. He had '01 in cancer in his
9 pancreas and they said it wasn't part of what
10 the cancer they were looking for, but then
11 again, they said, well, it could have been, but
12 it was always not here not there.

13 And as the other lady that stepped up,
14 we feel sorry for the people that weren't
15 compensated because we did lose our husbands.
16 My children lost their father.

17 And it's just hard. And just
18 thinking we should have been recognized in some
19 way. Thank you.

20 CHAIRMAN MELIUS: Okay. Yes.
21 Again, just if you want to talk to some of the

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1 people here from NIOSH and may be able to do some
2 follow-up on the individual case if there was.
3 I'm not sure how much information they had when
4 they were doing the dose reconstruction. It
5 may be helpful. But thank you. D'Lanie
6 Blaze, is it?

7 MS. BLAZE: D'Lanie.

8 CHAIRMAN MELIUS: D'Lanie, I'm
9 sorry.

10 MS. BLAZE: Yes.

11 CHAIRMAN MELIUS: It's not your
12 writing, it's my eyes.

13 MS. BLAZE: The acknowledgment of
14 Santa Susana Field Laboratories complete site
15 history on behalf of Area I, II and III
16 personnel has been a passion of mine since 2007.

17 I'm very happy that the Presidential
18 Advisory Board on Radiation and Worker Health
19 has come back to Santa Susana Field Lab with an
20 interest in touring Areas I, II and III and
21 that, at last, an extension to the Area IV SEC

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1 is moving forward.

2 We are grateful for your presence and
3 your efforts on behalf of Santa Susana Field Lab
4 personnel. Worker advocates and SEC
5 petitioner and former worker and a site
6 historian were not permitted to go on
7 yesterday's tour of the facility.

8 In lieu of our absence, it was
9 requested that we provide a list of things that
10 we'd have liked to point out to the Advisory
11 Board if we had been on the tour.

12 Each of you were provided with a copy
13 to your guide to sightseeing hot spots of the
14 Santa Susana Field Lab which features a
15 detailed fold-out map of Atomic Energy
16 Commission and Department of Energy activities
17 throughout Areas I, II and III.

18 This guidebook is based on historical
19 documents that were published by Department of
20 Energy, its contractors and other agencies.

21 All information is cited. All

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1 resources are included in their entirety on an
2 accompanying disk. And over 300 worker
3 interviews that were conducted by Department of
4 Energy and the Environmental Protection Agency
5 in 2009 are also included.

6 Upon your review, we are confident
7 that you will find that Areas I, II, and III
8 satisfy legislative criteria that is used to
9 determine a Department of Energy facility under
10 the statute.

11 Currently, Santa Susana Field Lab
12 claimants are denied EEOICPA compensation at a
13 rate of nearly 90 percent, often based solely
14 on an Area I, II or III work location.

15 However, Area I, II and III workers,
16 employees of a DOE contractor, were rotated to
17 Canoga and DeSoto facility regularly.

18 Those are both SEC facilities wherein
19 the SEC covers all workers. It is therefore
20 illogical to exclude Area I, II and III
21 personnel from EEOICPA.

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1 Further, as illustrated in the
2 guidebooks, Atomic Energy Commission and
3 Department of Energy's engagement in nuclear
4 laser and coal gasification research, waste,
5 storage and disposal of Area IV material,
6 personnel who were monitored for radiation
7 exposure, accidents and spills involving DOE
8 waste and construction, modification and
9 integration of new and existing facilities for
10 use by or on behalf of Department of Energy
11 throughout Areas I, II and III of SSFL is very
12 well documented.

13 Again, this documentation has been
14 provided in DOE's own words, from their own
15 published documents. There is no denying any
16 documented history by this agency and its
17 predecessors.

18 And Department of Energy may have put
19 it best in their statement that, "Historically,
20 great benefits have been obtained by separating
21 growing and diverse programs and test

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1 facilities at the Santa Susana Field Lab."

2 It is my sincere hope that you will
3 ardently support and argue for the inclusion of
4 Area I, II and III personnel to EEOICPA in
5 accordance with the legislation and in the
6 spirit of the Act as it was intended by
7 Congress.

8 I wanted to address the question on
9 the tritium plume that was raised after SC&A's
10 presentation. The tritium plume would be
11 underneath the SNAP Area IV Number 59.

12 And Department of Energy acknowledged
13 transport of contamination and tritium to the
14 site wide reclaimed water system and stated in
15 the guidebooks, that you guys have, that the
16 drainage from SNAP Building 59 reached the
17 Silvernail pond in Area III which was the entry
18 point to the site wide water reclaim system.

19 Now tritium has also been discovered
20 in Areas I and II. And there are two documents,
21 specifically, on the disk that you were

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1 provided yesterday that speak to the tritium
2 plume, one by the EPA, the Rocketdyne Santa
3 Susana Field Lab sample analysis report from
4 1989 and the document, Radiation Protection and
5 Health Physics Services, tritium production
6 and release to groundwater at Santa Susana
7 Field Lab. That's on your disks.

8 I thank you very much for coming to
9 Santa Susana and for the opportunity to
10 comment.

11 CHAIRMAN MELIUS: Okay. Thank you.
12 Okay. Is there anybody else in the audience
13 here, who wishes to speak to the Santa Susana
14 site before I go to the phone? Okay. Good.
15 Is there anybody on the phone who wishes to
16 speak to the Santa Susana site or offer
17 comments?

18 MR. PACE: This is John Pace. Can
19 you hear me?

20 CHAIRMAN MELIUS: Yes, we can.
21 Thank you, Mr. Pace. I had you --

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1 MR. PACE: Okay.

2 CHAIRMAN MELIUS: -- on the list
3 here. Go ahead.

4 MR. PACE: Okay. Well, I would like
5 to help Mrs. Roesch out there. She spoke, one
6 of the first speakers. Her husband was a
7 fireman and I was, when she told the story, I
8 was there at the time and at the SRE reactor when
9 her husband through the door to help put out the
10 fire that we had.

11 We had a fire and explosion in the high
12 bay area at the time, pulling out the sodium
13 pump which caused the reactor to go down in
14 1959.

15 And we were trying to replace it. As
16 we was gotten it all lose and a man come out of
17 the down the floor where it was at, came up.
18 And we had a kind of a tent we had covered over
19 to keep the oxygen out.

20 And then when he came through, somehow
21 it allow oxygen in the area where that sodium

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1 was at with the sodium pump and it had a big
2 explosion and a fire on top of that.

3 And that's when Mr. Roesch came with
4 the, you know, fire department to see if he
5 could help us out. And he come through a small
6 room that we had there and into the high bay
7 area.

8 And we yelled at him to get out of the
9 building or out of the deal just exactly like
10 his wife just had told you. And because we was
11 worried because with the explosion and all the
12 radiation that came out of the pump area, it was
13 only three feet from the reactor where we was
14 working.

15 And we was worrying about having other
16 fires here, of more radiation coming up out of
17 the reactor core. So what she tells you is
18 actually true and I'm a witness to that.

19 And I was there on that. That was an
20 incident that I've talked about many times and
21 NIOSH knows about it. It's on the record with

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1 them. But I haven't had anything for evidence
2 to prove to them that this occurred.

3 And I got exposed to a lot of radiation
4 myself on that. Me and three other men, we got
5 blown clear across the room on our tippy toes
6 there trying to keep from falling down.

7 With that explosion we ended up all
8 having about four showers apiece trying to get
9 that radiation and contamination off us when it
10 happened.

11 And then most of them went home in the
12 coveralls, we call redlines, what we wear for
13 protection. And I happened to be lucky and
14 have clothes in my locker I was able to wear
15 home.

16 But I just wanted to be of
17 verification to Mrs. Roesch that I was there and
18 I'll be glad to help her on anything. And I
19 would like to make one, just real quick point,
20 is the radiation that came out of the SRE
21 reactor, and I was there, I was there at the time

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1 of the nuclear accident and afterwards.

2 I was there and my crew had started the
3 reactor up and ran the reactor for the two
4 weeks. That's all everybody talks about.
5 They ran a broken reactor, a reactor that wasn't
6 suitable for running, but we was told to start
7 it back up again.

8 But during that time, a lot of
9 radiation leaked out of that reactor through
10 the fuel elements, the seals around there. The
11 reactor had gotten so hot before we was able to
12 get it shut down on the 13th that it damaged that
13 it was leaking out into the high bay area.

14 So there's lots there that NIOSH needs
15 to learn about and I've already spoke on this
16 before. I don't want to do a lot of talk on it
17 because there's records of it already, but key
18 thing was just for Mrs. Roesch there.

19 I was there and I'll be glad to work
20 with her and help her out on that incident there
21 with her husband. So if there's any questions

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1 anybody would like to ask me that would be fine.

2 And anybody have a question at all or B-

3 CHAIRMAN MELIUS: I don't think right
4 now. But thank you very much, Mr. Pace, for --

5 MR. PACE: Okay. And thank you.
6 You --

7 CHAIRMAN MELIUS: Yes.

8 MR. PACE: And bye, now.

9 CHAIRMAN MELIUS: Sir. Anybody else
10 on the phone that would like to make comments
11 on Santa Susana? Okay. If not, I'm going to
12 go -- I have at least three people that have
13 wanted to make comments, I believe, on other
14 sites.

15 The first one is Terrie Barrie.
16 Terrie, are you on the line? Okay. Terrie, do
17 you maybe have a phone on mute or are we off?

18 MS. BARRIE: All right. Can you hear
19 me?

20 CHAIRMAN MELIUS: Oh, now we can.
21 There you are. Okay.

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1 MS. BARRIE: Okay. Do you hear me
2 now?

3 CHAIRMAN MELIUS: Yes, we can. Yes.

4 MS. BARRIE: Okay. I'll start all
5 over again. Good evening, Dr. Melius and
6 Members of the Board. This is Terrie Barrie of
7 the Alliance of Nuclear Worker Advocacy Groups
8 and I thank you for allowing me to call in my
9 comments.

10 Part of my comment does concern Santa
11 Susana. So I was happy to hear that some of the
12 Board Members and members of the community
13 questioned why Areas I, II and III are not
14 covered under this program.

15 From the oral history I've heard from
16 the workers and their advocates and apparently
17 attested to tonight, it was not uncommon for the
18 workers from Santa Susana to be detailed from
19 one area and assigned to another.

20 It seems common practice with all DOE
21 workers. And as you know, workers assigned to

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1 Areas I, II and III have been denied
2 classification as a DOE worker and are not
3 covered under this program.

4 A month or so ago, I found a Department
5 of Labor final decision which spells out the
6 criteria necessary for which DOL will designate
7 a site as a covered DOE facility.

8 The test needed to overcome is that
9 the claimant or advocate must prove that
10 Department of Energy had use of or controlled
11 the site. I need to emphasize the word or. It
12 appears that Department of Labor has a tendency
13 to ignore that word in the statute.

14 The law states the DOE must have
15 proprietary interest in the facility or have a
16 certain type of contract with that facility.
17 The law does not state DOE must have proprietary
18 interest and a service contract.

19 The final decision states quite
20 clearly what is needed to prove proprietary
21 interest. And I quote, "The evidence must

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1 establish that the MED, Manhattan Engineering
2 District (Department of Energy), had rights of
3 ownership, use or control of the buildings in
4 which the employee worked."

5 D'Lanie Blaze just prepared an
6 excellent guidebook for the Board which gives
7 many examples of the Department of Energy's use
8 of Areas I, II and III.

9 It is my hope that the Board and the
10 affected claimants petition the Department of
11 Labor to designate Areas I, II and III as a
12 covered DOE facility. And I'd be happy to
13 supply the link to that final decision.

14 I'd like to turn now to the issues with
15 the Rocky Flats SEC petition. I want to thank
16 LaVon Rutherford for his offer to discuss the
17 issues and I'm looking forward to our call next
18 week.

19 For those of you who are not familiar
20 with this, here's a brief summary. A man who
21 was assisting a family member with cancer who

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1 worked at the Rocky Flats facility after 1993,
2 which is the end of the current SEC Class,
3 alerted me to a recent release of NIOSH's
4 occupational internal dose document for the
5 Rocky Flats facility.

6 The document states, and I quote,
7 "Because of data issues and limitations, no
8 specific methods to bound doses from 233
9 uranium and 232 uranium had been determined.
10 Therefore, doses to unmonitored RFP workers
11 from neptunium, thorium and 233 uranium and its
12 associated 232 uranium and 228 thorium
13 contaminates cannot be reconstructed."

14 One would think that means since NIOSH
15 cannot reconstruct dose for these elements,
16 that the SEC Class should be extended.

17 Please note there is no qualifying
18 statement that limits the years NIOSH cannot
19 reconstruct those in that document. But
20 apparently, this statement is not enough for
21 NIOSH to recommend to the Board to withstand the

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1 SEC Class for Rocky Flats.

2 It is my understanding that for some
3 reason NIOSH needs to release the White Paper
4 on neptunium, and I might be wrong about this,
5 before making any kind of recommendation to the
6 Board.

7 But if they already know they can't
8 reconstruct dose for these elements, why is it
9 necessary to wait for the release of this paper.

10 I must remind everyone that time is
11 something many sick workers do not have an
12 abundance of. A friend of mine passed away
13 this summer. He did not fall within the
14 current SEC Class.

15 And as for the worker I mentioned
16 earlier tonight, even if the Board recommends
17 tomorrow to expand the Class for the Rocky Flats
18 facility, outside of a miracle that worker will
19 not live to receive the deserved compensation
20 because of the aggressive nature of the cancer.

21 Please keep the deteriorating health

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1 of the workers in the forefront of this process.
2 Thank you again, for allowing me to call in
3 these comments and I look forward to my
4 conversation with LaVon.

5 CHAIRMAN MELIUS: Okay. Thank you.
6 For those of you that weren't part of the
7 emails, there was -- Terrie Barrie and LaVon
8 scheduled a conference call for next week
9 sometime. I can't remember the date, but --

10 MR. RUTHERFORD: Next Wednesday at
11 1:00.

12 CHAIRMAN MELIUS: Next Wednesday to
13 try to clarify that particular issue. Anyway,
14 thank you. The next person I have to be listed
15 is Jeff Schultz. Jeff, are you on the line?

16 MR. SCHULTZ: Yes, I'm here.

17 CHAIRMAN MELIUS: Oh, okay. Go
18 ahead.

19 MR. SCHULTZ: Thank you for the
20 opportunity, everybody, to speak tonight. My
21 name is Jeff Schultz and I'm in Westminster,

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1 Colorado.

2 I'd like to comment tonight on the SEC
3 Petition 192 regarding neptunium-237 exposure
4 at the Rocky Flats plant. My document's
5 recently been made available on the internet.

6 The title of the document is
7 Validation of Rocky Flats Plant Radionuclide
8 Inventory and the Historic Data Using the SWEPP
9 Assay Data and it's dated August 2004.

10 The abstract document states that,
11 "This report presents the results of a
12 descriptive statistical analysis of isotopic
13 characteristics of radioactive waste stored at
14 the Idaho National Engineering and
15 Environmental Laboratories Radioactive Waste
16 Management Complex."

17 In the body of the document there's a
18 section 4.1.4 neptunium. And the document
19 states, "At least some of the SWEPP waste drums
20 contained neptunium-237. However, neptunium
21 quantities are not measured or calculated by

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1 the PAN/gamma system. Neptunium data are only
2 available when the SGRS absolute system is
3 used.

4 Of the SWEPP graphite waste drums,
5 only four were assayed using the absolute gamma
6 system, hence, data on neptunium is very
7 limited."

8 Section 4.2.4 states that,
9 "Measurable quantities of neptunium-237 were
10 found in all but four waste drums for which
11 there was SGRS data."

12 Section 4.3.4 states, "Since there
13 were only neptunium data for 14 mixed metal
14 waste drums, plotting of the histograms is not
15 useful."

16 Section 4.5.4 states no neptunium
17 data were available for organic setup waste.
18 Section 4.6.4, "no neptunium data were
19 available for special setups weight."

20 From this document it's clear that
21 waste shipments to INL were being scrutinized

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1 for the content of neptunium-237 in this 2004
2 document.

3 Further, they were using a
4 statistical approach to guess what amount of
5 neptunium-237 was used from a fraction of data
6 sampled from the drums that were surveyed with
7 the SGRS system.

8 A coworker of ours on a crew in
9 Building 371, who was assigned to survey drums
10 with a Canberra SGS system in 2002,
11 [identifying information redacted] task was to
12 survey legacy drums which had been in storage
13 for many years in the plant.

14 By [identifying information
15 redacted] account some of the drums had no
16 labels, other had labels that deteriorated
17 making them illegible. Some drums were
18 re-labeled with information as to what they
19 thought was in those drums at that time.

20 In the process of surveying the drums
21 with this SGS system, they did a step where they

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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]

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1 also commented that some of the drums
2 [identifying information redacted] surveyed
3 and repacked contained waste from the 1969
4 Mother's Day fire that occurred in Building 776
5 and Building 777.

6 And this is a testament that waste was
7 store in these drums at the Rocky Flats Plant
8 for a very long time. 1969 waste was still
9 sitting in drums.

10 Our workers contend that detection of
11 neptunium at the site was largely missed since
12 this is very weak gamma and it's merely lumped
13 in with the other gamma signatures and it shows
14 up in the total plutonium count.

15 And that they weren't really tasked
16 with looking for neptunium. There was no
17 reason to look for it. Only the real modern SGS
18 equipment that was brought to the site around
19 the year 2000 could distinguish between
20 plutonium and neptunium. Reliable neptunium
21 detection in the old days would have required

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1 the use of a spectrometer.

2 The Rocky Flats plant had many barrel
3 storage areas. Drums were constantly moved
4 around by workers between 90-day satellite
5 storage areas.

6 A shell game was conducted, so that
7 drums in these storage areas wouldn't violate
8 the storage time limit of 90 days in these
9 so-called temporary storage areas.

10 So when the 90 days was up drums would
11 start being moved from one area to another.
12 Materials in suspect corroded drums were
13 repacked into new drums over the years.

14 When a new requirement was instituted
15 to install carbon filters on all the drums to
16 relieve a possible problem of hydrogen build-up
17 in the drums and possible explosions, a project
18 was started and around 10,000 drums were
19 re-lidded with new lids that had a threaded
20 opening where they could install the carbon
21 filter.

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1 Many drums had to be surveyed and
2 repacked over the years to comply with
3 plutonium limits dictated by the waste sites to
4 allow our shipments. So the drums were handled
5 a lot.

6 As we ran out of space in the
7 designated storage areas and because of
8 extended periods of waiting for the website to
9 open and a period of time where shipments to the
10 INL area were curtailed by the governor of Idaho
11 new drum storage areas had to be created because
12 the main drum storage areas were full.

13 So drum storage started being pushed
14 into the process rooms where the people were.
15 And as workers, we had to work around these hot
16 drums and we had to be shielded by these drums on
17 a daily basis.

18 This caused a lot of exposure to
19 employees. Some of these drums contained
20 neptunium as proven by the fact that neptunium
21 is showing up at the waste sites.

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1 I'm in the process of trying to find
2 another coworker who works at the Savannah
3 River plant. He was quoted by another employee
4 as saying that waste shipments received at the
5 Savannah River plant from the Rocky Flats plant
6 were surveyed at Savannah River and they were
7 found to have neptunium in them.

8 And this occurred in the time period
9 of the early 2000s when Rocky Flats was closing
10 and shipping their waste around. When the
11 plant finally closed, the equipment used for
12 the pre-1984 time period when neptunium work
13 was done, that equipment was demolished and
14 removed.

15 In the process of removing this
16 equipment, ventilation duct work that went to
17 this equipment and the work of the equipment
18 itself exposed our workers to neptunium
19 contamination that was left behind.

20 This equipment went into waste crates
21 or into cargo containers ultimately shipped to

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1 the Nevada Test Site. And this material is
2 really only surveyed for plutonium, uranium,
3 and americium. They, again, did not count the
4 neptunium present.

5 I just wanted to ask the Board Members
6 to consider this evidence that Rocky Flats
7 workers were exposed to neptunium-237 well into
8 the 2000s when the plant was closed and
9 demolished and consider extending our SEC
10 further out to the closing date. And thank you
11 again for the opportunity to comment this
12 evening.

13 CHAIRMAN MELIUS: Okay. Thank you.
14 And we will follow-up on this and, obviously,
15 NIOSH is here in the audience, too, and they're
16 actively evaluating Rocky Flats. And also our
17 contractor is here, so this information will be
18 available, obviously, to them for follow-up
19 also. So again --

20 MR. SCHULTZ: Thank you.

21 CHAIRMAN MELIUS: -- we appreciate

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1 the thoroughness of your follow-up. That
2 was --

3 MR. SCHULTZ: Thank you.

4 CHAIRMAN MELIUS: -- helpful. Good.

5 The other person I have listed who wanted to
6 make comments on the phone is Dr. Dan McKeel.
7 Dr. McKeel, are you on the line?

8 DR. MCKEEL: Yes, I am. Can you hear
9 me?

10 CHAIRMAN MELIUS: Yes, we can very
11 well.

12 DR. MCKEEL: All right. Well, good
13 afternoon to the Board Members and all
14 assembled. I'm Dan McKeel. I'm the General
15 Steel Industries and Dow Madison SEC
16 co-petitioner.

17 First off, I certainly will sincerely
18 thank the Board for tasking SC&A to review the
19 Dow Madison Appendix C Revision Number 1 that
20 was issued on April 3rd of 2014.

21 I'd ask that this be done twice and I

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1 certainly appreciate that it now is going to be
2 done. As was stated this SC&A review is
3 absolutely necessary, the first step toward
4 NIOSH issuing a Program Evaluation Report for
5 Dow even though Director Hinnefeld tells me
6 that the PER for that site is being prepared.
7 I don't know how far along it is.

8 But my remarks tonight mainly address
9 processing of a revised GSI Site Profile, which
10 is Appendix BB, Rev 1 that Dr. Ziemer mentioned
11 in his TBD-6000 Work Group report earlier this
12 afternoon.

13 I would note that a GSI Program
14 Evaluation Report based on GSI Appendix BB, Rev
15 1, which was issued June 6, 2014, has been
16 stopped pending release of SC&A's review which
17 was just released a few days ago for Appendix
18 BB, Rev 1.

19 The dose reconstruction Subcommittee
20 at its 10/29/14 meeting declined to make a
21 detailed review of four completed GSI dose

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1 reconstruction cases based primarily on the
2 future availability which was said to be
3 tomorrow by Mr. Mauro of SC&A's review of
4 Appendix BB, Rev 1.

5 So that document was not available for
6 the Subcommittee Members to review. The SC&A
7 memo we're talking about was drafted by Drs.
8 Robert Anigstein and John Mauro of SC&A.

9 The dose reconstruction Subcommittee
10 Members on October the 29th were assured by John
11 Mauro that the SC&A finds were minor and would
12 not require changes in dose reconstruction
13 practices for GSI. SC&A stated the main
14 changes involved language tweaking primarily.
15 And this was also suggested today by Dr. Ziemer.

16 Acting chair Wanda Munn, for the dose
17 reconstruction Subcommittee assured the
18 Members that all dose reconstructions
19 shortcomings and NIOSH four methods had been
20 dealt with from the previous Rev 0 of Appendix
21 BB which came out in June of 2007.

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1 The Board DFO, Ted Katz, admitted that
2 these older methods were now outmoded. And he
3 declared, and I'm quoting him, "This committee
4 is done with these cases."

5 Should this unfortunate decision
6 stand, no GSI completed dose reconstruction
7 will have been reviewed by the DRSC. All of
8 this was really shocking to me because I'd been
9 asking Ted Katz and DRSC chairs for years about
10 these GSI case reviews with completed dose
11 reconstructions without getting any
12 satisfactory answers on why no cases had been
13 reviewed, what the case numbers were et cetera.

14 Anyway, I want to now turn to the
15 comment about my part in Appendix BB, Rev 1.
16 The SC&A review of the revision of Appendix BB
17 also address in part, an extensive critique
18 dated July the 16th, 2014, that I had made of
19 the revised DCAS GSI Site Profile.

20 I received my copy of the
21 Anigstein-Mauro SC&A memo on November the 3rd

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1 and then wrote an eight-point initial reaction
2 memo to all Board and TBD-6000 Work Group
3 Members the same day.

4 My concerns were initially, besides
5 some of the content and the findings of the SC&A
6 report that even though SC&A was reviewing my
7 work as well as that of Dave Allen and NIOSH,
8 my name was not actually mentioned in the report
9 title, the body text or in the references of the
10 SC&A memo.

11 However, they did quote findings of
12 mine, but they refer to me as the GSI
13 co-petitioner throughout.

14 So despite these allusions to my work,
15 my White Paper, which was 87 pages, critiquing
16 Appendix BB, Rev 1, which was posted on the DCAS
17 website for three-and-a-half months before the
18 SC&A review was released was not cited in the
19 text of in the references in their 10/29 GSI
20 Site Profiles review memo.

21 I observed in reading through the

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1 content of the body of the report that SC&A had
2 cherry-picked and briefly mentioned a few of my
3 many objections to the Allen DCAS 6/16/14
4 Appendix BB paper.

5 I equated this tactic to DCAS's Dave
6 Allen's throw them a bone technique. Mr. Allen
7 admitted using this strategy as demonstrated by
8 email for the Hooker Electrochemical site that
9 was obtained by the site petitioner through a
10 FOIA request. DCAS director Hinnefeld later
11 apologized to the Board for these actions on the
12 part of his DCAS personnel.

13 Further review of the 10/29
14 Anigstein-Mauro Appendix BB, Rev 1 review memo,
15 and this is the most important thing I'll say
16 to you tonight, showed that there were eight new
17 SC&A findings.

18 Several of which will require
19 extensive new modeling and dose recalculation
20 by NIOSH. An example, which I also pointed out
21 in my Appendix BB, Rev 1 review was that GSI

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1 radiographers during the radium 226 area were
2 also exposed to the betatron beam and activated
3 high nickel steel castings with respect to
4 photons and betatron beam neutrons.

5 NIOSH had not included those
6 important doses from the betatron to GSI
7 radiographers during the radium 226 era. So
8 SC&A noted they had to be added.

9 Also SC&A differed with NIOSH and Dave
10 Allen on skin beta doses from the betatron and
11 said that those doses needed to be resolved as
12 well, and so on.

13 The remedies and resolution of these
14 eight new SC&A findings on Appendix BB, Rev 1,
15 would likely occupy several more meetings and
16 White Papers to be resolved completely.

17 Please recall the 13 SC&A findings on
18 Appendix BB, Rev 0 from 2007 took seven years
19 until January of 2014 to be considered to be
20 completely resolved by the TBD-6000 chair as
21 stated in his report to the Board earlier this

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1 year.

2 For the record, the correct full
3 citation from my White Paper dealing with
4 Appendix BB, Rev 1 is as follows. The URL, the
5 link to it is
6 <http://www.cdc.gov/NIOSH/ocas/gsi.html>. And
7 this is part of NIOSH docket 140 for the GSI AWE
8 Illinois site.

9 The full citation on the DCAS web page
10 is submission by Daniel W. McKeel, Jr., M.D.,
11 GSI SEC 1005 co-petitioner. And the title is
12 Critique of GSI, Appendix BB, Rev 1 by Dave
13 Allen, DCAS, 6/6/14 and it's a pdf two megabyte
14 87 page file.

15 In light of all this, I feel even more
16 strongly that the Board has been seriously
17 misled by the TBD-6000 Work Group including the
18 SC&A and NIOSH members on the finality of
19 resolution of the original 13 findings of
20 Appendix BB, Rev 0, both leading up to and
21 during the final nine to eight vote for GSI SEC

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1 105 on 12/11/12.

2 And this misleading has continued
3 even afterwards. Even today it is abundantly
4 clear that all GSI Site Profile dose
5 reconstruction findings from the Rev 0 June
6 2007 version are not fully resolved.

7 NIOSH and DCAS have more details to
8 work through. And for the same reasons, I
9 believe the D.R. Subcommittee Members were
10 misled on October 29th by SC&A and John Mauro.
11 The new findings are not all minor and cosmetic,
12 far from it. More dose calculations are
13 required by NIOSH.

14 Finally, I note the SC&A memo was
15 included as a discussion paper for this
16 meeting. During the Work Group reports, Dr.
17 Ziemer mentioned he had seen the SC&A Appendix
18 BB, Rev 1 review.

19 He did not mention that SC&A was
20 tasked by the Board and the DFO to also review
21 my detailed White Paper on that same Rev 1,

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1 Appendix BB document.

2 Finally, I sincerely and humbly ask
3 all Board Members to please read all three
4 papers, Appendix BB, Rev 1 issued 6/6/14, the
5 Dan McKeel critique of Appendix BB, Rev 1 issued
6 on July the 16th, 2014 and the Anigstein-Mauro
7 SC&A memo about Appendix BB, Rev 1 that was
8 issued on October the 29th, 2014.

9 Thank you very much and I appreciate
10 you're letting me address you. Thank you.

11 CHAIRMAN MELIUS: Thank you. Is
12 there anybody else on the line that wishes to
13 make public comments? Okay. If not, I
14 believe that concludes our public comment
15 session and concludes our meeting. So we will
16 talk to everybody again after the holidays.

17 MR. KATZ: Thank you, everyone, for a
18 productive meeting.

19 (Whereupon, the above-entitled
20 matter went off the record at 5:46 p.m.)

21

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