

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

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NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

+ + + + +

SUBCOMMITTEE ON PROCEDURES REVIEW

+ + + + +

THURSDAY
JULY 18, 2013

+ + + + +

The Subcommittee convened at 8:30 a.m., Mountain Daylight Time, in the Shilo Inn, 780 Lindsay Blvd., Idaho Falls, Idaho, Wanda I. Munn, Chair, presiding.

PRESENT:

WANDA I. MUNN, Chair
JOSIE BEACH, Member
PAUL L. ZIEMER, Member*

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ALSO PRESENT:

2

TED KATZ, Designated Federal Official
HANS BEHLING, SC&A*
KATHY BEHLING, SC&A*
ELIZABETH BRACKETT, ORAU Team*
HARRY CHMELYSKI, SC&A*
ROSE GOGLIOTTI, SC&A*
STU HINNEFELD, DCAS
JENNY LIN, HHS
STEVE MARSCHKE, SC&A*
JOHN MAURO, SC&A*
JIM NETON, DCAS
STEVE OSTROW, SC&A*
MUTTY SHARFI, ORAU Team*
SCOTT SIEBERT, ORAU Team*
MATT SMITH, ORAU Team*
JOHN STIVER, SC&A
ELYSE THOMAS, ORAU Team*

*Participating via telephone

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Adjourn

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1 P-R-O-C-E-E-D-I-N-G-S 4

2 (8:31 a.m.)

3 MR. KATZ: Good morning, everybody
4 on the line and in the room. This is the
5 Advisory Board on Radiation and Worker Health,
6 Subcommittee on Procedures Review.

7 Roll call.

8 So conflicts of interest, we're
9 not speaking about any sites where any Members
10 here have conflicts, so you don't need to
11 speak to conflict of interest. Let's just do
12 attendance.

13 Wanda Munn is here to my right and
14 Josie Beach to my left and Paul Ziemer's on
15 the phone. And I'll just check and see if
16 Dick Lemen's on the line. I don't expect him
17 but, are you there, Dick?

18 (No response.)

19 MR. KATZ: Okay. No Dick, but we
20 have a quorum, we have three. So then let's
21 just go on with role call with the NIOSH ORAU

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1 team. 5

2 MR. HINNEFELD: Stu Hinnefeld from

3 NIOSH.

4 DR. NETON: Jim Neton from NIOSH.

5 MR. KATZ: And NIOSH ORAU on the

6 phone?

7 MS. THOMAS: This is Elyse Thomas,

8 ORAU team.

9 MS. BRACKETT: Elizabeth Brackett,

10 ORAU team.

11 MR. SIEBERT: Scott Siebert, the

12 ORAU team.

13 MR. SHARFI: Mutty Sharfi, ORAU

14 team.

15 MR. SMITH: Matt Smith, ORAU team.

16 MR. KATZ: Welcome all of you.

17 SC&A team?

18 MR. STIVER: SC&A, John Stiver.

19 MR. KATZ: And on the phone, SC&A?

20 DR. MAURO: John Mauro, SC&A.

21 MR. MARSCHKE: Steve Marschke,

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1 SC&A. 6

2 DR. OSTROW: Steve Ostrow.

3 DR. H. BEHLING: Hans Behling,

4 SC&A.

5 MR. KATZ: Very good. Welcome to
6 all of you.

7 MS. MARION-MOSS: And --

8 MR. KATZ: Yes, who is that?

9 MS. MARION-MOSS: Lori Marion-
10 Moss, NIOSH.

11 MR. KATZ: Oh, Marion (sic). Lori,
12 I mean. Lori Marion-Moss.

13 CHAIR MUNN: I was just going to
14 ask about you, Lori. Thank you.

15 MR. KATZ: Welcome federal
16 officials, contractors to the feds, this is
17 Ted Katz, the Federal Official for the
18 Advisory Board.

19 MS. LIN: Jenny Lin, HHS.

20 MR. KATZ: And do we have any
21 members of the public on the line that want to

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1 register their attendance? 7

2 (No response.)

3 MR. KATZ: Okay then. Wanda, it's
4 your agenda.

5 CHAIR MUNN: We anticipate
6 following the agenda that's been posted fairly
7 closely, if we can. I'm going to rely on
8 those of you who are out there on the
9 telephone, please tell us if you cannot hear
10 us. Because of our audio situation here, we
11 want to make sure that we are adequately
12 covered. And if you're having any trouble
13 with any of the electronics or LiveMeeting, we
14 need a report-back from you on that as well.

15 I believe that we're going to
16 start today with Stu Hinnefeld. He's going
17 to, I hope, bring us up to date briefly on any
18 progress that's been made with respect to how
19 overarching issues are going to be recorded or
20 if there's any new thinking about how we can
21 follow through with the BRS and overarching

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1 issues, and anything that's transpired since
2 our last meeting.

3 Stu?

4 MR. HINNEFELD: Okay, I'll try and
5 give this, and if I mess it up, Lori can
6 correct me.

7 With respect to the overarching
8 issues, one of the things we wanted to do was
9 make sure we identified what we call an origin
10 document; where did it originate from? And we
11 have done that, Jim actually had done that
12 before. And so we've got what we call an
13 origin document, and we just -- by that, we
14 know that that was a review or something that
15 brought that issue up. It may not have been
16 the first one, but it brought it up early on.
17 We think it's the first time.

18 So we have -- you know, frequently
19 this will be a review of a Site Profile or a
20 TIB or something like that. So we're adopting
21 conventions for how to enter these because we

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1 have certain conventions like when -- in the
2 BRS, when you have a review of a TIB, there's
3 a PDF of that TIB up there that you can review
4 back to. For these overarching issues, it's
5 not quite as easy to have one put out there.
6 And so we're putting up -- I don't know if
7 this is done yet, but we're going to put up
8 like the review.

9 The issue first arose in an SC&A
10 review of a Site Profile, then that review
11 will be in the PDF that's stuck out there
12 because that's where it originated, where the
13 finding originated from.

14 So that was one of the things we
15 were going to do.

16 Other than that -- and I don't
17 know if this has all been populated yet in
18 terms of all these source documents, whether
19 they've all been identified and entered in the
20 database yet, but we will be proceeding and
21 doing that.

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1 Lori, can you give more of an
2 update than that?

3 MEMBER ZIEMER: Wanda, this is
4 Ziemer. Very hard to understand Stu. Am I
5 the only one having that problem? Is it where
6 he's located relative to the speakers?

7 MR. KATZ: He's actually right by
8 the speaker.

9 DR. MAURO: This is John. I
10 agree, I'm having a little difficulty, I'm
11 having to strain. I'm following it, but it's
12 a bit of work.

13 MR. KATZ: Okay. Let's talk into
14 the mic.

15 MR. HINNEFELD: Can you hear me
16 any better now?

17 DR. MAURO: Yes, for me.

18 MS. MARION-MOSS: Yes, that sounds
19 better.

20 MR. HINNEFELD: Okay. So I have a
21 microphone that is not a very good one, then.

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1 I'll try to go back through my
2 update here.

3 For the overarching issues and
4 entering them in the database, we have -- I
5 think we have most of the issues entered. And
6 the origin document, in other words, the point
7 of origin of that particular overarching issue
8 Jim had identified already, and we have that
9 list and we're entering those origins into the
10 database so we know where this particular
11 issue arose, we believe, the first time it
12 came up.

13 In terms of, you know, putting
14 things in the database similar to other
15 findings, when we do -- when there is a review
16 of, say, a TIB or something, and we enter
17 those findings in the database -- SC&A
18 actually enters them -- we have a link to a
19 PDF of the TIB that was reviewed. And for
20 these overarching issues, that's not -- you
21 don't have the same sort of analogue; you

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1 don't have a TIB to put there. So what we've¹²
2 decided we would do to start would be to put a
3 link to the document that originally -- the
4 originating document for the overarching
5 issue. It might be an SC&A review of a Site
6 Profile, for instance.

7 So that is the progress we've made
8 so far. And I don't know exactly how far
9 along we are on populating it. We made these
10 decisions to make those entries to the
11 database, but right now I'm not so sure how
12 far along we are. And I wondered if Lori
13 could give more of an update than that.

14 MS. MARION-MOSS: This is Lori.

15 What we've done so far since the
16 last meeting is basically we've populated
17 Jim's matrix that he provided to us at the
18 February meeting. And if you go to each
19 overarching issue that's in the BRS and you
20 actually click on the document title, you will
21 see that matrix come up. And in that matrix,

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1 like Stu just mentioned, it basically talks¹³
2 about the overarching issue, where it was
3 first identified, and what has been done, the
4 status of that issue. So you'll see that for
5 each one of them, each of the overarching
6 issues.

7 So far, that's all we've done
8 since the last meeting.

9 CHAIR MUNN: So Lori, I'm looking
10 at my document list here under the BRS. And I
11 see under total findings only two postings.
12 There are two findings under oronasal
13 breathing and one finding under workplace
14 ingestion. And the other items don't appear
15 to be populated. Am I looking at the wrong
16 thing? Where can I go to find the matrix that
17 you mentioned?

18 MS. MARION-MOSS: You actually
19 have to go, Wanda, to the overarching filter,
20 which will pull up all seven, I believe,
21 overarching issues.

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1 CHAIR MUNN: Well, I can find¹⁴
2 them, they're all together on the primary list
3 anyway. So I'm looking at that here right
4 now. And all I see, the only entries that are
5 showing on the primary listing are two
6 findings under oronasal breathing and one
7 under workplace ingestion. And I'm just
8 wondering whether there are more that have
9 been populated that are somehow not
10 translating to this main list.

11 MS. MARION-MOSS: No, those are
12 the only ones we've done so far.

13 CHAIR MUNN: Okay, good. That's
14 what I wanted confirmation of. Thank you very
15 much.

16 Anyone else?

17 (No response.)

18 CHAIR MUNN: Any questions,
19 comments or additions?

20 MS. K. BEHLING: Just a quick
21 question about the --

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1 MR. KATZ: Wait, we can't hear you¹⁵
2 very well. Can you speak closer to your
3 phone.

4 MS. K. BEHLING: Okay. Is that
5 any better?

6 CHAIR MUNN: Yes.

7 MR. KATZ: That's better. Thanks.
8 Okay.

9 MS. K. BEHLING: Okay. Just a
10 quick question. Recently I had gone into the
11 BRS and I was actually trying to, I guess, get
12 a list of the PERs that we have been assigned
13 to review.

14 MR. KATZ: Kathy, can you speak
15 up? I don't know if you're using a speaker
16 phone, but it's -- you're fading away again.

17 MS. K. BEHLING: Okay, hold on one
18 second.

19 MR. KATZ: Thanks.

20 MS. K. BEHLING: Is that any
21 better?

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1 MR. KATZ: Yes. 16

2 CHAIR MUNN: Much, yes.

3 MS. K. BEHLING: Okay. I guess I
4 was curious as to why -- or when you go about
5 putting something into the BRS system, I was
6 going to go into the system to look for a list
7 of the PERs that SC&A has been assigned
8 throughout the years. And I believe Steve
9 Marschke indicated to me that just because
10 it's in the BRS system doesn't necessarily
11 mean we've already been assigned to do that.

12 And so what drives you to put
13 something in the BRS system, the PERs?

14 MR. HINNEFELD: What drives us to
15 put something in the BRS? Normally, I think
16 what the process is supposed to be is that
17 when it gets assigned for review, it gets
18 placed in the BRS. Alternatively, there is a
19 place to put things that are available for a
20 review but not yet been assigned.

21 So I don't know. I'm not exactly

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1 sure which category of PER you're talking
2 about.

3 MS. K. BEHLING: Okay. Because
4 what I was trying to do is get a full list of
5 those that have been -- where we have been
6 tasked to review them. And I thought that
7 would be the genesis of them being entered
8 into the BRS system. But at least Steve
9 Marschke said to me that that's not
10 necessarily true, that there could be other
11 PERs out there that, you know, have been
12 issued but that we have not been assigned to
13 review.

14 MR. KATZ: Yes, I would think they
15 would only go on the BRS, Kathy, after we
16 receive a review from SC&A, right? I mean,
17 not when they're tasked?

18 MR. MARSCHKE: I don't think
19 that's true, Ted.

20 MR. KATZ: Okay.

21 MR. MARSCHKE: This is Steve

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1 Marschke. 18

2 I think, basically, if you look at
3 the BRS and you check on total findings,
4 there's a number of documents in there that
5 have no total -- no findings against them,
6 many more--so than documents that were -- SC&A
7 reviewed and had no findings against them.

8 I think at one point -- correct me
9 if I'm wrong, Lori, but at one point, I think
10 NIOSH linked a bunch of -- you know, basically
11 all the documents that they had in their
12 system, they linked them into the BRS. So the
13 documents are -- the documents show up in
14 there, but it does not necessarily mean --
15 like, there's 145 documents in the BRS right
16 now.

17 And as I recall correctly, we've
18 only reviewed a little over 100 and maybe a
19 few more PERs, I don't know, maybe a dozen or
20 so more PERs. So we're talking maybe no more
21 than 120 documents that we reviewed. So

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1 there's a number of documents in the BRS which¹⁹
2 I don't think have any -- have been reviewed
3 by SC&A.

4 CHAIR MUNN: I think you're
5 correct, Steve. Certainly the most recent
6 PERs that have been assigned, I believe, are
7 showing on page 8 of the Board Review System,
8 and none of them have any findings as yet,
9 which we wouldn't anticipate until we get the
10 SC&A report.

11 So I'm not sure how to answer
12 Kathy's question. I'm not sure what triggers
13 the inclusion of a PER.

14 MS. MARION-MOSS: This is Lori.

15 Kathy, I think the answer to your
16 question is, currently, there is no report
17 that will give you a list of the PERs that
18 have been assigned to the committee for -- or
19 SC&A for review as of yet. That's something
20 that we may need to -- if that's something you
21 guys would like to see, what have you, the

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1 committee agrees to do, we can work on doing
2 that.

3 Right now, my understanding --
4 Steve was basically correct, we were just
5 trying to get all the documents into the
6 system. So to answer your question for now,
7 no, there's no listing of all the PERs that
8 have been assigned to SC&A for review.

9 MS. K. BEHLING: Okay. Because I
10 was wondering, those that didn't have any
11 findings associated with them, perhaps we were
12 tasked to do them and we just hadn't presented
13 the report yet or there were no findings or
14 something along those lines.

15 But you're telling me that, no,
16 there are documents out there that we have not
17 been tasked to review yet, so it was just --
18 you know, a question I had because I was
19 trying to get a complete tally of the PERs.
20 But obviously, that's not appropriate to go on
21 the BRS system for SC&A to do that. I think

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1 it would be nice if we were able to but, you²¹
2 know, I'm not trying to burden anyone with
3 additional, you know, items on the BRS system.

4 MR. KATZ: But Kathy, all of the
5 PERs, if you wanted, say, a complete list of
6 the PERs that have been done, those are on the
7 NIOSH website.

8 MS. K. BEHLING: Yes.

9 MR. KATZ: Yes.

10 MS. K. BEHLING: That I was aware
11 of.

12 MR. KATZ: Okay.

13 MS. K. BEHLING: I was just trying
14 to go back and in time and be sure I had a
15 full understanding of all of those that had
16 been assigned to SC&A.

17 MR. KATZ: Okay. Okay. I mean,
18 otherwise, I have that information and John
19 Stiver should have that information, because
20 we tracked what we tasked to SC&A. So you
21 should have that.

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1 MR. STIVER: Yes, I've been²²
2 keeping track of that. And I guess the point
3 being, I mean, I'd be able to give a summary
4 table out of BRS.

5 CHAIR MUNN: It certainly would.

6 MR. STIVER: Some of those without
7 findings, I haven't decided where they're at,
8 so we'll have to backtrack and look through
9 those.

10 MR. HINNEFELD: This is Stu.

11 If I can offer one thing, remember
12 the documents in the BRS, there are two large
13 categorizations. There's the unassigned group
14 --

15 MR. STIVER: Right.

16 MR. HINNEFELD: -- and the
17 assigned group. You know, we could make it a
18 convention that, when it is assigned for
19 review, regardless of whether or not there are
20 findings, you move it into the under Board
21 review. And if you've got a review with no

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1 findings, you could write essentially 23
2 finding that says no findings.

3 MR. STIVER: Yes.

4 MR. HINNEFELD: Or something like
5 that. So that it -- that way you know that
6 it's there, and it's been reviewed and there
7 were no findings on it.

8 Whereas, if something hasn't been
9 assigned to you then you know it hasn't been
10 reviewed, or assigned for review.

11 MR. STIVER: As long as we have
12 something we can --

13 MR. HINNEFELD: That will fall to
14 us. I mean, we can manipulate that. In fact
15 --

16 MR. MARSCHKE: This is Steve.

17 And in fact, Stu, if you'll just
18 basically -- as I mentioned before -- I'm
19 looking at the BRS now. And as I mentioned
20 before, there was 145 documents in the BRS.
21 There are only 139 of them which are for the

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1 Procedures Review Subcommittee. So that may²⁴
2 be -- you know, maybe if -- I don't know why
3 those -- there were six documents that were
4 filtered out and -- from the total inventory
5 when it went through the procedure review
6 committee. And I don't know what the --
7 exactly why they were filtered out. But they
8 -- if they haven't been assigned to the
9 Subcommittee yet. But you know, maybe if --
10 Kathy, maybe if you just look at the Work
11 Group filter, there's 139.

12 Now again, I wouldn't guarantee
13 that all those have been assigned for review,
14 but we can -- but somehow they're filtering it
15 the way -- kind of like the way Stu said. I
16 mean, there's -- the number that is assigned
17 to the Procedures Subcommittee is fewer than
18 the total number in the system.

19 MR. STIVER: Steve, this is John.

20 If you filter by those in the
21 Subcommittee on procedures, you get the exact

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1 same numbers in all the groups. So I'm not²⁵
2 sure that's --

3 CHAIR MUNN: But certainly from
4 this Subcommittee's point of view, I think
5 what Stu suggested with respect to PERs that
6 are assigned is the appropriate path for us to
7 take. Because of whether or not unassigned
8 ones are applicable from the BRS point of
9 view, I guess it's still in my mind an open
10 issue. But certainly anything that's been
11 assigned seems to me should appear on this
12 list.

13 MR. HINNEFELD: Okay. Then I'd
14 like to suggest this. Ted, will you send Lori
15 and me a list of the PERs that have been
16 assigned?

17 MR. KATZ: Yes.

18 MR. HINNEFELD: And we will verify
19 that those are in the reviewed, under Board
20 review part.

21 MR. KATZ: Yes.

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1 MR. HINNEFELD: And John, if you²⁶
2 could let us know of any that were reviewed
3 without findings?

4 MR. STIVER: Yes.

5 MR. HINNEFELD: We will gin up a
6 no-findings finding or something and write it
7 in there, closed. If the Subcommittee's okay
8 with that, we'll enter that as closed.

9 And so then we will bifurcate PERs
10 between ones that have been assigned for
11 review and the ones that have not been
12 assigned.

13 CHAIR MUNN: Right, yes.

14 MR. KATZ: That's easy. And John,
15 if you'll just send me a list and I'll check
16 it against mine and then -

17 MR. STIVER: Okay.

18 MR. KATZ: -- I'll carry through.

19 MS. MARION-MOSS: Thank you.

20 CHAIR MUNN: Do the other Members
21 of the Subcommittee have any comment on that

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1 course of action? 27

2 MEMBER BEACH: No, it sounds good.

3 CHAIR MUNN: Paul?

4 MEMBER ZIEMER: No, yes, that's
5 fine.

6 CHAIR MUNN: All right, fine. Then
7 we'll anticipate that for our next meeting.

8 And do we have any other
9 information or any other discussion that's
10 necessary on the review system right now?

11 MS. MARION-MOSS: This is Lori. I
12 would like to present a new feature --

13 CHAIR MUNN: Good.

14 MS. MARION-MOSS: -- that the BRS
15 offers.

16 CHAIR MUNN: Show us. Please do,
17 Lori.

18 MS. MARION-MOSS: I guess I could
19 better demonstrate it. But --

20 CHAIR MUNN: Do you have access
21 under LiveMeeting?

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1 Steve, does she -- do you know²⁸
2 whether --

3 MR. HINNEFELD: Someone is sharing
4 something on LiveMeeting.

5 MR. MARSCHKE: I think what you're
6 seeing, I don't know, I have my screen up on a
7 LiveMeeting. I don't know, I hope that's what
8 you're seeing.

9 CHAIR MUNN: Right now we've got -
10 -

11 MEMBER ZIEMER: Is that yours,
12 Steve?

13 MR. MARSCHKE: Yes, and now
14 somebody else has taken over.

15 MR. KATZ: Yes, that's fine. That
16 should be Lori.

17 MR. MARSCHKE: I hope so.

18 MS. K. BEHLING: Excuse me, Ted,
19 this is Kathy Behling. I did not get an
20 invitation to the LiveMeeting.

21 CHAIR MUNN: Oh, dear. Can

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1 someone send a copy of the invitation to

2 LiveMeeting --

3 MR. KATZ: Yes, I'll forward mind.

4 CHAIR MUNN: Does anyone else need
5 that information that doesn't have it?

6 (No response.)

7 CHAIR MUNN: All right. Jim and
8 Kathy, I guess.

9 MS. MARION-MOSS: This is Lori.

10 Can you see my desktop?

11 CHAIR MUNN: Yes. We're looking
12 at evaluation of the effect of adding
13 ingestion intakes at Bethlehem Steel. That's
14 the first item on the document title. Is that
15 your screen?

16 MS. MARION-MOSS: I believe so.

17 CHAIR MUNN: Yes.

18 MR. KATZ: Okay. I just sent it
19 to you and Kathy. So you can just click on
20 the link from my forward.

21 I just forwarded it to you, Kathy.

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1 MS. K. BEHLING: All right, thank³⁰
2 you.

3 DR. MAURO: Ted, this is John. I'm
4 still linked into yesterday's LiveMeeting.

5 MR. KATZ: Okay, that's a
6 different one. You just need to --

7 DR. MAURO: Oh, okay. That's
8 closed. That's why I'm -- okay, so I have a
9 different --

10 MR. KATZ: Yes, but I'm just going
11 to forward you mine, John. So just use mine.

12 DR. MAURO: Okay, thank you.

13 MR. KATZ: I'm sending it to your
14 CDC address.

15 DR. MAURO: That's fine. Gone. It
16 should be there in a second.

17 DR. OSTROW: This is Steve Ostrow.
18 I hate to bother you. Can you send it to me
19 also?

20 MR. KATZ: No, of course. That's
21 not a bother.

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1 DR. OSTROW: Thanks a lot. 31

2 CHAIR MUNN: So Lori, is that your
3 control on OTIB-37?

4 MS. MARION-MOSS: Yes. That's me.

5 CHAIR MUNN: Okay.

6 MS. MARION-MOSS: One of the new
7 features that our IT group has provided, and I
8 do believe, Steve, this was a result of one of
9 your previous requests. But up in the
10 document title section, where my pointer is
11 here, you're going to see something new which
12 is a printer icon which was not there
13 previously.

14 CHAIR MUNN: Oh, yes.

15 MS. MARION-MOSS: If you click on
16 that printer icon, another window should
17 appear which gives you a total, a listing, a
18 PDF of all the findings that we have in the
19 BRS for this particular document.

20 CHAIR MUNN: Oh, that's excellent,
21 Lori. That's excellent.

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1 MS. MARION-MOSS: Okay. Just³²
2 remember that the icons that appear under each
3 finding will only list the responses for that
4 particular finding.

5 CHAIR MUNN: That one, right.

6 MS. MARION-MOSS: Not all the
7 findings.

8 CHAIR MUNN: Got it. But that
9 will be -- I'm sure that several of us will
10 stumble with that one, differentiating that.
11 But thank goodness for the ability to list all
12 the findings. That's very helpful.

13 MS. MARION-MOSS: Steve, is it to
14 your liking?

15 MR. MARSCHKE: Yes, that's great.
16 I think that's -- that will be very handy.

17 CHAIR MUNN: Especially for those
18 of you who are manipulating this system. Now
19 that's extremely good. Thank you so much,
20 Lori. Gold star for that one.

21 MR. MARSCHKE: Lori, can you go

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1 back and try all the output? Yes, try that³³

2 Yes. And then -- okay, we have finding one.

3 Can you scroll down? Four pages. Yes,

4 finding -- yes, great. And three --

5 CHAIR MUNN: That's terrific.

6 MR. MARSCHKE: That's great. Yes,

7 that's exactly what we need. That will help

8 out a lot.

9 CHAIR MUNN: And I'm assuming it
10 will print, even. How wonderful. Very good.

11 All right. So is that fully
12 operable now for all of the listings on the
13 BRS, Lori?

14 Lori?

15 MS. MARION-MOSS: That's it.

16 CHAIR MUNN: Okay. So that's now
17 fully operable for any item that we pull up,
18 right?

19 MS. MARION-MOSS: Correct.

20 CHAIR MUNN: Oh, you've populated
21 the whole thing. Thank you very much.

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1 Any others? 34

2 (No response.)

3 CHAIR MUNN: If not, then let's
4 move on to our next item under the system of
5 the findings. And that's the -- our folks at
6 SC&A are going to -- I think John Mauro is
7 going to talk to us about the new document,
8 estimating doses for localized skin exposures.
9 John?

10 DR. MAURO: Yes. I'd be glad to.

11 I assume everyone has a copy of
12 the report that's dated June 13th dealing with
13 the subject. It's relatively brief. And Hans
14 and I both worked on it. And I'll give you an
15 overview of it.

16 As you may recall, this issue
17 regarding the direct contamination of skin,
18 that's the issue, and calculating the doses
19 from that exposure scenario actually
20 originated at the DR Subcommittee level, and
21 it was transferred over as an overarching

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1 issue to the Procedures Subcommittee. ~~So~~
2 that's why it's here.

3 And the issue has to do with when
4 we were reviewing a case, Bridgeport Brass and
5 Harshaw, the two of which are AWE facilities,
6 that are old ones. And one of the issues that
7 came up was a recurring theme was surfacing
8 during these DR reviews and these old Site
9 Profile Reviews for these old AWE facilities
10 that go back to the 1940s, early 1950s, where
11 folks were machining, rolling, handling
12 uranium metal, generating lots of uranium
13 dust, uranium oxide fine particles, perhaps
14 some uranium oxide flakes becoming airborne.

15 And what we noted, one of the
16 comments that I've had for quite some time now
17 is that the dose reconstructions themselves of
18 these workers, when they do the -- let's say
19 it's working with skin cancer. What's usually
20 done is, an estimate is made of the radiation
21 exposure to the skin of a person with a skin

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1 cancer. Based on two methods, one of ~~two~~³⁶
2 methods, one if the person was wearing film
3 badge and had an open window reading, you'd
4 have data on the open window reading, you'd
5 get a non-penetrating dose and you reconstruct
6 the dose using OTIB-17.

7 The other method is a calculation
8 where, for example, we know that if you're
9 dealing with uranium and you're standing close
10 to it, you know, nearby, your skin will be
11 exposed to both the photon exposures, much of
12 which is Bremsstrahlung, but also there's
13 quite a bit of beta coming off that could
14 reach a few feet out. And you could
15 theoretically calculate what the dose is at a
16 distance to the skin from, let's say, a slab
17 of uranium or an ingot. And NIOSH routinely
18 reconstructs skin dose that way.

19 The question that I've raised on a
20 number of occasions is, at least in the very
21 old AWE facilities, there's lots of evidence

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1 that there was a heavy dust loading and also³⁷
2 that there was reason to believe that some of
3 these were flakes, not just fine particles
4 like a five micron AMAD particle. But they
5 were flakes. I think of them as snow coming
6 down. It may not be that bad but, you know,
7 the way -- when you read about Bethlehem Steel
8 and Simonds Saw and these facilities, you get
9 the sense that they were actually visually
10 impaired in some cases from the heavy loading,
11 airborne loading of this material.

12 So one of my comments or findings
13 for these dose reconstructions for people,
14 real people with skin cancer is, did you take
15 into consideration the fact that they -- that
16 the skin could also be exposed from direct
17 deposition of this uranium oxide dust and
18 flakes? And the answer is that they -- well,
19 I can tell you that I've done about 100 of
20 these dose reconstructions and I've never seen
21 that scenario modeled. And that was my

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1 commentary at the DR Subcommittee meeting. 38

2 At the time -- I forget if one of
3 the NIOSH or contractor folks presented an
4 approach for saying, you know, you're right,
5 we don't do that, but we're going to come up
6 and make an offering of an approach for doing
7 this type of calculation. And I actually have
8 in the report, this June 2013 report, quoted
9 directly out. This is the method that NIOSH
10 is planning to use for reconstructing those
11 types of doses.

12 I'd like to point out that this is
13 a lot different than what people often refer
14 to as the hot particle dose, where you're -- I
15 know that Hanford has had issues where some
16 high specific activity particle, ruthenium or
17 cobalt might fall on a person's skin and
18 deliver a very high dose locally.

19 This is different. This is more -
20 - this is a uranium flake which has a very low
21 specific activity. So we're not talking about

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1 enormous localized doses, but we are talking³⁹
2 about doses that are not insignificant and, in
3 our opinion, we felt that should be addressed
4 in the DRs for these workers at these old
5 facilities.

6 Now during the DR Subcommittee
7 meeting, a discussion broke out that --
8 whether that was a plausible scenario. There
9 were folks both on the Board and with NIOSH
10 and their contractors that felt, well listen,
11 we don't think it's that realistic that the --
12 at least these large flakes. Perhaps the fine
13 dust, you know, these five-micron very fine
14 dust that's airborne will settle out, land on
15 a person's hands and face, skin, ears. But
16 this idea of a flake falling and sitting on a
17 person, let's say a one centimeter flake
18 falling and sitting didn't seem to be too
19 plausible.

20 Now all I can say is that, I don't
21 know how plausible that is. But from reading

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1 a lot of the AWE old literature, at least at
2 these very old facilities, it didn't sound to
3 be implausible. Because, visualize grinding
4 and dragging a roller where there's all the
5 sparks, if folks have a part of the Bethlehem
6 Steel, which goes back to 2004, you may be
7 remember the rolling operation and roller
8 number one and the sparks were flying and the
9 flakes were coming off. So it was -- at least
10 conceptually in my mind, it seemed plausible.

11 But there is this question before
12 us now, is that a plausible scenario? Many
13 folks claimed during the meeting that, well,
14 it might have been plausible then, but it's
15 certainly not plausible now because workers
16 are protected, they're covered in hoods, they
17 cover their face and skin. They're surveyed
18 when they leave and they're decontaminated
19 when they leave, and they shower and they make
20 sure that the person is -- does not have any
21 substantial contamination on the hands, face,

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1 skin, et cetera. 41

2 So I would -- so our position is
3 that certainly is reasonable, that that
4 scenario perhaps is not plausible today, or
5 even maybe in the '80s or the '70s. But I'm
6 talking about the large number of workers that
7 fall in the category of what I call old AWE
8 facilities, many of which have gotten SECs for
9 a variety of reasons. And what we have here
10 is old facilities with SECs, they're
11 compensating everyone except people with skin
12 and prostate cancer. So they do a partial
13 dose reconstruction for skin cancer, let's
14 say. And a partial dose reconstruction
15 currently does not include the direct
16 deposition of the uranium oxide dust and
17 flakes on skin. Sort of sets the stage for
18 the issue.

19 And why it's an overarching issue,
20 because it applies to a broad number of sites,
21 at least a dozen sites that I could name,

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1 where that type of scenario may very well have⁴²
2 occurred.

3 And so the first issue that we're
4 bringing up before the Subcommittee is the
5 issue of plausibility. Is this a scenario
6 that needs to be explicitly addressed in the
7 dose reconstruction? I think there's
8 agreement, and certainly NIOSH, please weigh
9 in, that yes, the fine-particle scenario where
10 you have these small, let's say five-micron
11 AMAD dust particles that are airborne,
12 settling down on surfaces, and they could also
13 settle down on a person's, not only his
14 exposed skin, but also any part of his
15 clothing.

16 And I think there's agreement that
17 that is a plausible scenario, and certainly
18 should be included as part of the dose
19 reconstruction for a worker with skin cancer.

20 The question that I think is still
21 a little bit up in the air from a plausibility

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1 point of view is, what about this large-flake⁴³
2 question? You know, is that -- let's say for
3 example, a person has skin cancer on the ear
4 and neck which, by the way, is extremely
5 common primarily because of the sun. We know
6 that. But nevertheless, we have a worker,
7 he's a claimant, he has a skin cancer on the
8 neck or the face or the ear, and you're
9 reconstructing his dose for that scenario. The
10 question is -- and it's one of these old AWE
11 facilities. Do you try to reconstruct the
12 dose to the skin underneath the flake?

13 Now we've done enough parametric
14 analysis of different size/thickness flakes.
15 And the bottom line is, it's certainly -- if
16 it was a flake that could fall and it's on the
17 order of, say, a centimeter, and it's
18 relatively thin but, you know, not five
19 microns, that thick, you can deliver 240
20 millirem per hour to the skin, the basal cell
21 epithelial, right underneath the flake. Okay?

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1 So that is something that's easy⁴
2 to calculate but that's not the problem. The
3 problem is, do you believe that that could
4 occur and -- as a real scenario? And then the
5 question becomes, if you do believe it could
6 occur, what do you put into IREP? You know,
7 so where we -- so we wrote this report -- I'm
8 sort of setting the big picture so you can
9 almost visualize it.

10 I'd like to zero in now and talk
11 about two different scenarios that we address
12 in our report. One is the one where you have
13 these very fine particles that are falling on
14 a person. And I think we all agree that
15 that's a real scenario. And you could
16 actually calculate over the course of, let's
17 say, an eight-hour day, if you know some
18 estimate of the airborne dust loading, and
19 which we usually do from TBD-6000 that gives
20 us that information.

21 So we have that, and we all agree

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1 that we have a pretty good handle on the ⁴⁵
2 deposition velocity of .00075 meters per
3 second. And we also know that the -- you
4 know, it will build up over time. The
5 question is, how long does it build up? Well,
6 one could say it builds up during the course
7 of the day, and here's where the discussion
8 starts.

9 And I think Hans could come in
10 here and help out a bit.

11 The question is, sure you could
12 allow it to build up for, let's say, eight
13 hours. And then you assume it's washed off.
14 And you calculate what the dose is to the
15 skin, the exposed skin, from that buildup of
16 fine uranium dust on the skin over that eight-
17 hour period. Then it's washed off because it
18 goes home, takes a shower or whatever, or
19 showers at the end of the day at work. And
20 then comes back to work the next day and it
21 happens again. And so you start off with that

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1 zero dose again. 46

2 Well, that's, I think, our first
3 issue, that way of thinking about the fine
4 particle exposure scenario. And Hans has
5 written up a very nice piece as the heart of
6 our report describing why we think, that's
7 what I call that relatively simplistic
8 approach to estimating the dose to the skin as
9 adopted by NIOSH in their write-up that's in
10 our report, we quoted it, why there may be
11 some problems with that.

12 Hans, if you wouldn't mind, do you
13 want to take it from here and explain why that
14 scenario, the way NIOSH is approaching the
15 dosimetry might have some flaws?

16 DR. H. BEHLING: Yes. The issue
17 really is one from -- that comes from personal
18 experience. I spent a number of years in a
19 nuclear power plant as the manager of rad
20 health. And one of the recurrent problems
21 were obviously, among other things, skin

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1 contamination. And whenever we had a skin⁴⁷
2 contamination that was verified by research on
3 the way out of the RWP area, every attempt was
4 made to obviously eliminate that contamination
5 as quickly as possible and as efficiently as
6 possible. And there were many, many times
7 when a contamination required many, many
8 washings, and these are washings that are
9 obviously focused washings.

10 We're not talking about taking a
11 shower with your Ivory soap in hand without
12 any concern about scrubbing one particular
13 area of the body that's obviously contaminated
14 but you don't know it. So there's the issue
15 of the concept that every day, after an eight-
16 hour shift, a hundred percent of any
17 contamination is removed.

18 And I also, if -- on the
19 assumption that you may have had a chance to
20 read John's and my write-up on this issue,
21 also John and I have spent years in the

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1 Marshall Islands, and of course there the⁴⁸
2 unique aspect was the activity from fallout
3 that people were subjected to that included
4 the people, the indigenous people of the
5 Marshall Islands. And of course, the one area
6 that John and I studied extensively was Shot
7 Bravo on March 1, 1954 and the consequences of
8 fallout that the people were subjected to as a
9 result of Shot Bravo on Rongelap.

10 And I looked at all the testimony
11 that were documented in behalf of that
12 particular event, and these people were
13 routinely washed over and over and over again.
14 Their hair were -- body hair were shaven off,
15 et cetera, et cetera. And it took many, many
16 attempts to decontaminate people. And I
17 provided some of that information that comes
18 out in one of our reports that John and I
19 wrote in behalf of the Nuclear Claims
20 Tribunal.

21 The other issues -- and so what it

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1 really comes down to is the idea that, every⁴⁹
2 day, somebody walks into his job at a rolling
3 mill station at Bethlehem Steel and then gets
4 contaminated for eight hours. And then he
5 leaves and goes into the shower and a hundred
6 percent is removed is an unrealistic
7 assumption. We know that from experience.

8 The other thing is that the
9 assumption was based upon only contaminated
10 skin that was not covered by clothing. And I
11 also quoted one of the documents that said --
12 NIOSH documents where an assessment was made
13 as to how much potential mitigation clothing
14 does to a surface contamination on clothing.
15 And they concluded that only about 20 percent
16 is removed, meaning that, if a person is fully
17 clothed as we would expect them to be, with a
18 minimum of like a T-shirt and perhaps a pair
19 of pants, the contamination that would deposit
20 on the clothing is not zero in terms of the
21 skin doses underneath that clothing. But it

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1 would, in effect, be about 80 percent. 50

2 Now here's the other thing about
3 clothing. Unlike work that it's reasonable to
4 assume that a person who works at a very hot
5 facility, hot meaning temperature-wise,
6 obviously these rolling mills were either --
7 locations where air conditioning was not a
8 part of their environment, the work was heavy,
9 they were probably very sweaty, et cetera.

10 A person would, in all likelihood,
11 take a shower at least once at day whether
12 it's at work, assuming the facility was there
13 that would allow them to do that, or if he
14 can't, came home and probably took a shower
15 before he had dinner, or, worst case, next
16 morning before he goes off to work. So the
17 timeframe for removal of contamination that
18 would be a hundred percent, of course, would
19 at least be on a daily basis.

20 When you talk about clothing, and
21 I went back and I thought about my

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1 experiences. I am at this point 70 years old⁵¹
2 so I'm old enough to know what kinds of
3 washing machines existed back in the days when
4 these facilities are in question. We're
5 talking about the late '40s, early '50s.

6 And I remember one of the washing
7 machines my mother used, was a top -- open-
8 ended unit that had wringers attached to the
9 side. And these things had a very small
10 volume. And women in those days probably only
11 washed once a week. So it's possible that the
12 person who may have had contaminated clothing
13 may not have had a change of clothing for a
14 whole week, meaning that the exposure from
15 contaminated clothing that he might have worn
16 over and over on multiple days would remain on
17 the clothing and therefore continue to expose
18 them.

19 And only being washed maybe once a
20 week, meaning that the 80 percent dose he
21 would receive on the contamination having

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1 settled down on clothing would be offset by
2 the fact that his clothing wouldn't be washed
3 as frequently as his body would be.

4 So for simplicity, I would say the
5 issue of whether or not the area of the body
6 that may have a cancer is clothed as opposed
7 to bare skin, such as the face, neck or
8 forearms, et cetera, the truth is these areas
9 of the body should be considered exposed to
10 contamination based on the fact that
11 contamination that's airborne settles on
12 clothing would result in exposure that was, in
13 essence, covered. So that's pretty much what
14 we concluded.

15 Also again, I went back to the
16 issue of the Marshall Islanders exposed to
17 Shot Bravo, and one of the key elements that I
18 concluded was the military's attempt, when
19 they were relocated from Rongelap, to quietly
20 decontaminate their physical bodies, they also
21 confiscated their clothing. You can read in

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1 the write-up, multiple attempts were made to
2 decontaminate clothing to give it back to the
3 people from whom they were taken, and it took
4 many washings and inclusive of special
5 treatments such as acid to remove the
6 contamination.

7 So to give an understanding of the
8 complexity of trying to derive a skin dose
9 that involves open areas, uncovered areas as
10 opposed to clothing areas, and as far as I'm
11 concerned, one could probably assume that
12 there really isn't any significant difference
13 based upon what I just told you about the
14 likelihood of clothing being worn multiple
15 days. And the difficulty of removing
16 contamination, not just from the scene but
17 from clothing as well.

18 MR. HINNEFELD: This is Stu.

19 And I'd just like to offer one
20 thing.

21 I'd like to talk for one thing

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1 with respect to what Hans just said. 54

2 As a person with many years
3 experience with uranium processing plant, I
4 don't know if --

5 MR. KATZ: Hold on.

6 MR. HINNEFELD: I don't know if
7 everyone can hear this echo, but it's very bad
8 on our end.

9 MS. MARION-MOSS: It is here, too.

10 Okay. The point I was going to
11 make in response to the previous discussion
12 was, as someone with many years of experience
13 as a RadCon manager at a uranium processing
14 facility, I can't recall any instance when it
15 was difficult to wash uranium off of intact
16 skin. And I would relate that to the
17 difference in specific activity and probably
18 chemical affinity from some fission products
19 for adhesion to skin and hair that uranium
20 doesn't share.

21 So other than that, I mean the

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1 clothing issue, I believe there's some weight⁵⁵
2 to that. But to me, the washing and the
3 incomplete washing I don't believe is relevant
4 for a uranium facility.

5 DR. NETON: Can I chime in too?

6 MR. HINNEFELD: Absolutely.

7 DR. NETON: This is Jim.

8 I agree with Stu's first comment,
9 first of all, but I'd like to talk about the
10 other two -- two of the other issues that were
11 brought up. The first one is the issue of the
12 large flakes. I am of the opinion that it's
13 not really plausible for these large flakes to
14 remain on the skin for any length of time. And
15 I recall, for some reason just recently I was
16 reading, I believe it was a RESRAD-type
17 document that actually did an analysis of
18 residence time, or likely residence time on
19 skin as a function of particle size. I can't
20 recall exactly where I read it, but I think
21 that's something that is worth looking into

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1 because I do believe, as the particles get
2 larger and larger, it's less likely that
3 they're going to remain, you know, on the
4 skin. If somebody is moving around and just
5 air currents and such, it's just not possible,
6 or not likely in my mind. So I think that's
7 something to look into.

8 The third issue about clothing
9 contamination: we have dealt with this in the
10 past. If you recall, way back in the
11 Bethlehem Steel TBD, the workers were adamant
12 that they wore very dirty clothing and wore
13 that clothing for up to two weeks without
14 cleaning. And I just brought up the Site
15 Profile for Bethlehem Steel and we did account
16 for that in that particular TBD. And it was
17 based on the dose rate measured coming off of
18 contaminated clothing at Mallinckrodt. And it
19 was about -- I think we ended up at something
20 like one and a half mR per hour. So that's
21 something else to look into in that area. But

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1 we can't obviously address these issues at
2 this meeting.

3 But I do agree that clothing
4 contamination, to some degree, you know, has
5 some traction. And we have dealt with it in
6 the past, maybe not consistently. That may be
7 a valid point.

8 CHAIR MUNN: So can we work on the
9 -- are you hearing me all right, James?

10 Can we work on the assumption then
11 that NIOSH will have specific responses to
12 some of these comments next time?

13 All right. We will look forward
14 to that.

15 Anything else from SC&A?

16 DR. MAURO: Yes, this is John.

17 There is a couple of more bits of
18 this that I'd like to address, and this is
19 where I could certainly use some help in
20 NIOSH.

21 Let's for the moment --

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1 CHAIR MUNN: Hold on just 58^a
2 moment, John.

3 DR. MAURO: Sure.

4 CHAIR MUNN: We're having trouble
5 with the pickup from the phone.

6 Okay, that's good.

7 MR. KATZ: Okay. So now, John,
8 you can carry on.

9 DR. MAURO: Are we good?

10 MR. KATZ: Yes.

11 CHAIR MUNN: I think we're good.

12 DR. MAURO: Okay. The other part
13 of the question that I'd like to just put on
14 the table, and it has -- actually has more to
15 do with IREP than it does with this dose
16 scenario, and understanding IREP and how it
17 works.

18 In your example that was run for
19 the Bridgeport Brass, what was done was, it
20 turns out that the scenario was, okay, the
21 person's face, arms, neck was exposed and

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1 received and had fine deposited uranium. And
2 the dose was calculated to the skin which
3 turned out to be about some percentage, 14
4 percent, whatever the number was -- I forget
5 the exact number -- of the total surface area
6 of the skin, okay?

7 And in order to do the Probability
8 of Causation, they said, well, if only 14
9 percent of the skin is exposed, what we're
10 going to do is we're going to -- and you get a
11 dose, I think it was 16 millirem per hour from
12 that -- I think it was -- or per day. The
13 actual absolute numbers are really not
14 important; it's the concept. And let's say
15 it's 16 millirem per day. But you're saying
16 that, but that's only to a portion of the
17 skin, 14 percent of his skin.

18 So what NIOSH did is they took
19 that 16 and divided it by eight, you know, and
20 brought it down to two millirem per day as if
21 all the skin of his body now was exposed to

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1 two millirem per day. And that was the input⁸⁰
2 into IREP. Because, as I understand, your
3 baseline that, when you're doing excess
4 relative risk or you do your Probability of
5 Causation, you're basically comparing the risk
6 of cancer from the radiation exposure relative
7 to the baseline risk of getting cancer to the
8 skin anyway from all other causes.

9 So in effect, you had to normalize
10 the skin exposure to what it would be if it
11 was whole-body exposure, I mean all the skin
12 was exposed. And in one respect, I understand
13 that. But in another respect, I'm troubled by
14 it. And I'm not saying I have the answer, but
15 I'll tell you what my trouble is. The way I
16 look at it is, if you have a partial exposure
17 of the skin that, let's say, 16 millirem per
18 day to 14 percent of the skin. Now isn't the
19 real question the Probability of Causation or
20 the excess relative risk, doesn't your
21 baseline then have to be changed?

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1 In fact, for the skin cancer⁶¹
2 doesn't it have to be reduced? Doesn't the
3 denominator in the PoC equation have to go
4 down, thereby increasing the PoC? Because in
5 effect, your baseline is not the risk of
6 cancer to the entire skin of the body, it's
7 the risk of cancer to only the portion of the
8 skin of the body.

9 Now it's a bit of a brain teaser,
10 but -- so it seems to me -- I understood what
11 you did and why you did it. But then I asked
12 myself, no, no, no, the baseline skin cancer
13 that should be in the calculation should be
14 the baseline for that portion of the skin, so
15 it should be smaller. It can't be the full
16 number, the baseline has to be lower. And of
17 course, if you're going to lower the baseline
18 you have -- that means you're going to
19 increase the Probability of Causation.

20 So I could see by the approach
21 that you folks have used, you're going to

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1 underestimate the PoC, because first of all¹₆₂
2 you're reducing the dose when, in fact, if you
3 -- what I would have done is say, no, no, you
4 don't reduce the dose, you leave the dose what
5 it is, but you reduce the baseline which
6 increases. So the dose stays the same, 16,
7 and the baseline goes down because it's only a
8 portion of the skin that you're judging your
9 dose against.

10 And that has been sort of a
11 troubling knotty problem in my mind, and I'd
12 love to hear -- in fact, I called David Kocher
13 about this because David is one of the world's
14 experts on the subject. And I have to say
15 that I'm still confused whether or not the
16 problem that I'm having conceptually with the
17 approach, whether it's valid or not. And I
18 guess I'm looking to Jim and Stu -- can you
19 help?

20 DR. H. BEHLING: John, can I say,
21 that's something that I wrestle with, too.

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1 DR. MAURO: Sure. Sure. 63

2 DR. H. BEHLING: And given what we
3 just talked about, and I gather from Stu in
4 his comments that they're willing to accept
5 the notion that perhaps the skin underneath
6 the clothing is probably impacted by
7 contamination as fair skin which would obviate
8 the need for this whole discussion that you're
9 engaging in. In other words, all the skin is
10 now exposed.

11 DR. MAURO: I agree. But it
12 doesn't go away when it comes to this flake
13 issue. If the flake issue goes away, and it
14 sounds like maybe it will as a plausible
15 scenario, then maybe this is a moot point.

16 But you can understand whether
17 it's a moot point or not, all I can say is
18 that I find it a conceptual problem with IREP
19 that, given that it's a real scenario, that
20 it's a partial skin exposure, not the whole
21 body, the whole skin surface. The way in

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1 which you come at the problem to do the PoC⁶⁴
2 and the way that it was done in the example
3 problem for Bridgeport Brass did -- you know,
4 Hans, I understand you're right, that might go
5 away.

6 But let's say it doesn't go away,
7 okay? Am I thinking about this incorrectly,
8 how you do PoC under those circumstances?

9 MR. HINNEFELD: John, this is --

10 DR. H. BEHLING: That's something
11 with regard to the issue of what may have been
12 done to David Kocher. The fact of the matter
13 is, if you were to do a revised baseline for
14 cancer, it would probably not be proportional
15 to the surface area of the skin. Because I
16 believe that if you look at empirical data
17 involving the medical data that may be
18 available out there on skin cancer, the
19 overwhelming majority of cancer is probably in
20 the natural population that has nothing to do
21 with radiation. It's probably the result of

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1 sun exposure, and those skin cancers would⁶⁵
2 probably ultimately be confined to the areas
3 that are naturally not subject -- that are not
4 covered, namely the hands and arms, the face,
5 the ear lobes, the neck, et cetera, et cetera.

6 So it would probably not be a
7 proportional percentage value of total skin
8 because, as I said, if you look at baseline
9 values in the natural population, those skin
10 cancers would probably be dominated by areas
11 of skin, not just the nose, face, ears, neck
12 and hands.

13 MR. KATZ: John, can I jump in for
14 just a second? Jim Neton wanted to say
15 something and he hasn't had a chance to weigh
16 in yet.

17 CHAIR MUNN: Thank you, John.

18 DR. NETON: Thank you. Hans was
19 actually making the same -- having the same
20 discussion that I was going to make about the
21 baseline risk. And I actually think it may be

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1 unknowable, the data -- 66

2 DR. MAURO: Okay.

3 DR. NETON: -- probably aren't
4 even there.

5 But getting back to John's
6 original point, it still would apply even if
7 we did accept clothing contamination, because
8 there -- it's possible you'll have instances
9 where you'll have measurements of skin
10 contamination on a person that you could use
11 in a dose calculation. And in that case, if
12 you look at our TIB-17, it actually provides
13 three alternatives to doing a skin dose
14 calculation.

15 The first situation is, if the
16 contamination is directly deposited on the
17 site where the skin cancer occurred, then we
18 would not adjust the risk value for the very
19 reason that John mentioned. Is that we
20 believe there was competing -- a competition
21 between the background incident rate and the

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1 risk value being reduced. Those two offset⁶⁷
2 each other roughly. We don't know if that is
3 really true, but it made some common sense to
4 us way back when we wrote TIB-17. So in that
5 case, I think we're doing the best we can for
6 the claimant in that scenario.

7 In the case where the skin
8 contamination was known to be not over the
9 site of the skin cancer, then we would
10 obviously assign a PoC of zero because they --

11 DR. MAURO: Yeah.

12 DR. NETON: -- received no dose.

13 Now in the case where you have
14 skin contamination with a cancer of an unknown
15 location, in other words you don't know
16 whether the cancer was covered -- was directly
17 under the contamination or not, the TIB
18 provides for a distribution to be assigned. A
19 log-normal distribution with the central
20 estimate being the adjusted risk value, that
21 is divide the risk value by the percentage

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1 ratio, the percentage of the skin that's
2 contaminated to the whole body. And the upper
3 end of that distribution would be the full
4 dose making no adjustments. And that's the
5 way it's currently done.

6 So it seems to me that the one
7 that you reviewed, John, may have been done
8 improperly, even according to our own
9 procedures.

10 DR. MAURO: Okay.

11 DR. NETON: So that's where our
12 current position stands. I do agree that
13 there's room for discussion and further
14 analysis of this. I intend to take this up
15 with SENES to some degree, because they are
16 our experts in this area, we're not. And you
17 know, ask some basic questions, you know, like
18 first of all, even if you were to adjust for
19 baseline cancer risk of areas exposed, is that
20 even doable? And if not, then what are your
21 other options.

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1 DR. MAURO: Hey Jim, thank you. 69

2 My main goal here today was
3 typically to communicate what was on our mind,
4 the things that were troubling us, not that we
5 had answers. We just didn't understand
6 completely and -- whether or not -- you know,
7 and it sounds like you folks understand our
8 concerns. And it sounds like you are going to
9 address them. And for the -- and then we'll
10 all hear a little bit more about, you know,
11 how to deal with -- right now, I guess you do
12 have your procedure and the -- there's a part
13 of that OTIB-17 that talks about some of the
14 things you mentioned.

15 And my concern was this business
16 of the baseline and the -- and how do you deal
17 with that. And of course, the point that Hans
18 made regarding the clothing. I think that
19 once that's on the record, that is, you folks
20 take a position and answer our concerns, for
21 example, document why you feel the wash-off

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1 will work, the -- and the degree to which you
2 can address the accumulation in the clothing,
3 I think we get that on the record and then we
4 move on.

5 But this has been very helpful and
6 thank you for all the time you gave us on
7 this.

8 CHAIR MUNN: And it's our
9 assumption that we'll have a report from NIOSH
10 responding to this paper at our next meeting,
11 right? Is that --

12 MEMBER ZIEMER: Wanda, could I ask
13 another question on this? And I was going to
14 make a comment.

15 CHAIR MUNN: Certainly, Paul.

16 MEMBER ZIEMER: One thing about --
17 and this is Ziemer, Court Recorder.

18 For an argument about skin, which
19 is, in many respects sort of different from
20 the rest of the body, because it's all over
21 the place, it's very easy for us to think

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1 about stochastic effects such as in the
2 Marshall Islands where there is, you know, a
3 one-to-one relationship where the fallout hits
4 the skin and you've got skin burns.

5 But where you have non-stochastic
6 effects -- I got it reversed here.

7 DR. MAURO: Reversed, yes.

8 MEMBER ZIEMER: I reversed it.

9 But where you had non-stochastic -
10 - or where you have stochastic effects, and
11 the skin is an organ, to what extent you're
12 going into a one to one relationship between
13 the base is actually delivered versus where
14 the cancer is? The skin is actually not just
15 a surface that has some depth and so there's a
16 volume there as well.

17 And is there any good research
18 that shows that the cancer would appear in the
19 immediate vicinity of where the dose is
20 delivered for a stochastic effect on the skin?

21 DR. NETON: Paul, this is Jim.

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1 MEMBER ZIEMER: The skin of the
2 whole body is an organ --

3 DR. NETON: I think there's
4 probably some very good animal data on that.
5 They've done research for years with pigs and
6 radiation, localized radiation. And I'm not
7 aware of what's called, I guess, these
8 abscopal effects where cancers pop up
9 somewhere else other than the radiation site.
10 And I don't --

11 MEMBER ZIEMER: And then that --
12 there's sort of an argument it could be
13 cancers crop up somewhere else from where the
14 dose is delivered.

15 DR. NETON: And I don't know, but
16 my guess would be that I don't think that
17 there's very -- a good body of evidence that
18 would support that. But it's something that
19 would have to be looked at in more detail.

20 DR. H. BEHLING: Yes. And with
21 regard to the Marshall Island experience, skin

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1 cancer was really not the major issue there.⁷³

2 think the doses were in the thousands of rads.

3 And most of those, the approach
4 was they were in contact with the
5 contamination on their feet. And they don't
6 wear shoes most of the time --

7 MEMBER ZIEMER: Right, those are
8 direct burns and so on.

9 CHAIR MUNN: Somewhat different
10 circumstance than what we're facing with the
11 current question.

12 MEMBER ZIEMER: Okay, yes, I just
13 wanted to ask. You know, intuitively, we
14 should -- there should be a one to one
15 relationship between where the dose was
16 delivered and where the cancer occurred. But
17 I always have trouble on the skin, you know,
18 as an organ, and that also goes to this issue
19 of whether you approximate it or not in the
20 way that John was describing.

21 DR. NETON: Paul, you raise a good

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1 point. And it's always interesting. We treat
2 all skin cancers as independent events, and
3 we've had independent primary cancers, we've
4 had I think -- I don't know Stu might know
5 better, but I think there's cases where we've
6 had 100 or more individual skin cancers all
7 treated as individual primaries.

8 And of course, at each iteration,
9 the PoC, the dose required to get to a PoC of
10 50 percent goes down substantially as you go
11 up and up.

12 MEMBER ZIEMER: Yes. But we don't
13 really do that with other organs.

14 DR. NETON: Well, we do --

15 MEMBER ZIEMER: Maybe we do with
16 blood --

17 DR. NETON: You can have multiple
18 cancers in the same organ. And if they're
19 listed individual -- as primaries, you can
20 have two primary colon cancers, for example,
21 quite easily.

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1 MEMBER ZIEMER: Right. Right. 75

2 DR. H. BEHLING: But I think
3 coming back, using a parallel relationship
4 between radiation and sun exposure, abscopal
5 effects involving sun exposure and skin cancer
6 is not likely because, in most instances, when
7 you do have skin cancers, I've had multiple
8 skin cancers removed and they all happen to be
9 in areas that were maximally exposed to
10 sunlight. And so I believe that, you know, a
11 sun exposure and radiation exposure probably
12 would be very parallel in terms of which cells
13 are affected and which ones are most at risk.

14 MEMBER ZIEMER: Right.

15 MR. SMITH: This is Matt Smith
16 with the ORAU team.

17 For Dr. Ziemer's question, there's
18 information in the IREP technical document. So
19 that's one of those baseline documents back
20 from the 2002 timeframe. Page number is 8,
21 and this is where it is discussed that skin

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1 cancers tend to occur within the field of
2 radiation exposure. The citations there are
3 based on studies of situations where people
4 were exposed under medical exposure
5 conditions.

6 CHAIR MUNN: Thank you, Matt.
7 That's helpful.

8 MR. SMITH: So there's about, I
9 think, three or four citations there.

10 CHAIR MUNN: Good.

11 MEMBER ZIEMER: Okay, thank you.

12 MR. SMITH: You bet.

13 CHAIR MUNN: Does that satisfy
14 your question, Paul?

15 MEMBER ZIEMER: Yes, I think so.

16 CHAIR MUNN: Good. Then any other
17 questions before we return to the question of
18 when we might have a response from NIOSH?

19 MR. HINNEFELD: Well, we're -- I
20 don't think I can give you a schedule today.
21 We'll have to work this into the resource

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1 loading with the rest of the tasks on the
2 project and weigh it against the resources
3 available.

4 CHAIR MUNN: We'll continue to
5 carry it on the agenda then.

6 MR. HINNEFELD: Sure. And we'll
7 let you know if we have anything to say as the
8 next meeting approaches.

9 CHAIR MUNN: Good. Good. Thank
10 you much, Stu.

11 Any other comment or question with
12 respect to this particular issue?

13 (No response.)

14 CHAIR MUNN: If not, thank you
15 all. Thank you SC&A for the paper. And thank
16 the rest of you for the discussion and the
17 additional information. Thanks, Matt.

18 The next item on our agenda is
19 PERs 31 and 30. We were going to have a
20 report from SC&A on our status?

21 MS. K. BEHLING: Yes, Wanda. This

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1 is Kathy Behling. 78

2 And this -- I'm going to start
3 with PER 30, and that was sent to Subcommittee
4 on July 1st of this year. I hope you'll have
5 that report. And I'll just preface this that
6 that report was done by Ron Buchanan and he
7 was not available to be on the line with us
8 today. So I'm going to try to walk you
9 through that.

10 CHAIR MUNN: Thank you, Kathy.

11 MS. K. BEHLING: Okay. And just
12 as a reminder, obviously our PER process
13 considers five sub-tasks. But this initial
14 report, we only include three sub-tasks. And
15 I will try to walk through those.

16 PER 30 was issued as a result of
17 the Savannah River Site Technical Basis
18 Document revision. The report was initially
19 put out in July of 2003, and as of April 2005
20 there were three revisions.

21 And then on the -- on December

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1 18th of 2007, PER 30 was issued because ~~of~~⁹⁹
2 changes to those revisions that would cause an
3 increase in dose.

4 I will mention also that there is
5 a -- there was a change to the occupational
6 medical dose section in 2009. Just that
7 particular section, which would constitute a
8 Rev 4. And as part of this review, we'll
9 discuss a little later, we looked at that
10 also.

11 So to start with, the issues that
12 changed in the revisions and increased dose,
13 there were four separate issues. And
14 primarily those issues in summary, between Rev
15 0 and Rev 1, for the urine sample data,
16 generally the guidance in Rev 0 was to assume
17 a daily rate of 1.4 liters per day for the
18 urine sample. However, many of the actual
19 samples that were submitted, where the
20 activity was listed as 1.5 liters per day. So
21 it was assumed that, if it was 1.4 liters,

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1 that would result in a lower assigned intake,⁸⁰

2 And as I said, that was corrected in Rev 1.

3 The second issue has to do with
4 environmental data. And the environmental
5 plutonium intake in Rev 0, if you assigned a
6 type-M plutonium, you would -- Rev 0 would
7 have a value that was actually too high. And
8 if the values were assigned as a type S
9 solubility, the values were listed -- that
10 were listed initially in Rev 0 were too low.

11 So this requires that NIOSH go
12 back and reassess all the DRs that use the
13 type S solubility for plutonium between Rev 0
14 and Rev 1.

15 The third issue, also an
16 environment issue were -- had to do with the
17 work hours that were assumed. In Rev 0, it
18 was assumed that there were 2000 work hours
19 per year, and in Rev 1 that changed to 2500
20 hours per year. That's environmental also.

21 And then finally, the fourth issue

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1 that created an increase in dose was, again,⁸¹
2 environmental ambient intake. There was a
3 table in Appendix B of the Site Profile where
4 the maximum site-wide ambient intakes, that
5 the headings between the plutonium and the
6 uranium were transposed. And so again, that
7 was corrected in Rev 1.

8 But in addition to that, there was
9 a dose reconstruction tool that was issued
10 about ten days after the Site Profile was
11 issued. And the tool, the workbook was
12 correct. But NIOSH did go back and look at
13 all of the cases that were done under Rev 0,
14 even though the workbook would have corrected
15 that.

16 If we move on to our sub-task 2,
17 which is in Section 3 of our report, here is
18 where we look at the specific methods for
19 corrective action that were taken.

20 Now in the case of Savannah River
21 Site Profile, SC&A has reviewed the Site

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1 Profile in the past. There was a PER 2 that⁸²
2 was put out back in 2003 that corrected an
3 error regarding surrogate organs assigned for
4 the medical dose. And we looked at that, we
5 reviewed that, that PER 2, and we found it to
6 be adequate.

7 We also did a review of Rev 2 of
8 the TBD in 2005 and, in fact, Ron included an
9 Attachment A to this PER review that just
10 summarizes our findings. They really are
11 outside of the scope of this PER 30.

12 We also looked at a paragraph-by-
13 paragraph comparison between Rev 0 and Rev 1,
14 and so on, and we did not find any other
15 issues or any other items that might increase
16 the dose. So we agree with NIOSH in the fact
17 that these four issues that were addressed are
18 appropriate.

19 I'm going to move on to our first
20 finding and I'll come back then to our fourth
21 evaluation here.

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1 But our first finding has to do
2 with something that was stated in PER 30, and
3 it's maybe just a cautionary issue in and a
4 documentation issue. But NIOSH stated in
5 there that there were placeholders or reserved
6 -- pages that were reserved where they did not
7 do certain dose reconstructions if they found
8 that they didn't have a methodology for doing
9 those reconstructions at the time. So they
10 were -- those particular cases were set off to
11 the side and not done until there was a
12 methodology.

13 And I guess the first question
14 that we have, phrasing a concern is, is there
15 documentation available to verify that those
16 claims were held in reserve and were not
17 completed? And just so that we can convince
18 ourselves that none of these cases slipped
19 through the cracks. That was our first
20 finding.

21 Now I'll go back and, as I said,

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1 this may go a little bit beyond what -- the ⁸⁴
2 extent of PER 30. But we also looked at this
3 final revision to the medical dose. And like
4 I said, that was done before in 2009. And in
5 looking at that, we realized that there were a
6 lot of changes being made, significant changes
7 that would increase the dose.

8 And our second finding, which
9 you'll see on page 11 of our report is just to
10 be sure that there will be a PER issued to
11 cover the increase of the dose associated with
12 the occupational medical section that was
13 revised in 2009. And Ron has listed here
14 several of the issues that were changed and
15 that could increase the dose.

16 In the past, previously NIOSH, in
17 their publication records section up front in
18 the -- their Site Profiles, they used to
19 include a statement in there when there was a
20 change made that would prompt a PER. They
21 included that kind of a statement, that there

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1 was training required and that this change⁸⁵
2 would increase dose, perhaps, and that a PER
3 would be issued. But that statement is no
4 longer always being included, and it was not
5 included in this 2009 revision. So we're not
6 sure -- we believe that there should be a PER,
7 but we just -- we're not sure that that's been
8 initiated yet. I don't believe it has been
9 initiated yet, and we wanted to make sure that
10 that does happen.

11 And then finally, we looked at the
12 corrective action plan and Ron went through
13 each one of the four corrective actions. And
14 for each of the four issues, we concur with
15 NIOSH's approach, and we didn't find any
16 additional errors as we cited on page 12 under
17 Section 3.2.1.

18 Finally, we look at the -- how
19 NIOSH identified a number of cases that need
20 to be evaluated. And that's done under sub-
21 task 3, under Section 4 of our report. And

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1 what Ron did is he also went and he did^a₈₆
2 search. And his search looking at the
3 Savannah River Site cases, anything less than
4 a PoC of 50 percent, and looking at cases
5 prior to Revision 1, he initially identified
6 from that search 57 claims. And then he did a
7 little bit more detailed manual search and
8 identified another three.

9 So because that number differed
10 from the 54 claims that NIOSH indicated, said
11 needed to be reassessed, we went and looked a
12 little bit closer at those, and it was
13 determined that three of our sixty claims were
14 returned to NIOSH for other reasons and were
15 reworked using the Rev 01 and didn't need to
16 be reassessed. And three of the other claims
17 were -- oh, and they were reworked also. They
18 used the 2500 hours per year for the ambient
19 dose, and it was a hypothetical internal that
20 was used for the assessment. So none of the
21 other issues were identified under PER 30 were

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1 of a concern for those cases. 87

2 So bottom line was, we did agree
3 that there were 54 cases that should be
4 reevaluated.

5 The only cautionary statement I
6 will make, because one of the things that we
7 have seen and we mentioned before in our
8 review of these PERs is that there have been
9 times where we've looked back and it looked as
10 if the claims should have been reworked
11 because of being pooled for another reason.
12 And when we go into the actual file, there may
13 even be a PER form in there indicating that it
14 was reevaluated.

15 But we have seen in cases, some
16 cases, that that hasn't happened. In fact, it
17 was something that we recognized under PER 14,
18 which was the construction trade worker. And
19 actually, right now I'm working on the
20 Blockson PER 20 case reviews, and there was a
21 case in there that was selected, however the

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1 review was not done, and we're not quite sure
2 why that is.

3 So just a cautionary note that I
4 think we really need to look at those cases
5 also that seem to have been pulled for other
6 reasons, just to ensure that they actually
7 were reworked.

8 And that's the summary of PER 30.
9 If you have any questions, I'll try to answer
10 them.

11 CHAIR MUNN: Thank you, Kathy.

12 Does anyone have any questions
13 before -- I believe Stu has some comment to
14 make. But question before that?

15 (No response.)

16 CHAIR MUNN: If not, Stu?

17 MR. HINNEFELD: I'm not real sure
18 what I can add. Lori, have we prepped
19 responses to these findings yet?

20 MS. MARION-MOSS: No, we haven't.

21 MR. HINNEFELD: Okay. Just in

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1 reaction to this -- all you'll get is my
2 reaction. The phased implementation of TBDs
3 as finding number one was something we did
4 overtly because, you know, this -- these
5 changes date back to the years 2003 and 2004
6 when we had 10,000 claims in our inbox, okay?
7 And so we were doing what we do to get some
8 cases moving, and that included doing this
9 reconstruction that we could do before we
10 completed everything. So you know, there's no
11 -- you know, I'm not going to complain about
12 the phased implementation, that was something
13 we had to do.

14 The question about, is there some
15 sort of documentation of it, and I don't know
16 the answer to that question. If this
17 situation were to occur today, in all
18 likelihood the cases that could not go forward
19 would be pending. And there would be a "pend"
20 on that case today. I don't know if we were
21 sophisticated in 2003/2004 with the use of

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1 "pends" and whether we did it at that time or
2 not. So I don't know if there's a document,
3 we'll have to figure that out.

4 There's a comment in here, I think
5 it had to do with the medical X-ray revision,
6 TIB 4, changes to medical X-ray, and on the
7 record, change record page, whether -- you
8 know, at one point there was a notation on the
9 change record page, "this change requires a
10 PER."

11 And we intentionally stopped
12 putting that in there because the document was
13 not given sufficient review at the time that
14 page change was prepared to really know
15 whether you needed a PER or not. And so given
16 -- so the fact of the matter is, there were
17 things that came over that said "PER required"
18 when, in fact, there was no PER required.

19 So because of the situation we
20 were facing we said, look, we're not going to
21 get into this, we're just -- we don't put that

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1 statement in there. That decision will be
2 made later, not when we write the document
3 decision. So that was an overt decision on
4 our part.

5 MR. KATZ: And we talked about
6 that at the last meeting, actually.

7 MR. HINNEFELD: Did we?

8 MR. KATZ: This came up at the
9 last meeting.

10 MR. HINNEFELD: So other than
11 that, though, I don't know that I have much
12 else to add, and will be -- we'll prepare
13 responses to the findings in the normal
14 fashion.

15 MS. K. BEHLING: Okay, thank you.

16 Yeah, we had talked about this the
17 last time, but we've been going to -- putting
18 a notion as to whether there was going to be a
19 PER or not. The only thing it does to us is
20 we don't know if that process has been
21 initiated. So that's why it has come up in

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1 this particular document. Just because ~~it~~^{it}
2 used to be that we could say, we're
3 considering a PER so we don't have to identify
4 that as an issue. But we don't know that
5 anymore.

6 MR. HINNEFELD: Right.

7 CHAIR MUNN: Thank you again,
8 Kathy.

9 Anyone -- any further question?

10 (No response.)

11 CHAIR MUNN: If not, are you going
12 to do 31 as well, Kathy?

13 MS. K. BEHLING: I'm going to have
14 Hans do 31.

15 CHAIR MUNN: All right.

16 MS. K. BEHLING: Because 31 is
17 quite complex.

18 And let me also ask a question. I
19 hope that everyone has PER 31, because I think
20 it's going to be very necessary to be looking
21 at some graphs and some information that's

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1 provided in PER 31. 93

2 And I -- Ted, thank you for
3 sending me the link. When I tried to get onto
4 LiveMeeting, it says that the meeting is full.
5 So I'm not sure if that document can be pulled
6 up so that everybody can view it or if you all
7 have your copy and Hans can proceed.

8 MR. MARSCHKE: Kathy, this is
9 Steve.

10 When was it sent out?

11 MS. K. BEHLING: It was sent out
12 on Monday the 15th. So I'm sure no one has
13 had an opportunity to look at this in light of
14 the full Board meeting this week. It was sent
15 out on the 15th.

16 MR. MARSCHKE: PER 31, okay, I've
17 got it.

18 DR. H. BEHLING: And this is Hans.

19 I'm really hope that, because of
20 some of the complexities that surround this
21 particular PER, that I could get people's

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1 attention to focus on figures A, B and C that
2 are part of the write-up. Because it's very
3 important for me to identify certain elements
4 of those figures in order for them to
5 understand the findings that were raised by
6 Ron Buchanan in his write-up.

7 CHAIR MUNN: We do have the
8 document up on LiveMeeting screen. And if
9 you'll make sure that you identify which
10 graphic you're wanting, Hans, as you're
11 speaking?

12 DR. H. BEHLING: Yes, I will.

13 CHAIR MUNN: That's good.

14 DR. H. BEHLING: And I guess if I
15 may ask a quick question here, we've been on
16 the phone for about two hours. Is there any
17 reason for us to take a break at this time?
18 Because it may take a while for this
19 discussion to go through the whole spectrum.
20 If so, if you want to take a break now or
21 continue?

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1 CHAIR MUNN: Thank you for your⁹⁵
2 thoughtfulness. Yes, we were scheduled for a
3 break in another 15 minutes or so, a little
4 more than that. But if this is going to be a
5 long discussion, it's probably well advised to
6 take a brief meeting break right now.

7 DR. H. BEHLING: Yeah. It could
8 be longer, it can be shorter, it's really --
9 and the reason I say this is because I was
10 brought onto this whole issue a couple days
11 ago when we were informed that Ron wouldn't be
12 able to support this meeting.

13 And it's been a lot of back-
14 pedaling on my part to try to actually
15 understand the issues that many of you are
16 probably very, very well aware of based on the
17 fact that the issue of chest counting and
18 thorium was a major issue regarding the
19 Fernald situation. And I listened-in to the
20 discussion yesterday.

21 So it's a question of how much

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1 information do we need to discuss based on
2 what you already know about the issues
3 regarding chest counting for Fernald persons
4 at the Y-12 facility.

5 CHAIR MUNN: Well, as you well
6 know, we've had a lot of intellectual exposure
7 to thorium recently. But perhaps it would be
8 wise of us to take that 15-minute break now.
9 And we'll make that decision about how deeply
10 we want to go into the weeds on this when we
11 take up our discussion as we come back, if
12 that's okay with all concerned. Is that good
13 with you, Paul?

14 MEMBER ZIEMER: Yes, that's fine.

15 CHAIR MUNN: All right. Very
16 good. We'll go offline for 15 minutes. We'll
17 be back at 10:30 Mountain time.

18 (Whereupon, the above-entitled
19 matter went off the record at 10:17 a.m. and
20 resumed at 10:31 a.m.)

21 CHAIR MUNN: It's 10:30, we're

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1 back online. 97

2 I believe I heard you, Paul,
3 verify you're on?

4 MEMBER ZIEMER: Yes, I'm here.

5 CHAIR MUNN: And Hans, I just
6 heard you, so I know you're on.

7 DR. H. BEHLING: Yes, I'm on.

8 CHAIR MUNN: All right. We're
9 back in session.

10 DR. H. BEHLING: Okay. And so
11 everybody who needs to be there is there?

12 CHAIR MUNN: I believe so.

13 DR. H. BEHLING: Okay.

14 CHAIR MUNN: Oh, hold on just a
15 moment. John Stiver's not here. I just
16 realized.

17 MR. KATZ: Yeah, but I think we
18 can go, we've got plenty of SC&A
19 representation.

20 CHAIR MUNN: I believe we can,
21 too. I think John probably is familiar with

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1 what we're doing anyhow. Let's go ahead⁹⁸

2 Hans.

3 DR. H. BEHLING: I can start then?

4 CHAIR MUNN: Yes.

5 MR. KATZ: Yes, thanks Hans.

6 CHAIR MUNN: Go right ahead.

7 DR. H. BEHLING: Okay. And I do
8 want to ask you, Wanda, when John Stiver comes
9 back, I was actually going to inform him that
10 he might want to step in at times, because I
11 realize he was very, very actively involved in
12 the issue of chest counting, and he's also co-
13 author of the White Paper that was written
14 back in April of 2012 that was authored
15 between Joyce Lipsztein and John. So he may
16 be in the position to answer certain issues or
17 respond to certain things that I'm probably
18 not as familiar with as he is. So when he
19 comes back, would you inform him of the fact
20 that I might call on him, or that he should
21 interrupt in areas where he might feel he has

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1 something to add? 99

2 MR. KATZ: Right. We'll tell him
3 that. But somebody maybe is not off -- is not
4 on mute, and we're getting a lot of static
5 from one person's line. So everyone but Hans,
6 can you mute your phones?

7 DR. H. BEHLING: Okay.

8 MR. KATZ: No, we still have it so
9 maybe it's someone else. Someone else not
10 have their phone on mute?

11 Okay, that's good. Whoever just
12 went on mute, that fixed it. Thanks.

13 DR. H. BEHLING: Okay.

14 CHAIR MUNN: And Hans, John is
15 back in the room now. I'll relay your message
16 to him, and you can go ahead with your
17 presentation.

18 DR. H. BEHLING: Okay. All right.

19 As Kathy already told you, both
20 PER 30 and 31 were actually authored by Ron
21 Buchanan who, unfortunately, is not able to

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1 make it today because he's closing on a house, ¹⁰⁰
2 And as I'd indicated before, I hope everyone
3 has had a chance to pull up the write-up for
4 PER 31 that John -- I mean, that Ron Buchanan
5 authored on your screen, so when I ask you to
6 please consult Figure A, B or C, that you're
7 in a position to do so because some of the
8 comments I'm going to be making will ask you
9 to look at certain specific items that will
10 help you understand the issues that are being
11 discussed.

12 CHAIR MUNN: We do have the
13 document up on our LiveMeeting screen.

14 DR. H. BEHLING: Okay, great.

15 In areas, as I said, because this
16 has been a subject of discussion with the
17 Board as a whole and with various
18 Subcommittees, I'm sort of at a loss to
19 determine exactly how much depth I should go
20 into. But at any time, if somebody feels that
21 you're being bored or you're being insulted by

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1 these comments, please step in and give me ~~the~~¹⁰¹
2 heads up so we can reduce the discussion by
3 some measure if it turns out that people are
4 too familiar with this, or even more familiar
5 than I am. So please let me know.

6 The particular PER 31 was issued
7 back at a time when there were revisions to Y-
8 12. And the revision, if you go to page 8 of
9 the report in question, involved a change to
10 the occupational internal dose that occurred
11 on December -- no, January 12th, 2006. And
12 that singular revision is the justification
13 for PER 31.

14 And that particular revision
15 really involves the single change, and that
16 change is the assumption that thorium-228 and
17 thorium-232 are not to be assumed to be in 100
18 percent equilibrium but were changed to 80
19 percent equilibrium. And so in essence, this
20 is the core of the change that prompted PER
21 31. And I'll just read the very statement

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1 that appears in PER 31 in Section 2, that
2 reads as follows:

3 "After evaluating the Y-12
4 documentation, one issue did arise that could
5 increase the dose estimates for some claims.
6 The equilibrium ratio of thorium-228 to
7 thorium-232 was changed from assuming 100
8 percent equilibrium to assuming 80 percent
9 equilibrium. Incorporating this change,
10 however, would increase dose estimates for
11 patients containing a thorium intake
12 determined from chest count data."

13 So that's really the sum total of
14 what constitutes PER 31, a change of
15 equilibrium from an assumption of 100 percent
16 to 80 percent.

17 And you can see that those dates
18 on page 8 of the write-up, and as a result of
19 that PER, PER 31 identified that they were a
20 total of 693 claims that had been completed
21 prior to December 18, 2007, which was the

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1 issuance of PER 31, with PoCs of less than ⁵⁰₁₀₃
2 percent that could be affected. In other
3 words, this is a very global number which has
4 not yet been, as far as I can tell, been
5 looked at by NIOSH to determine how many of
6 those 693 claims that had been completed prior
7 to the issuance of PER 31 would be affected.
8 Because they would obviously have to have
9 something to do with thorium exposures and
10 chest counting in Y-12. So this number is
11 obviously a global number and would probably
12 have to come down if NIOSH takes a very close
13 look at this.

14 On page of the write-up from Ron
15 Buchanan, he identified a total of four
16 issues. And the first issue of finding 1
17 states the following. And he summarizes those
18 findings both on page 12 of the write-up as
19 well as on page 17. The more comprehensive
20 definition of finding 1 is found on page 17,
21 which I'll just quickly read to you.

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1 "The change in thorium¹⁰⁴
2 228/thorium-232 ratio, one-to-one to zero-
3 point-eight-to-one would actually reduce the
4 assigned dose, not increase it if thorium body
5 burdens are based on chest count."

6 That's a very profound statement.
7 And he goes on to say, "the only incidents
8 where a thorium-228/thorium-232 ratio of zero-
9 point-eight-to-one would increase overall dose
10 is if only the counts from lead-212 were used
11 to determine thorium-228 body burden then the
12 thorium-232 burden would divide from those
13 results."

14 That is basically a contradiction
15 of the very issue that defines PER 31, which
16 Ron has stated that the conversion of 100
17 percent equilibrium to 80 percent equilibrium,
18 rather than increase the dose would actually
19 decrease the dose. With the exception of one
20 situation, and that is if the analysis
21 involves the use of lead-212 as the indicator

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1 of radium. 105

2 I'm going to ask everyone if that
3 is something that you have heard before, has
4 been discussed before, or if you actually
5 already understand the concern that was raised
6 in issue one. Among the three Members, or
7 anyone else, can I have a response?

8 MR. STIVER: Hans, this is John
9 Stiver.

10 We went through this very same
11 issue in considerable detail regarding
12 Fernald. And the problem, as I recall, NIOSH
13 was planning to use lead-212 instead of
14 actinium-228 in order to get back -- based on
15 presumed equilibrium to get back to a thorium-
16 232 intake.

17 The problem wasn't necessarily
18 with that approach. It was that the empirical
19 formula they used to get from the count data
20 back to milligrams thorium was just found to
21 be inadequate all the way around.

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1 Later on -- I don't know if ^{this}₁₀₆
2 was true for Y-12, but at Fernald in 1979,
3 they went from reporting milligrams thorium to
4 actual activity of lead-212 in the actinium-
5 228. And we were able to show that, by
6 reviewing that data, you know, it is possible
7 then to get back to a thorium intake, a
8 plausible thorium intake, and place it up or
9 down.

10 But this is kind of a moot point
11 in that it doesn't really make much of a
12 difference because they're never really
13 measuring the activity level to begin with in
14 that earlier period. There may be some --

15 DR. H. BEHLING: Yeah, and this is
16 why I asked you to step in.

17 Anything that you've been -- that
18 somebody doesn't understand why that -- or why
19 Ron came to that conclusion, it should be very
20 obvious. And I was just simply going to go
21 quickly through that whole issue because of

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1 the fact that, when you report the body burden¹⁰⁷
2 in terms of milligrams thorium, what you're
3 really measuring, or what you're really
4 dealing with is a milligram quantity of
5 thorium-232.

6 And then that's obviously
7 something that you can conclude based on the
8 Radon half-life. You could determine half-
9 life for thorium-232 versus obviously thorium-
10 228. And on the basis of activity, you
11 realize that if we're talking about, let's
12 say, the recorded quantity for thorium was two
13 milligrams, that that is almost 100 percent
14 thorium-232.

15 And then using, obviously,
16 activity which indicates a third of 232,
17 defined by zero-point-one-one nanocurie per
18 milligram, you can obviously convert the
19 milligram into nanocuries and realize you have
20 the value for thorium-232. If you then say
21 they're in full equilibrium of that same

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1 quantity of activity would now also have to ^{be}₁₀₈
2 assigned to thorium-228. If you now convert
3 to only zero-point-eight, you would obviously
4 reduce the dose associated with thorium-232,
5 which in combination with the revised
6 equilibrium fraction would give you a lower
7 number.

8 So it's obviously clear to me when
9 you deal with milligram quantities of thorium,
10 you're talking about 232. And if you
11 therefore reduce the equilibrium from one-to-
12 one to zero-point-eight-to-one, you obviously
13 reduce the dose. So I'm not sure whether or
14 not that issue remains an issue or has been
15 looked at.

16 MR. STIVER: This is John again.

17 I think the problem we have is
18 that, you know, the PER is really looking at,
19 if we made this change, these are the results
20 that would occur, these are the number of
21 claims that would be affected.

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1 But the bigger issue is that ~~that~~¹⁰⁹
2 approach has been found to be not a reliable
3 dose reconstruction method to begin with.

4 DR. H. BEHLING: Yeah. And as I
5 said, I'm only following --

6 MR. STIVER: Right. You're just
7 going to go through and give --

8 DR. H. BEHLING: -- that's really
9 the next issue that Ron identified. And that
10 obviously involves the issue that were -- or
11 issues that were identified in the White Paper
12 that you co-authored with Joyce Lipsztein back
13 in 2012.

14 MR. STIVER: I guess you just have
15 to keep in mind as you go through this, the
16 historical nature of the document. This was
17 all taking place, you know, before we came to
18 these conclusions, you know, regarding
19 Fernald, which are applicable. So maybe the
20 thing to do is just kind of go through and
21 summarize what the findings are and --

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1 DR. H. BEHLING: Yeah. Okay. ^{So} 110
2 the first finding is that, according to that
3 methodology, the milligram quantities that are
4 obviously supposed to be defined on the
5 contribution of thorium-232, you end up with a
6 lower dose based on the reduction of those
7 assigned to 232. That is no longer now one-
8 to-one but point-eight-to-one to those
9 contributed from the thorium-232.

10 So again, that what it turned out
11 to be. And you know what was the strange
12 thing is that the actual defined TBD makes a
13 statement to that effect. And if I read on
14 page 31 of the original revised TBD for Y-12,
15 they talked about the issue of revising the
16 equilibrium ratio from one-to-one to zero-
17 point-eight-to-one. And in the process, the
18 statement on page 31 gives you the following.

19 "It was reported in 1965 that when
20 Y-12 was processed less than one year after
21 purification by the supplier, and as a

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1 consequence had only about ten percent as much
2 radium-228 as radium-224." And they give a
3 reference. "This means that the maximum dose
4 conversion factor per milligram of thorium-232
5 would be less than that for thorium-232 in
6 full equilibrium with its progeny."

7 So I'm having a tough time
8 understanding how we can reconcile that
9 statement as it appears in a revision of
10 Section 5 of the Y-12 TBD with the PER 31 that
11 says, we would actually raise the actual dose
12 assigned to the individual based on this
13 change from one-to-one to zero-point-eight-to-
14 one. I'm having a tough time understanding
15 how that PER came to be.

16 CHAIR MUNN: Stu?

17 MR. HINNEFELD: Yeah, Jim and I
18 were having a bit of a sidebar conversation.
19 What's the question exactly here?

20 DR. H. BEHLING: Well, as I said,
21 PER 31 -- and I read the exact statement --

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1 says that when we convert from a equilibrium¹¹²
2 ratio that was only used from one-to-one, full
3 equilibrium between thorium-232 and 228, and
4 we change that equilibrium ratio from fully a
5 hundred percent to eighty percent, where
6 thorium-228 is only eighty percent of thorium-
7 232, we would actually increase the dose. And
8 yet -- and that's the sum total of PER 31.

9 Yet, when I look at the revisions
10 to the Y-12 TBD, and there were multiple
11 revisions that respond to that change in
12 assumed equilibrium, inclusive of the most
13 recent version that came out in 2012. But
14 I'll read to you the original version that
15 came -- that was the genesis of PER 12, and it
16 states the following:

17 "It was reported in 1965 that
18 thorium Y-12 was processed less than one year
19 after purification by the supplier, and as a
20 consequence had only about ten percent as much
21 radium-228 as radium-224." And they give a

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1 reference as 1965, page 18. 113

2 "This means that the maximum dose
3 conversion factor per milligram of thorium-232
4 would be less than that for thorium-232 in
5 full equilibrium with its progeny." Meaning
6 that you would reduce the dose if you go from
7 one-to-one to zero-point-eight-to-one. And
8 that is stated in the actual revised TBD.

9 And therefore, I cannot reconcile
10 the actual genesis of this particular PER
11 because, contrary to what the PER says you
12 would rate the dose, it's stated here in this
13 TBD that it would reduce the dose.

14 DR. NETON: Hans, this is Jim.

15 I think there's two separate
16 issues here. You would reduce the dose per
17 unit intake because there -- you know, all of
18 those source terms are individual intakes to
19 start with. You would intake so much thorium-
20 232, so much thorium-228, so much radium. And
21 if it's a 50 percent equilibrium, the dose per

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1 unit intake of that mass of material has ¹⁰~~11~~₁₄
2 be, by definition, lower because you have less
3 intake of the daughters at the first
4 inhalation.

5 But the dose will go up, because
6 if you adjust -- and I say, if there's 50
7 percent equilibrium of thorium-228, the mass
8 of thorium-232 that was measured is going to
9 go up by a factor of two. So you have a
10 double intake. But the dose per unit intake
11 of that intake is going to be less, because
12 your source term has a different composition.
13 So they're not --

14 DR. H. BEHLING: Yeah, that is not
15 too obvious, because I mean, I look at -- for
16 instance, in the case of Ron's write-up on
17 page 15, he cites a table where he looked at
18 the total of five dose reconstructions and
19 their methodology and four of the five
20 reported thorium in terms of milligrams. And
21 again, when you just assume that that number

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1 remains a constant, unless you actually ^{now} ~~115~~
2 revise those milligram quantities, according
3 to what you're saying.

4 DR. NETON: Yeah, you would have
5 to. I mean, by definition, you have to
6 increase the amount of thorium because you're
7 assuming that you had less equilibrium. So if
8 I have 50 percent equilibrium thorium-228, I'm
9 going to underestimate the amount of thorium-
10 232 by half, right? Because it's --

11 DR. H. BEHLING: Yeah, I
12 understand that.

13 DR. NETON: And so if I know -- if
14 I know it's less equilibrium, though, I would
15 double the amount of thorium that's there.

16 DR. H. BEHLING: Okay. This goes
17 -- I'll be back to the issue that, at one-to-
18 one equilibrium, a working level might be
19 defined by two-point-nine nanocuries of
20 thorium-232. If you go --

21 MR. KATZ: Hey, Hans --

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1 DR. H. BEHLING: -- to 80, ^{it}~~116~~
2 rises to 3.2. And then if it goes to ten
3 percent equilibrium, it raises it to twelve-
4 point-some nanocuries of thorium-234. Is that
5 what you're referring to?

6 DR. NETON: No. No, not at all.

7 MR. STIVER: The thing is, what
8 we're trying to get back to here is an intake
9 of thorium-232. And obviously if you're at 50
10 percent equilibrium, you've doubled the actual
11 thorium intake.

12 DR. H. BEHLING: Yeah.

13 MR. STIVER: Now the dose that you
14 get from that, because it is this equilibrium,
15 there's fewer daughters. So over the course
16 of that year or so, you have a lower dose.
17 You're looking at two separate issues right
18 there.

19 What we're trying to do is get
20 back to the thorium-232 intake, based on
21 measuring these daughter products.

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1 DR. H. BEHLING: Yeah, and I get
2 this, it was not really called out in this
3 particular write-up.

4 MR. STIVER: And yeah, if there
5 are a lot of different documents, a 1965 West
6 paper is kind of the seminal one. But there's
7 a lot of others. We had to go back through it
8 to try to piece together exactly how they got
9 to milligrams thorium from --

10 DR. H. BEHLING: Yeah. And this
11 really brings me back to the White Paper that
12 you and Joyce authored back in 2012. And I
13 realize that, in reading that, it sort of
14 answers most of the issues that were
15 addressed. And that is namely one. Lead-212
16 was apparently never properly assessed in
17 terms of the spectral analysis of chest
18 counting, or there's no documentation. And
19 therefore, all of the assumptions that were
20 made about what these numbers really mean have
21 raised the question including the MDA that was

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1 assumed somewhere around 6 million grams ^{is}~~118~~
2 now reduced to microgram, according to the
3 process you had written, and so forth.

4 These are all the issues that were
5 really raised by Ron as well. How you convert
6 milligrams -- how were milligram quantities
7 devised? And obviously it involves a
8 procedure that was raised in question that was
9 initially cited in behalf of Scott in 1966.
10 And the other person, West, 1965. And
11 according to what I recall reading in the
12 White Paper, those have been obviously
13 discarded as perhaps not valid. Am I correct?

14 MR. STIVER: So I've got a
15 question for the work in general here. How do
16 we want to proceed on this? I mean, here we
17 have a PER based on a methodology that's no
18 longer considered valid for dose
19 reconstruction. Is it really something we
20 want to pursue, in terms of going back and
21 looking at the number of cases affected? Or

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1 it seems like at this point, it would be time
2 to revise the Y-12 TBD somehow, or you know,
3 go down a different route.

4 It seems like we're kind of in the
5 same situation we were in with PER 14, about
6 the -- you know, the construction workers
7 based on old methodology that's no longer
8 really applicable.

9 CHAIR MUNN: I do think we need to
10 hear from NIOSH.

11 MR. HINNEFELD: Well, this is Stu.

12 And I think that, to John's point,
13 I see little point in carrying through the PER
14 and filling out claims and checking them. The
15 key issue here is to go back to the Y-12 Site
16 Profile, as you said, and see what kind of
17 interpretation, if any, can be made from this
18 MDA data. If thorium data is the only method
19 for those reconstruction for thorium for some
20 years, you know, take a look at it in light of
21 discussions that have occurred in other Work

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1 Groups fairly recently. So I think that ^{is}₁₂₀
2 the logical pathway to go here.

3 I think in terms of interpreting,
4 you know, I would have to know more about what
5 the Site Profile says about how do you
6 interpret this number that comes out of the in
7 vivo counter, what do you do to it? Because
8 it seems --

9 DR. H. BEHLING: It really does
10 not. I looked at it.

11 MR. HINNEFELD: It doesn't say?

12 MR. STIVER: This is exactly the
13 issue we went through. It's the exact same
14 methodology as Y-12.

15 MR. HINNEFELD: Right. In order
16 to even write the PER, there must have been
17 some understanding that, when you're doing the
18 counting, you're counting these decayed
19 products. And so the milligram thorium number
20 that prints out has to be adjusted because of
21 the equilibrium. That has to be part of it,

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1 otherwise the PER would never have been¹²¹
2 written.

3 So beside that --

4 DR. H. BEHLING: Well --

5 MR. HINNEFELD: Wait a minute,
6 Hans, let me finish.

7 Besides all that, I think the
8 action going forward would be, for this, you
9 know, with this issue presumably would go to a
10 Y-12 Work Group if there is or was one. But
11 aside from that, it's incumbent on us at NIOSH
12 to take a look at this document, in light of
13 decisions, program decisions that have been
14 made recently.

15 MR. STIVER: Just to add on to
16 that, an issue that would be important is, at
17 what point in Y-12 did the stop reporting
18 milligram thorium and start going to actual
19 activity?

20 MR. HINNEFELD: Right. Exactly.
21 It sounds to me like we're going to have an

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1 analog to the Fernald discussion. 122

2 MR. STIVER: It will be almost
3 exactly --

4 MR. HINNEFELD: And so it sounds
5 to me like it's going to be an analog to that,
6 and we'll just have to determine where to
7 proceed.

8 DR. NETON: You raise a good
9 point, Stu. There is a Y-12 Work Group that
10 has been idle for quite some time now. And
11 the intent was to get back and close out those
12 Site Profile issues, I thought. There was. I
13 mean, that's how we -- it was Mark Griffon, I
14 think, wasn't it?

15 CHAIR MUNN: Yeah, I think --

16 DR. NETON: And you know, after we
17 -- after the SEC Classes, then like all other
18 Work Groups, one would think you'd go back
19 and, you know, close out the Site Profile
20 issues. But I don't think it ever -- it has
21 not convened since the SEC was added.

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1 CHAIR MUNN: Well, let me suggest¹²³
2 at the outset that, clearly, we haven't had
3 enough opportunity for NIOSH to actually
4 review these findings, and to respond to them
5 in any way. It appears that the best first
6 step would be to have Hans very briefly go
7 through the other couple of findings that we
8 have here, just to say what they are more than
9 anything else. And then we're going to have
10 to give NIOSH time to adequately review the
11 content of the -- the deeper content of the
12 findings, and to respond one way or the other.

13 Personally, I would like to
14 postpone any further real discussion here
15 until we simply look, for the record, at what
16 the findings are here and ask for a NIOSH
17 response when they can respond to that. At
18 that time, I would like to see us make the
19 decision as to whether or not we can close
20 these issues out here or whether it needs to
21 be referred back to the Y-12 Work Group.

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1 Is there any problem with ~~that~~¹²⁴
2 path of action?

3 Josie?

4 MEMBER BEACH: No, that sounds
5 reasonable.

6 CHAIR MUNN: All right. Paul?

7 MEMBER ZIEMER: That seems
8 logical. I do feel at some point we've got to
9 get the Y-12 Work Group involved in this,
10 though, as to the particular site.

11 CHAIR MUNN: Well let's -- unless
12 we have some response, however, to these
13 findings, even if it's just we see those and
14 we're not ready to say anything yet. It seems
15 to me we have to have -- allow NIOSH to
16 formulate a document in response.

17 MEMBER ZIEMER: Yeah. I think we
18 also need to know whether SC&A has interpreted
19 NIOSH's approach.

20 CHAIR MUNN: Fine. Is that all
21 right with you, Hans? Just briefly --

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1 DR. H. BEHLING: Yeah, I ^{am} 125
2 somewhat away from this whole issue. But my
3 gut feeling tells me that the very issues that
4 are being raised here by Ron have been raised
5 by others, as in the case of Fernald.

6 CHAIR MUNN: Yes. This is not the
7 first time we've seen these --

8 DR. H. BEHLING: Yes.

9 CHAIR MUNN: -- and probably won't
10 quite be the last. But we'll try to strive
11 for that.

12 If you'll just very briefly go
13 through --

14 DR. H. BEHLING: Yeah, okay.

15 CHAIR MUNN: -- a listing of what
16 the other issues were. And then we'll rely on
17 NIOSH to give us some documented feedback when
18 they can.

19 DR. H. BEHLING: Yeah. The second
20 issue I'm sure has also been discussed in
21 Fernald, and that is how were these numbers,

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1 when they were reported in milligrams derived?¹²⁶
2 And what assumptions were made? And I think
3 it goes back to what they referred to as the
4 empirically contrived division factor which
5 summed the ratio of counts in the case of the
6 240 KeV lead-212 and the two actinium-228
7 gamma energy peaks. And then subtracting them
8 out, and that was based on 1100 individuals
9 who were considered not exposed.

10 And among the assumptions that
11 were incorporated into that whole model, that
12 includes a equilibrium fraction between
13 actinium-228 and thorium-232, of having a
14 value of zero-point-six.

15 And according to Ron, and if you
16 look at the particular figure in his write-up,
17 if you look at the figure B on page 14, that
18 equilibrium ratio between indicator
19 radionuclides, which for thorium-232 happen to
20 be actinium-228. Or you can also look at the
21 radium-228 as well, because the two of them

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1 are linked to each other. That ratio ^{only}₁₂₇
2 occurs after about eight years of time.

3 And so that would be one of the
4 key issues that does not -- is not consistent
5 with the other assumption that we're dealing
6 with a disequilibrium between the two thoriums
7 that is only limited to zero-point-eight,
8 because that would occur within the first
9 year. So the ratio that apparently was
10 incorporated into this impurity devised
11 conversion factor, they used a ratio between
12 the indicator radionuclide, actinium-228 and
13 thorium-232 of zero-point-six. And so we have
14 a discrepancy here in the equilibrium fraction
15 that, in one case involves point-eight for the
16 thorium, and in the case of actinium-228 and
17 thorium-232. The assumption was the
18 equilibrium of point-six which doesn't occur
19 for a period of eight years after the physical
20 separation of thorium from ore.

21 And so I assume that that was an

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1 issue that was raised for the issues set
2 around the model, and that was the core of the
3 finding number 2.

4 The finding number 3 again was a
5 statement that he made regarding the different
6 solubility of thorium decay products. And
7 what he was really referring to here in this
8 case was the issue of assumptions that can be
9 made with regard to equilibrium between the
10 indicator isotope in each of the two thoriums.
11 And there are obviously two potential problems
12 here.

13 But the one that I think really
14 needs attention is the issue of separating
15 radium between thorium-232 and actinium-228,
16 because the intermediate product is radium-
17 228. And that has a half life of five-point-
18 seven years.

19 So if you start out with, let's
20 say, a full equilibrium between thorium-232
21 and radium-228 and actinium-228, based on the

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1 short half life between radium and actinium,¹²⁹
2 you can always assume there's equilibrium. But
3 what you cannot necessarily tell is
4 equilibrium between thorium-232 and radium-228
5 as it goes into the system as a function of
6 time after separation.

7 We assume that thorium is very
8 soluble in the lung and it may not be the case
9 for radium-228. And what he's raising here is
10 that, on the assumption that radium is removed
11 from the lung at a more rapid rate than would
12 be expected for thorium-232, the consequence
13 of that more rapid removal of radium-228 would
14 potentially reduce the amount of actinium-228
15 that you're using as an indicator of
16 radionuclide for actinium-232. Meaning that
17 you would underestimate the actual quantity of
18 thorium-232 if radium were to be removed
19 differentially from the lung as opposed to
20 thorium-232.

21 For the other radium-228 that is

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1 the decay product of thorium-232, given the ¹³⁰
2 half life of that particular radionuclide of
3 only three-point-six-four days of half life.
4 And of course within seconds, it ends up being
5 transformed to lead-212. That is not an
6 issue, and I think looking at that decay
7 chain, the indicator radionuclide lead-212
8 could reasonably be assumed to be a hundred
9 percent in equilibrium with thorium-228, based
10 on the very short timeframes during which
11 radium could be leached out or removed at an
12 accelerated rate as opposed to thorium-228. I
13 think that is really the issue here for
14 finding 3. I don't know if that was discussed
15 in Fernald, Stu, or John Stiver, if you'd
16 comment?

17 CHAIR MUNN: I think we'll give
18 them an opportunity to respond to that
19 formally, since that's -- we're running out of
20 time for the morning. And let's just assume
21 that both this item --

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1 DR. H. BEHLING: Okay. 131

2 CHAIR MUNN: -- and finding number
3 4, which --

4 DR. H. BEHLING: Number 4 is the
5 issue of the MDA or LOD value. And apparently
6 West in 1965, and Scott '61 had come up with a
7 method by which they assumed that the MDA
8 value would be somewhere around point-six
9 nanocuries for thorium-232, which corresponds
10 to a weight of about five and a half to six
11 milligrams.

12 And then I read, obviously, the
13 White Paper that John Stiver and Joyce
14 Lipsztein authored, and they obviously contest
15 that and make some strong statements that the
16 actual levels would be anywhere between two to
17 three orders lower in terms of the natural
18 instance in total whole body or lung burden,
19 based on the values that they cited, rather
20 than approximately point-six nanocuries
21 corresponding to about six milligrams.

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1 The real natural level in people¹³²
2 unexposed would be about three micrograms for
3 the lung and thirty micrograms for the whole
4 body. That would mean that the sensitivity of
5 this whole chest counting system may be off,
6 and the uncertainty may be off by a factor of
7 100 to 1000. And I assume that has been
8 resolved in the previous discussions regarding
9 Fernald.

10 MR. STIVER: Hans, this is John.

11 All of those issues have been
12 discussed in depth and resolved, regarding
13 Fernald.

14 I was just looking through the
15 DCAS website, and it looks like there never
16 was a Y-12 Work Group.

17 MR. HINNEFELD: There was one,
18 once.

19 MR. KATZ: Well, it's -- okay,
20 there may have been one, but it was -- I don't
21 know when it was, because it wasn't in my

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1 time. And it wasn't even shown as a closed¹³³
2 one in my time, those ones listed as closed.
3 So it must have been a very early Work Group
4 before things got formal.

5 DR. MAURO: This is John. I was
6 there, there was a Y-12 SEC and a great deal
7 of work was done on Y-12. That Work Group,
8 though, I think was dismantled -- if that's
9 the right word -- once all of the complex SEC
10 issues were resolved. Arjun was very much
11 involved.

12 And I think there were -- I
13 remember there were some still residual Site
14 Profile issues that it was every intention to
15 regroup and address. So you're right, at the
16 present time, there is not an active Y-12
17 group. There was at that time, and I remember
18 participating.

19 MR. STIVER: Actually, the latest
20 edition of the SEC was in 2011. Now there
21 must have been a Work Group at that point.

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1 MR. KATZ: No, there wasn't. ^{So} 134

2 this was all done through the Advisory Board?

3 MR. STIVER: No.

4 MR. KATZ: No, again, if there was
5 a Work Group, I believe there was a Work Group
6 because people wouldn't have been there and
7 see it and all that. But I mean, it predates
8 2008. So it's long ago, and it's -- and
9 nobody remembers at this point. I'm sure
10 somebody could reconstruct who the Members
11 were.

12 But anyway, it's disbanded and we
13 have to set up a new Work Group.

14 MR. STIVER: We'll go back through
15 the transcripts, I guess.

16 DR. MAURO: Wanda, could I have
17 one minute of process issue that has been on
18 my mind? I'll be brief before you break.

19 CHAIR MUNN: Please do.

20 DR. MAURO: Is this the
21 appropriate time?

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1 CHAIR MUNN: Yes, please. 135

2 DR. MAURO: What we're looking at
3 is what I've been calling the stovepipe
4 problem that we've all been struggling with.
5 And Wanda, you know that, I think we've come
6 to a way in which to deal with the
7 relationship between the DR Subcommittee and
8 the Procedures Subcommittee?

9 CHAIR MUNN: Yes, we don't have a
10 problem.

11 DR. MAURO: What we're seeing now
12 is the relationship as it might connect to
13 some of the Site Profiles. What I'm saying
14 is, here we're running into a stovepipe issue
15 or DR process between the time the DR was done
16 and the time it comes before the Procedures
17 Subcommittee, so much has occurred on Fernald
18 that it has a direct bearing on this.

19 What I would suggest is, the
20 reason we're able to deal with this type of
21 stovepipe issue is on an ad hoc basis. You

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1 know, John Stiver is sitting there in the ¹³⁶
2 room, as is many of the other folks who have
3 been very close to Fernald. So we're able to
4 address this, I would say, in an ad hoc way,
5 and it's working.

6 But I would also say that it's
7 only ad hoc, and if you have the right people
8 in the room at the right time, you're going to
9 be able to deal with it.

10 There may be a way, and that which
11 we should consider part of the process,
12 instituting a process that, before we meet
13 like this, this would be a good example, that
14 something by way of looking at the issues and
15 a cross pollination between the different
16 activities that have been going on between the
17 time the PER was reviewed and today, for
18 example. What has happened on the program
19 that might influence some of the work that, in
20 this case, Ron has done?

21 I think this is needed on every

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1 Work Group so that we try to break the ¹³⁷
2 stovepipe, and not depend on, I guess,
3 institutional knowledge that might or might
4 not be present at a given Work Group meeting
5 or at a given Subcommittee meeting, so forth.

6 This is just something to -- I'd
7 like to throw on the table to think about,
8 because we're going to run into this more and
9 more.

10 MR. STIVER: Hey, John, remember
11 when we were talking about doing that straw
12 man type summary for GSI, as an example, is
13 how we could --

14 DR. MAURO: Yes.

15 MR. STIVER: -- approach that.

16 DR. MAURO: And that would go
17 toward -- if there was actually a running
18 account of each Work Group that's maintained
19 of where we are now, and maybe updated once a
20 month or once every few months, whenever it's
21 essential. And that it becomes a resource to

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1 everyone. You know, we're -- what's happened¹³⁸
2 on Fernald that might have influenced this?
3 And it was -- all I'm saying is that, I think
4 it's important that we break the stovepipe,
5 and not in an ad hoc way that we're doing
6 right now and is working, but in a way that we
7 explicitly try to deal with it.

8 MR. STIVER: I think the time to
9 do that might have been yesterday or the day
10 before during the full Board meeting. But,
11 you know, we can certainly look forward to
12 that in the future as something to --

13 DR. MAURO: Well, I can tell you
14 right now, it's going to happen. When we talk
15 about PROC-44, luckily enough I was listening
16 in to the surrogate data meeting. And then
17 the Board's discussion of it yesterday, I
18 believe it was. And by happenstance, you
19 know, I happened to be listening in.

20 But, you know, in reality is --
21 the ideal circumstance is that when there is

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1 this cross-connection between activities that
2 is a way to capture it to a process that
3 instituted it to the program. And all I'm
4 doing is, I want to alert folks to this,
5 because I think this is important.

6 MS. K. BEHLING: This is Kathy
7 Behling.

8 This is where I believe the BRS
9 system could be our avenue. If all of the
10 Work Groups were to feed their information
11 into that BRS system, that would certainly be
12 the first step to resolving these types of
13 issues, I believe.

14 DR. MAURO: Yes, I agree.

15 MR. STIVER: That process is
16 underway, too, I might add.

17 CHAIR MUNN: The comments that are
18 made with respect to stove piping are
19 certainly understood and accepted as quite
20 valid.

21 At this precise moment, however,

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1 it seems that we do have a process which¹⁴⁰
2 hasn't been followed yet. And we are perhaps
3 making too much of an issue out of issues that
4 have been covered, as you said, in other areas
5 which are not of record at the time we sit
6 down to look at these things.

7 But our process is to have NIOSH
8 respond to these. And my gut-level feeling is
9 that NIOSH's responses to these findings could
10 be very straightforward and based on the fact
11 that they've been looked at in another venue.
12 And that's our common thread here, is that
13 NIOSH processes the concerns that are brought
14 to them.

15 If this has already been looked
16 at, and it appears that it has been very
17 thoroughly, certainly we've had enough
18 discussion on it in the last week, week and a
19 half, in other Work Groups and in the full
20 Board itself, then this is not going to turn
21 into a monumental issue once we have an

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1 opportunity for this process to work itself
2 out. Until NIOSH can say, "this has been
3 taken care of and this is where it's been
4 taken care of," then we're just spinning our
5 wheels.

6 So for the good of the order,
7 unless anyone has any objection, I would
8 suggest that we move on with our agenda. And
9 that we -- NIOSH has already accepted the fact
10 that they will have responses to these
11 findings. Let's see what happens when the
12 findings come back. They may clarify the
13 entire process for everyone. Any objection to
14 that?

15 Paul?

16 MEMBER ZIEMER: I have no
17 objection. I have a point of information.

18 CHAIR MUNN: Yes.

19 MEMBER ZIEMER: I'm looking at the
20 Work Group minutes from January 5th, 2006, for
21 the Y-12 Work Group. It was chaired by Mark

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1 Griffon, Members were Wanda Munn, Mike Gibson¹⁴²
2 and Robert Presley.

3 CHAIR MUNN: Yes, which accounts
4 for some of the --

5 MEMBER ZIEMER: SC&A was John
6 Mauro, Kathy Demers. So that's 2006, but
7 there was a Y-12 Work Group.

8 CHAIR MUNN: We had a lot to say
9 about many of these things at that time. All
10 right. Thank you very much, Paul. That's
11 most illuminating, and very pleasant to have
12 on our record.

13 If we have no further comment with
14 respect to these particular PERs, then we'll
15 go on to ask NIOSH if they have response to
16 the PER 0014 findings available?

17 Before we start that, also, who is
18 manipulating the documents on Live Meeting?
19 Steve?

20 MR. MARSCHKE: Oh, that's me,
21 Steve Marschke, yeah.

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1 CHAIR MUNN: Oh, okay. Very good¹⁴³
2 I was having trouble moving it from one screen
3 to the other and wasn't seeing what I wanted
4 to see on the Live Meeting screen while Hans
5 was discussing the findings. Thanks.

6 MR. MARSCHKE: Sorry.

7 CHAIR MUNN: That's quite all
8 right. I just wanted to know who was doing
9 it.

10 I'm sorry, Stu. It's your
11 platform.

12 MR. HINNEFELD: Okay. This is
13 Stu, I'll start this. I've been briefed on
14 this but there's been a Board meeting in
15 between, so we'll see how much I remember. But
16 Lori can probably correct me if I mess this up
17 very much.

18 The responses were submitted to
19 the Subcommittee on -- oh, there it is --
20 Wednesday. That would be yesterday. Lori
21 sent an email to the Subcommittee Members

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1 titled "Procedures Subcommittee BRS update,"
2 And attached to that are two files, one of
3 which is the responses to the PER 0014
4 findings from the case review. As I recall,
5 the PER had, you know, like six findings from
6 the review of the PER that are in BRS. And
7 then there were several additional findings
8 that came out from the review of the selected
9 cases, seven through, I don't know, fifteen,
10 or something. And those are not yet loaded in
11 BRS, or at least they weren't recently. And so
12 our responses were written on this Word file
13 and distributed yesterday.

14 So I can walk through them real
15 quick.

16 CHAIR MUNN: If you would go
17 through them very briefly, since we haven't
18 had time to absorb them. And I just want to
19 know what's been responded to and roughly
20 what's been said.

21 MR. HINNEFELD: Yeah. The first

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1 finding, which is finding number 7 because ¹⁴⁵the
2 enumeration follows the numbering of the six
3 findings that were done on the PER itself, was
4 that SC&A questions why cases that did not
5 meet the selection criteria were included in
6 the set of cases requiring reevaluation. This
7 PER I believe had a selection criteria that
8 said that there's no point in reviewing cases
9 that have a PoC less than this value because
10 the amount of change can't possibly raise them
11 up to compensability. So it's a way to kind
12 of have a smaller set of cases to look at.

13 But the PER also said that, for
14 cases that are under that threshold, we will
15 look to see if those could have been affected
16 by additional PERs or additional changes so
17 that we can do all those reevaluations at
18 once. Because when you start adding
19 additional PERs, then your threshold doesn't
20 matter anymore.

21 So the reason why cases below the

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1 selection criteria were selected was because¹⁴⁶
2 they were looked at as judged that they might
3 be affected by another PER, and so we'd better
4 look at this one too. So that's why the
5 additional cases were selected.

6 The next one is not all cases
7 returned for PER 14 were reworked. I think
8 what actually the situation is, is not all the
9 cases that were requested to be returned were
10 returned. You know, because when we get a
11 case back, we do a reworking. The reason why
12 we might request a case back and we don't get
13 it back; there are essentially two main
14 reasons why that would occur.

15 One is that the claim has been
16 swept into an SEC in the meantime, and so a
17 dose reconstruction is no longer necessary.
18 And the second is that the claimant has died
19 and there is not a survivor and so the case is
20 no longer active. It's pulled. So those are
21 the two cases.

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1 And when this first time when ^{we}~~147~~
2 started doing PERs and we had an occasion like
3 this, when we would request cases and we
4 didn't get them back, we went back to DOL and
5 we said, "why didn't we get these back?" And
6 they told us, in every case, why we didn't get
7 it back. So after a couple or three times of
8 doing that, we didn't check on them anymore.
9 So that's the situation on these. There's no
10 record of us going back and forth with DOL on
11 these other PERs.

12 Okay. The next grouping, there
13 are several findings that are essentially the
14 same finding for different sites. This is
15 findings 9, 10, 11 and 16. And the finding
16 here is that the reviewers couldn't
17 conclusively confirm that the CTW adjustment
18 factor was built into the TIB or Site Profile
19 document where the CTW adjustment was
20 incorporated. The reason being that not all
21 the raw data, in terms of the -- you know, the

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1 bioassay or measuring data as it is printed¹⁴⁸
2 and the number exchanges. You have
3 essentially two sets of data. They weren't
4 individually provided so that the two could be
5 combined and figure out, did we generate a
6 correct combined table? All we provided in
7 these documents was a combined table.

8 Our view is that these documents
9 really should be reviewed for that aspect as
10 the document review out of the PER review. We
11 think we did them right. Several of these
12 technical documents have been reviewed by this
13 Subcommittee. And so we think that that issue
14 would have come up in those. And we believe
15 that review should occur in that forum rather
16 than for the site -- first of all, the
17 Procedures Subcommittee has done some of that
18 review of those documents. And, secondly, if
19 it's a Site Profile, we can maybe pass that to
20 the Site Profile, or to the site Working
21 Group. But it just doesn't seem an action for

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1 PER review. That's our opinion on those
2 findings.

3 CHAIR MUNN: Before you go on,
4 Stu, a format question from the Chair. In our
5 desire to hear these responses, I don't want
6 to lose track of the fact that we are
7 responding to issues that have been raised by
8 SC&A. And I'd like to have a feel from the
9 Subcommittee as to whether or not you would
10 like to look at these individually, and ask
11 for a response, immediate discussion from SC&A
12 whether or not we might be able to close --
13 whether any of the responses are acceptable as
14 given, whether we can clear any of these items
15 now.

16 I personally would like to have
17 that done, if it's possible to do that. But
18 I'll follow the Subcommittee's reaction to
19 that.

20 Josie?

21 MEMBER BEACH: Well, I think some

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1 of them may be able to be answered on the ¹⁵⁰

2 spot, but I don't want to speak for John. So

3 --

4 CHAIR MUNN: Well, that's my

5 point. If we can close them here today then

6 that's fine. If we can't, then that's a

7 different issue at all.

8 MEMBER BEACH: And I'm fine with

9 that.

10 CHAIR MUNN: Paul?

11 MEMBER ZIEMER: Yes, I'd be

12 willing to do that. I guess we need to -- if

13 there's any particular heartache from SC&A, we

14 need to do that, but otherwise it looks fine

15 to me.

16 CHAIR MUNN: That's fine.

17 MR. STIVER: Let's just go through

18 this list. This is John. And the ones we can

19 close, we'll close.

20 CHAIR MUNN: All right. Let's do

21 -- then before we go any further, let's go

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1 back to finding 7 and see if this is¹⁵_{15F}
2 sufficient response to the finding as it was
3 written.

4 John? Do you have a response?

5 MR. STIVER: I have no problem
6 with the response. It provides the
7 explanation we were looking for, unless Kathy
8 has some more information or has an opinion
9 she'd --

10 MS. K. BEHLING: I'm on the line.
11 I have no problem with the response to finding
12 7.

13 CHAIR MUNN: Then can we assume
14 that finding 7 will be shown as closed by
15 action of the Subcommittee, when it is
16 uploaded? Is that acceptable?

17 MEMBER ZIEMER: Yes.

18 CHAIR MUNN: I have two yeses and
19 my yes. At the time that we populate the BRS,
20 we can show that the Subcommittee closed this,
21 that SC&A accepted the response this date.

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1 And now finding 8? 152

2 MS. K. BEHLING: This is Kathy.

3 I would prefer to look a little closer at
4 this, because -- and again, I presented this
5 and I know Rose was the initial author.

6 MS. GOGLIOTTI: Kathy, I'm on the
7 line as well.

8 MS. K. BEHLING: Oh, okay, Rose.
9 Very good, you can maybe interject here.

10 But I would almost like to keep
11 this particular finding open to look at it a
12 little closer, because -- and Rose, correct me
13 if I'm wrong, but I think we were actually
14 looking at cases that had a form in the file
15 that indicated, yes, this was reevaluated, but
16 it wasn't. And perhaps that was because of an
17 SEC, I'm not sure. But I just feel we need to
18 look a little closer at that.

19 MS. GOGLIOTTI: I agree with you.

20 MS. MARION-MOSS: Kathy, this is
21 Lori. I have a question. Could you clarify

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1 where you're saying that the case was ~~not~~¹⁵³
2 reevaluated? What are you basing that on? A
3 reworked DR or --

4 MS. K. BEHLING: Yes, a reworked
5 DR.

6 MS. MARION-MOSS: Okay.

7 MS. K. BEHLING: In other words, I
8 will go into a file and I will see an
9 individual case evaluation form in there. It
10 will have a letter in there either stating
11 that it was not necessary to reevaluate this
12 because it was pulled for another PER, PER
13 0012 or whatever. But in some of these cases,
14 there was a form in there that said, "this
15 case was pulled for this PER and it was
16 reevaluated under this PER," but there's no
17 reevaluation in the file. I can give you
18 several examples of that.

19 And, again, now, maybe I should
20 have dug further to see if it fell under an
21 SEC. I have to look at that, I don't believe

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1 I did that. 154

2 MS. MARION-MOSS: Thank you.

3 MR. SIEBERT: Scott Siebert.

4 I think I can clarify this
5 slightly, if Stu would like me to?

6 MR. HINNEFELD: Yes.

7 CHAIR MUNN: Please do.

8 MR. SIEBERT: Okay. When we're
9 talking about those ICE forms in PER, then I
10 can speak specifically to the ones that ORAU
11 does for DCAS. I believe their system is the
12 same. When we get the list of claims to
13 review under a PER, we do the assessment and
14 review on our side and give the results to
15 DCAS.

16 Those files are not uploaded to
17 the system because they are interim files.
18 They are not a reassessment. Once DCAS has
19 the decision and reviews that, that is when
20 the ICE form is created by Dave Allen that
21 states we have reviewed. So we actually have

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1 reviewed that claim, and that is when ^{we} ~~155~~
2 request it back from DOL. And as Stu has
3 said, we have no control as to whether DOL
4 returns it or not.

5 So there may not be a full dose
6 reconstruction listing it in the record when
7 the ICE form comes out because we are not
8 required to do a full dose reconstruction
9 until DOL returns the claim.

10 MS. K. BEHLING: Okay. And what
11 kind of a timeframe are we -- but, ultimately,
12 once you've reevaluated the claim, that claim
13 will go into the case files and we can look at
14 that on our system, is that correct?

15 MR. SIEBERT: That information --
16 I defer to Stu for sure. But I do not believe
17 that information is an interim step. So I
18 can't -- go ahead.

19 MR. HINNEFELD: This is Stu.
20 I can't really shed a lot of light on this,
21 but we will look into exactly what's being

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1 done here. I have an idea about how I think¹⁵⁶
2 things are working, but it could be completely
3 wrong, and I just need to go find out.

4 CHAIR MUNN: All right. Can we --

5 MS. K. BEHLING: That said, I just
6 think that it should remain open.

7 CHAIR MUNN: Yes. It's an open
8 item. And NIOSH has the action on it.

9 And now we'll take up where we
10 left off with your report, Stu. With findings
11 9, 11, 16, et cetera.

12 MR. HINNEFELD: Yeah, I was kind
13 of done saying what I was going to say. These
14 documents, several of them have been reviewed
15 by the Subcommittee and some of them are Site
16 Profile documents. And so, in our view, the
17 continuation of these -- you know, the
18 resolution of these findings, A, they may have
19 already been looked at in the in the TIB
20 review, or in the Site Profile review. I
21 don't know that sitting here, but they could

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1 have been. I would think that the TIB review¹⁵⁷
2 would have looked at that.

3 And, alternatively, if it hasn't
4 been, I would suggest a different assignment
5 to actually look at that, if it's done
6 correctly. It just seems like we're getting
7 far kind of afield of what I thought a PER
8 should be doing in this instance.

9 MR. STIVER: This is John. I'd
10 just say that Rose and I and Kathy checked
11 those values, based on the assumption that the
12 right number is applied and just algebraically
13 checked to see what we'd get.

14 MR. HINNEFELD: Right.

15 MR. STIVER: And it all came out
16 as planned.

17 I guess the concern was you could
18 have any combination of adjustments that could
19 together to yield the value of the table.

20 Rose, did you want to say anything
21 more about that? I know you spent a lot of

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1 time looking at this. 158

2 MS. GOGLIOTTI: Well, essentially,
3 we were tasked with making sure that these
4 were appropriately executed. But unless you
5 have access to the raw data, you can't confirm
6 that, you can only make assumptions based on
7 the information we have, which appear to be
8 done correctly.

9 MR. STIVER: This is John again.
10 I would say that, you know, I like Stu's idea.
11 It really is -- if it's going to be an issue
12 and it's going to be pursued, it's probably
13 more appropriate to do it in Site Profile than
14 PER.

15 MS. K. BEHLING: This is Kathy
16 again.

17 The only comment I would make here
18 is, yes, we have a Site Profile process, we
19 have a Procedures process. But it's not until
20 we get to the dose reconstruction review
21 process that we're actually able to confirm

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1 that everything that is done and decided ⁱⁿ₁₅₉
2 the TBDs and Procedures and so on, is the
3 final step to confirming that everything is
4 being implemented correctly.

5 And I believe that's what Rose is
6 trying to do with this particular case is get
7 the raw data to verify that. And so although
8 I understand what you're saying, and I agree,
9 I don't want to duplicate efforts here, but
10 you do have to remember the dose
11 reconstruction is the final, where we put this
12 -- where we are actually applying everything
13 that we have, hopefully, put into these
14 procedures. And so I don't want to discourage
15 us from sticking to these.

16 MR. HINNEFELD: The thought just
17 occurs to me, I did not do this, but I wonder
18 if anyone looked at the dates of the most
19 recent review of these TIBs versus the dates
20 of the TIBs that contain this combined data
21 set? If it has been reviewed since the

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1 combined data set has been added, then ^{it}₁₆₀
2 would seem to me that the review of this
3 documents has been done and there's no need to
4 pursue it.

5 If it has not been reviewed, if it
6 was an earlier version of this TIB that was
7 reviewed, then it would seem that -- well, A,
8 it would have seemed that the revision would
9 have been reviewed, because that's kind of
10 what we do. But maybe not.

11 So, I mean, the history of it is
12 kind of relevant to is there more work to do
13 here or not? But, again, it's --

14 MR. MARSCHKE: This is Steve
15 Marschke.

16 I just want, a couple things
17 pointed out. One of them, which is what Stu
18 was just talking about, is I know that when
19 Ron Buchanan did some reviews way back when we
20 did the third set of reviews -- I'm not sure
21 when that was, but that was 2006, 2007.

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1 MR. HINNEFELD: I was a young man¹⁶¹

2 MR. MARSCHKE: He did -- he
3 checked some of these adjustment factors. So
4 if you go back and look into that document,
5 there was some checking at some sites, two or
6 three, maybe, that Ron Buchanan did back in
7 that day.

8 The other thing, as far as I'm
9 concerned, my own personal opinion is, you
10 know, I think the purpose of the PER, the
11 purpose of our checking the PER is to make
12 sure that the calculations were done
13 correctly. And, really, the only heavy
14 calculation that is done here that is done
15 differently is the calculation of the
16 adjustment factor.

17 One of the reasons for looking at
18 the specific cases is to make sure that, you
19 know, the change in the calculation hasn't
20 resulted in errors being made. Because, you
21 know, really, there's no change in the

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1 calculation, there's just a change in the ¹⁶²
2 number that you use in the multiplier for the
3 dose reconstruction itself. Really, the
4 change in the calculation occurs in the
5 calculation of the adjustment factor or the
6 calculation of the construction trade worker
7 default doses.

8 So I see the calculation of these
9 construction trade worker doses as really the
10 critical check.

11 MR. STIVER: Yeah, this is John.

12 I tend to agree with you, Steve. I understand
13 what Kathy's saying, and this is really --
14 everything feeds into dose reconstruction and
15 we really need to use the PER process to make
16 sure that things that were intended to be done
17 were, indeed, done according to plan or are
18 actually in use.

19 But in this situation, I think we
20 have pretty good empirical evidence that the
21 right values are in those tables, and I don't

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1 know whether it would really be worth our time¹⁶³
2 and the effort required to go back and check
3 each and every one of them, check the source
4 data. You know, Stu's comment that we might
5 look at the review dates and at least see
6 which ones have been reviewed more recently of
7 those ten different locations might worth
8 taking -- it might be worth it to do that to
9 kind of narrow down a list of possible
10 reviews. But my personal opinion is that I
11 don't see that this is really going to buy us
12 much.

13 MR. MARSCHKE: John, I can't hear
14 you.

15 MR. STIVER: Steve, can you hear
16 me now?

17 MR. MARSCHKE: Yeah.

18 MR. STIVER: Okay, I was a little
19 too far from the mic.

20 Basically, to restate everything,
21 I kind of agree with you. I understand

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1 Kathy's concerns. But I just don't think that ¹⁶⁴
2 the effort required would really justify what
3 we would find. I think that our preliminary
4 checks of those tables indicate that the right
5 values were used. It would be a big project
6 to go back and go through all the source data
7 to confirm that.

8 And if that were to be done, I
9 think it should be done, you know, at the Site
10 Profile level.

11 MEMBER BEACH: So you recommend
12 close?

13 MR. STIVER: I recommend closing,
14 yeah.

15 CHAIR MUNN: Do we have any
16 objection from anyone with respect to closure
17 of these items?

18 MEMBER ZIEMER: I agree with
19 closing them.

20 CHAIR MUNN: Very good. Then,
21 please, when they are uploaded, will you

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1 indicate that SC&A has accepted the NIOSH¹⁶⁵
2 response and that these three items are now
3 closed?

4 MEMBER ZIEMER: I think it's four
5 here.

6 CHAIR MUNN: Four. Four, sorry.
7 My eyes are not wide enough, I guess. Nine,
8 ten, eleven and sixteen.

9 Now finding 12, Stu?

10 MR. HINNEFELD: Okay. I think our
11 response is fairly straightforward here. This
12 is a finding about one of the particular cases
13 identified as being requested to be returned
14 and not having another rework. Well, the fact
15 is, it didn't get returned. Probably it's
16 from a site that's been added to the SEC and
17 probably was swept up into the SEC. So that's
18 12.

19 CHAIR MUNN: Is that acceptable to
20 you, John?

21 MR. STIVER: How hard would it be

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1 to check and see? 166

2 MR. HINNEFELD: It will take me a
3 little time because of the clunkiness, but I
4 can do it at lunchtime.

5 MR. STIVER: Okay. Why don't we
6 just hold that in abeyance until then?

7 MR. HINNEFELD: Or maybe I can do
8 it at lunchtime.

9 CHAIR MUNN: We'll set aside
10 finding 12 for a response after lunch.

11 MR. SIEBERT: Hello, this is Scott
12 Siebert, am I off mute?

13 MR. KATZ: Yes.

14 MR. SIEBERT: Okay, sorry about
15 that.

16 Stu, we actually did check on that
17 at the last meeting and it's in the transcript
18 of the last meeting. And we did verify that
19 it is an SEC claim and that's the reason it
20 appears it was not returned.

21 MR. STIVER: Okay. Let's close it

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1 then. 167

2 MR. HINNEFELD: Thanks, Scott.

3 MR. SIEBERT: Sure.

4 CHAIR MUNN: In that case, I'm
5 presuming we can close this finding?

6 MEMBER BEACH: Yes.

7 CHAIR MUNN: Correct?

8 MR. HINNEFELD: See, you don't
9 have to be that smart if the people working
10 with you are smart.

11 CHAIR MUNN: That's very good.
12 That's the whole purpose in hiring them,
13 right?

14 And Paul?

15 MEMBER ZIEMER: Yeah. Oh, yeah.
16 Close it.

17 CHAIR MUNN: All right, very good.
18 When it is uploaded, indicate that the
19 response is acceptable and it was closed by
20 the Subcommittee on this date.

21 Finding 13.

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1 MS. K. BEHLING: Can I just
2 interject here? This is Kathy.

3 One question, and maybe I'm asking
4 a very naive question, maybe I should know the
5 answer to this. But when we go onto NOCTS,
6 will you be able to see that a particular case
7 was part of an SEC? Because I just a question
8 it, and then we wouldn't have these -- such
9 findings.

10 MR. HINNEFELD: Yeah, this is Stu.
11 And I don't think from NOCTS there is a
12 definite way to say -- to know that. On --
13 there will be --

14 MS. K. BEHLING: I realize that if
15 we were to get into the case and look at this,
16 the cancer and so on and so forth, and go back
17 into the SEC process to see who qualified, we
18 could dig that out. I just wondered if there
19 was an easier way for us to be able to confirm
20 that and then not have these types of
21 findings.

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1 DOL sends cases back to you in response to ^a~~170~~
2 PER, is there a master list that's sent back
3 to you of the cases that are returned?

4 MR. HINNEFELD: I don't know.

5 MR. KATZ: Because that would be a
6 way to cut out all this nonsense. Because
7 then SC&A would know what was returned, and
8 they would do the same thing you would. They
9 would assume that DOL did their job and --

10 MR. HINNEFELD: I don't think DOL
11 sends us a master list.

12 MR. KATZ: Okay. And you don't
13 make a master list, either, of what was
14 returned?

15 MR. HINNEFELD: No.

16 MR. KATZ: Okay.

17 MR. HINNEFELD: No. I mean, they
18 only show up once.

19 MR. KATZ: Oh, I see. They just -
20 -

21 MR. HINNEFELD: They come in as

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1 they come in, because they're coming in from ¹⁷¹
2 four different district offices.

3 MR. KATZ: Got it.

4 MR. HINNEFELD: And a given
5 district office probably doesn't send all
6 theirs at once.

7 MR. KATZ: Okay. Thanks.

8 MS. K. BEHLING: Thank you, Stu.
9 I was just hoping that we could avoid this
10 type of finding in the future.

11 MR. HINNEFELD: Understand.
12 Understand.

13 Okay. So are we ready for finding
14 13?

15 CHAIR MUNN: We are ready for 13.

16 MR. HINNEFELD: Okay. This is a
17 finding that in one particular case we did not
18 apply the construction trade worker adjustment
19 to someone who had a job title that fit in the
20 construction job title. When we generate the
21 list of construction job titles for -- I think

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1 we did it for this PER -- we wanted to make
2 sure we caught everybody so we made a broad,
3 you know, list that we thought would encompass
4 all construction job titles.

5 There are also in-house workers
6 who use those job titles. There are many
7 construction trade workers jobs where the in-
8 house contractor will also have people in that
9 job title. And that was the case in this
10 case. I won't get into job titles for giving
11 out information and stuff, but it's in our
12 response.

13 And this person had a job title
14 that was on the list, but in reading his CATI
15 where he describes his work, it seemed pretty
16 clear from the description of the work that he
17 was an in-house employee, not a construction
18 contractor.

19 So based on that, that's the
20 reason why the CTW adjustment wasn't applied
21 in this case.

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1 MR. STIVER: So basically you have¹⁷³
2 additional information and you go ahead and
3 use that and determined --

4 MS. K. BEHLING: John, if you're
5 talking to me, I can't hear you.

6 MR. STIVER: Sorry, I keep
7 forgetting to turn the microphone on here.

8 MS. K. BEHLING: Oh, I could just
9 barely hear someone in the background, and I
10 don't even know if you were speaking to me.

11 MR. STIVER: I was responding to
12 Stu. I was just saying that in a situation
13 where you have somebody in that job title, for
14 whom you have additional information, like
15 this guy here, you'd go ahead and make that
16 determination. But say if you didn't have
17 that, you would have just gone ahead and given
18 him, you know, the claim in favor of
19 adjustment factors.

20 MR. HINNEFELD: Right. I mean, if
21 we don't have indication that he's not a

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1 construction worker -- 174

2 MR. STIVER: Yes, then he falls
3 back in --

4 MR. HINNEFELD: -- then he would
5 be a construction worker, right.

6 MR. STIVER: Yeah. I see nothing
7 wrong with that. I think we can close that
8 particular finding out.

9 CHAIR MUNN: We will, when we
10 upload this, indicate that the response has
11 been acceptable and it was closed on this
12 date.

13 Finding 14?

14 MR. HINNEFELD: Finding 14, we
15 have not prepared a response for yet. We will
16 provide a response at a later date.

17 CHAIR MUNN: Carried over.

18 Finding 15?

19 MR. HINNEFELD: Okay. I'm going
20 to try to remember this one.

21 This is a finding about the

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1 medical dose. And a 30 percent uncertainty,¹⁷⁵
2 The finding was that there should have been a
3 30 percent multiplier on the medical dose, and
4 then -- as part of the rework. The addition
5 of 30 percent to medical doses is a technique
6 that has been used at some time as essentially
7 a way to avoid using the distribution. You
8 add 30 percent to the medical dose and enter
9 that value as a constant. So that's used on
10 occasion.

11 But the best estimate is to enter
12 the medical dose, as it's determined, as a
13 normal distribution with the 30 percent
14 standard deviation. So the addition of the 30
15 percent is not a required part of doing
16 medical dose. It's a shortcut if you're
17 entering it as a constant, which I don't
18 believe was done in this case.

19 MR. STIVER: That sounds
20 reasonable.

21 Kathy?

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1 MS. K. BEHLING: And maybe, Rose¹⁷⁸
2 you could help me out here. For some reason I
3 thought this -- I didn't think this finding
4 had to do with medical dose.

5 MS. GOGLIOTTI: I completely agree
6 with you, Kathy, I'm very confused.

7 MS. K. BEHLING: Yeah. I keep
8 looking at this finding, and, no, this had to
9 do with an uncertainty not being applied to a
10 coworker dose, a construction trade worker
11 coworker dose, not a medical.

12 MR. HINNEFELD: Well, that's --
13 let me see what I can find out about it. Hang
14 on a minute.

15 (Pause.)

16 MR. HINNEFELD: It will take me a
17 while to chase this down, so --

18 CHAIR MUNN: All right.

19 MR. HINNEFELD: -- I'll have to --
20 unless someone on the phone can correct my
21 mistake there?

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1 CHAIR MUNN: Very good. We¹¹¹₁₇₇

2 talk about this one after lunch? Or not?

3 MR. HINNEFELD: Oh, I'm sorry, this
4 one wasn't medical. Thirty percent is the
5 uncertainly on a badge reading. It's not
6 medical. The 30 percent uncertainty is the
7 standard uncertainty on the badge reading. And
8 so it would be the badge reading that would --
9 is being suggested by the findings should have
10 been multiplied by one-point-three.

11 Our view is that it's not, you
12 don't do that. The 30 percent uncertainty is
13 the standard deviation around the central
14 value. So it's entered as -- it's treated as
15 a normal distribution. Yeah, it's not a
16 medical dose, it's the badge measured dose
17 that has that 30 percent uncertainty
18 associated with it.

19 MR. STIVER: So in IREP you just
20 put in the adjusted reading and then the
21 normal distribution --

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1 MR. HINNEFELD: And the
178
2 uncertainty value around it. You don't
3 multiply the --

4 MR. STIVER: Yeah, right. Okay.

5 MS. K. BEHLING: I agree. I just
6 -- can we keep this open so we can go back and
7 just look at this?

8 MR. HINNEFELD: Okay.

9 CHAIR MUNN: All right.

10 MS. K. BEHLING: Thank you, Wanda.

11 CHAIR MUNN: You bet. We'll leave
12 15 open and carry over.

13 And finding 17?

14 MR. HINNEFELD: Okay, 17. This
15 one is less familiar to me. Apparently the
16 1944 Hanford intakes -- interesting because
17 that's now a Class -- are based on Battelle
18 TBD-6000 rather than the coworker data set,
19 because we don't think we had enough data for
20 a coworker data set in 1944.

21 CHAIR MUNN: I'm reading through

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1 the response here that we haven't absorbed¹⁷⁹
2 yet.

3 MR. STIVER: Kathy, have you
4 encountered this type of thing before?

5 MS. K. BEHLING: I'm not sure that
6 I have. Rose, do you have any comments?

7 MS. GOGLIOTTI: I think that when
8 we looked at this we weren't sure what should
9 have been done because it was somewhat
10 ambiguous in the text.

11 MR. HINNEFELD: Okay. Well, I
12 would propose that we enter our response, you
13 know, the findings will be entered, our
14 response entered, in another -- you know, I
15 think maybe I'd take another look at it. Like
16 I said, I got briefed on this before the Board
17 meeting, and I can't retain things that long.

18 CHAIR MUNN: Very good. Let's
19 enter the response and it will remain open.

20 Findings 18, 19, 20 and 21?

21 MR. HINNEFELD: And this is,

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1 again, multiple. It's site specific. ^{It}₁₈₀
2 relates to the four different sites that were
3 caught up in this, included in the PER, claims
4 from those four different sites.

5 And so in each case the finding
6 was that it would be -- you know, the Site
7 Profile would be pretty -- it would be helpful
8 if the Site Profile pointed you to the
9 construction worker TIB while you were going
10 through the Site Profile. Yeah, that's true.

11 Our dose reconstructors, though,
12 typically work from tools rather than from the
13 Site Profile. You know, the DR tools. And
14 those are built and put in place for the dose
15 reconstructor to use on the construction.

16 So rather than embark on a path of
17 revising all those Site Profiles to point
18 people to OTIB-52, the OTIB-52 requirements
19 are built into the dose reconstruction tool
20 the dose reconstructor uses.

21 MR. STIVER: It makes sense to me.

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1 I'm fine with that. 181

2 CHAIR MUNN: Accepted --

3 MS. K. BEHLING: This is Kathy.

4 I'm sorry to interrupt.

5 I guess that our task was, if we
6 didn't have a case to look at, and I believe
7 in these four findings we did not actually
8 have a case to look at. And what we were
9 tasked to do is to find out if the technical
10 documentation had any discussion about the
11 OTIB-52. Although I guess we were going to
12 look at the workbooks also.

13 And so I agree, if the data is in
14 the workbook and that's how it's being
15 implemented, I would say that's fine, as long
16 as it's not being missed.

17 CHAIR MUNN: Acceptable by SC&A.

18 MR. STIVER: Yes, it is.

19 MS. GOGLIOTTI: The point on this
20 one, though, was that it was internal dose,
21 and Hanford is the only place that has that

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1 internal dose correction for trade workers. 182

2 MR. STIVER: That's correct.

3 MS. K. BEHLING: That's on 18, and
4 I think the remainder are for the -- that's
5 true, there is no documentation for the
6 internal at Hanford unless it's, again, in the
7 workbook.

8 CHAIR MUNN: Excuse me. So we're
9 agreed that SC&A is accepting the response?

10 MR. STIVER: Yes, SC&A accepts the
11 response.

12 CHAIR MUNN: We will show it as
13 accepted and closed as of this date.

14 MS. K. BEHLING: I think that --
15 let's go back to that one just one more time.
16 Because this is an internal, and the external,
17 I can understand it being built into the
18 workbook.

19 Now, is there something built into
20 a workbook for it, the very first one, 18 that
21 we discussed? Rather than grouping them

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1 together, let's just -- I just want to verify¹⁸³
2 what Rose is pointing out here.

3 Is there something in place for
4 the Hanford internal guidance that the dose
5 reconstructor will know to apply this to OTIB-
6 52 coworker dose, or correction factor?

7 MR. HINNEFELD: I think I'll defer
8 to Scott, since I don't do dose
9 reconstruction. Maybe he can fill in or -- I
10 don't know if he's a Hanford guy or not. Or
11 somebody else on the phone?

12 MS. K. BEHLING: Because --

13 MR. SIEBERT: Sorry. I'm just
14 fighting with my new keys.

15 I don't recall whether it's
16 specifically in any of the Hanford-specific
17 guidance. But as you say, OTIB-52 was clear
18 about it, and trust me, everybody knows that
19 that's the issue that they need to be working
20 through.

21 I'd have to check the tools to see

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1 if it's specifically implemented in the tools¹⁸⁴
2 or not. But, I mean, the bottom line still is
3 that OTIB-54 is the operative document, and
4 dose reconstructors know that.

5 MS. K. BEHLING: I guess my
6 feeling would be I'd be willing to close 19,
7 20 and 21, I guess. But 18, I think, this
8 Hanford internal one, let's look a little
9 further at that.

10 CHAIR MUNN: Is that agreeable
11 with the Subcommittee?

12 MEMBER BEACH: Yes.

13 CHAIR MUNN: We'll carry over 18.

14 MEMBER ZIEMER: Yeah, that's fine
15 with me.

16 CHAIR MUNN: SC&A has the action
17 to look further.

18 MR. STIVER: Okay.

19 CHAIR MUNN: Any other items that
20 need to be addressed on PER 14?

21 MS. MARION-MOSS: Wanda, this is

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1 Lori. 185

2 CHAIR MUNN: Yes, Lori?

3 MS. MARION-MOSS: I'm looking
4 through OTIB-52, and it states apply a factor
5 of two for Hanford claims.

6 CHAIR MUNN: Yes.

7 MS. MARION-MOSS: On the internal
8 section 6.2.

9 CHAIR MUNN: Yes.

10 MR. STIVER: Yeah, Lori, the
11 comment was about how is that carried into the
12 specific direction to Hanford? You know, the
13 Hanford Site Profile, does it point to TIB-52
14 or does the tool or -- you know, Scott has
15 told us, look, everybody knows that. So it's
16 not a question of whether it's in TIB-52, it's
17 a question of, does something about Hanford
18 make sure you know that you have to look at
19 TIB-52? So the fact that it's in 52 doesn't
20 really matter.

21 MS. MARION-MOSS: Okay. I

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1 address those today. 187

2 CHAIR MUNN: Are they currently
3 open? Do we have responses to them?

4 MS. MARION-MOSS: Yes, we do.

5 CHAIR MUNN: All right. Then we
6 certainly should address them. I'm sorry, I
7 thought all of the information was on that
8 list that we just received. Sorry about that,
9 Lori. Why don't you take us to the first such
10 item, and we'll address that finding. Which
11 finding are we looking at for PER 0014?

12 MS. MARION-MOSS: We have finding
13 1 and it's in progress.

14 CHAIR MUNN: And our response to
15 it?

16 MS. MARION-MOSS: It's entered
17 into the BRS and we have Matt on the line to
18 respond to it.

19 CHAIR MUNN: That's good. Matt?

20 MR. SMITH: Repeat all that one
21 more time, which one are we on?

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1 CHAIR MUNN: PER 0014, item 1¹⁸⁸
2 finding 1.

3 MR. SMITH: This was the item I
4 believe where there were questions about
5 prorating, correct?

6 CHAIR MUNN: I have been trying
7 for five minutes to get the proper thing on my
8 screen. And I'm not getting it there. But,
9 yes, it's deep dose adjustment factor may not
10 be claimant-favorable. That's the finding.

11 MR. STIVER: Yes, that's it, Matt.

12 MR. SMITH: On this one we went
13 back into the raw data for the Rocky Flats
14 analysis. That was one of the data set where
15 prorating was possible. On the other data
16 sets, there was not sufficient data in those
17 to accomplish any kind of prorating, but with
18 Rocky Flats we were able to.

19 And when we looked at the
20 comparison between what we saw with the other
21 sites, the prorating did not result in us

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1 seeing that the 1.4 factor was not sufficient,¹⁸⁹
2 The bottom line is the Rocky Flats is prorated
3 per the concerns that came up, but 1.4 turned
4 out to be actually a bounding result.

5 And, there, Wanda has brought up
6 the spreadsheet where we went back and looked
7 at that.

8 CHAIR MUNN: Thank you, Matt.

9 MR. SMITH: Yeah, this is
10 something we did a while ago.

11 CHAIR MUNN: Any reaction from
12 SC&A?

13 MR. SMITH: I recall we discussed
14 this a meeting or two ago.

15 CHAIR MUNN: Yeah, I recall it.

16 MR. STIVER: This is John Stiver.
17 I recall that discussion.

18 CHAIR MUNN: Yeah, I do, too. Bits
19 and pieces of it. Do we find that answer
20 acceptable?

21 MR. HINNEFELD: There is a lot

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1 here. I mean, if SC&A would -- you know, they¹⁹⁰
2 might need a little key to the spreadsheet.
3 You know, how to interpret this spreadsheet,
4 and how this spreadsheet supports it. And
5 although maybe it's apparent, there's a lot of
6 data on that spreadsheet. So maybe if you did
7 have a chance to look at it. I think you're
8 asking them a lot to ask them to recommend a
9 closure here, because there's a lot.

10 MR. STIVER: Yeah, I kind of
11 missed a little bit of the discussion.

12 MR. HINNEFELD: Yeah, I think
13 there's a -- the spreadsheet is -- probably if
14 you spend some time looking at it, I think you
15 can probably understand it. I've just glanced
16 at it and kind of intimidated by its size. But
17 if you need any help, let us know. If you
18 need some interpretation, let us know. And
19 because that's supposed to contain the
20 supporting information that allows us to
21 conclude that partial year doses don't require

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1 a different adjustment factor. 191

2 MR. STIVER: Yeah. Let's go ahead
3 and keep that open for now, and we'll go ahead
4 and look through it and make any
5 recommendations if we think that it needs some
6 sort of a key.

7 CHAIR MUNN: Finding 1 will remain
8 open in progress. Action next time is SC&A's.

9 Then we have -- am I correct, Lori
10 -- finding 3?

11 MS. MARION-MOSS: Right. And
12 finding 3 says a shallow dose adjustment
13 factor may be required. Annual shallow doses,
14 like penetrating doses received by CTWs, may
15 have been understated. In the event NIOSH --
16 I don't need to read that.

17 And, Matt? Do you want to -- the
18 last item that I show with finding 3 is a
19 response from Matt last October. So since we
20 are carrying over finding 1, we can assume
21 that finding 3 also will be addressed in the

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1 response to finding 1. Is that correct, John?
192

2 MR. STIVER: That is correct.

3 CHAIR MUNN: All right. Three is
4 a carryover, action SC&A.

5 And then is that all of them?

6 MS. MARION-MOSS: That's it,
7 Wanda.

8 CHAIR MUNN: All right. Very
9 good. Thank you, Lori.

10 MR. SIEBERT: Wanda?

11 CHAIR MUNN: Yes.

12 MR. SIEBERT: This is Scott
13 Siebert.

14 CHAIR MUNN: Yes.

15 MR. SIEBERT: I just wanted to
16 point out, on number 18, which was back in
17 Hanford, while you were doing this I was
18 frantically doing some searching.

19 CHAIR MUNN: Yes.

20 MR. SIEBERT: The internal
21 dosimetry coworker tool for Hanford does have

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1 the construction trade worker information¹⁹³ in
2 it, and it actually defaults to assuming that
3 the employee is a CTW unless the dose
4 reconstructor changes the toggle to a non-CTW
5 individual.

6 So we do have that information
7 directly in the tool itself.

8 CHAIR MUNN: Oh, good. Does that
9 make everybody feel better?

10 MS. K. BEHLING: Yes.

11 CHAIR MUNN: Does that, in fact,
12 make it possible for us to close this?

13 MS. K. BEHLING: Yes.

14 CHAIR MUNN: Good.

15 MR. STIVER: SC&A agrees, go ahead
16 and close it.

17 CHAIR MUNN: Thank you, John. When
18 we post item 18, we'll show as it was accepted
19 and closed as of this date.

20 Anything else on PER 0014?

21 (No response.)

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1 CHAIR MUNN: Thank you for calling
2 the in-progress items to my attention, Lori, I
3 appreciate that.

4 MS. MARION-MOSS: No problem.

5 CHAIR MUNN: If not, then we'll
6 move on to PROC-44. Status is, I believe John
7 Mauro is going to give us that. John?

8 DR. MAURO: Yes, I'm here. And
9 the PROC-44 report, I have a copy of it here,
10 I don't know if you folks have it in front of
11 you. But basically we already prepared a
12 procedure, it's called the original PROC-44
13 Special Exposure Cohort. It basically is
14 guidance that ORAU gives to its -- well, to
15 its SEC petition reviewers on the process to
16 use. That effectively is done to comply with
17 the requirements of Part 83. And we were
18 tasked to review that procedure, and the
19 report that you have in your hand is dated
20 October 15th, 2012.

21 What our report really boils down

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1 to, it has three elements to it. They're^a₁₉₅
2 bunch of findings, but I think it's better we
3 start with the macro. The three classes of
4 investigations that we did that resulted in
5 these findings are -- the first one is, there
6 -- it turns out that NIOSH issued their own
7 procedure relatively recently, more recently
8 than this original PROC-44. I think it was
9 called 004, it's a DCAS procedure. So which
10 basically -- so you can always think of it
11 like there's like a hierarchy of documents.
12 There is Part 83, which is the regulations for
13 what needs to be done to evaluate and make a
14 decision regarding sufficient accuracy
15 ultimately for an SEC.

16 Then underneath that are --
17 feeding into that, implementing that
18 regulation is a DCAS-PR-004. Yes, DCAS-PR-
19 004. And then below that is a hierarchy of
20 guidance. ORAU has its procedure that it
21 follows.

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1 Now, what happened here is that, we
2 were asked to review the ORAU PROC-44, which
3 was written a while ago before DCAS-PR-004 was
4 written. So one of our first classes of
5 findings is what I would call more
6 administrative, in that we had six findings
7 that there seems to be incompatibilities
8 between the flow of direction and instruction
9 given. Starting with the Part 83, flowing to
10 DCAS-PR-004 and then flowing down to PROC-44.
11 And there were six of those.

12 So let's first see if we can --
13 and there was a response that was provided in
14 writing by NIOSH related to the first -- well,
15 I'll call it six findings which deal with this
16 administrative incongruity. So I'll call it
17 that. And there was a response to each of
18 those.

19 And Steve Ostrow, who I believe is
20 on the line --

21 DR. OSTROW: Yeah, I'm here.

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1 DR. MAURO: Great, thanks, Steve¹⁹⁷
2 He could relate to you -- he
3 looked at those responses and what the plans
4 are to deal with the concerns we raised.

5 And, Steve, if you could summarize
6 our recommendations regarding closure of one
7 through six?

8 DR. OSTROW: Well, the
9 recommendations basically on NIOSH, the last
10 time I looked at the Board Review System, all
11 of them begin "ORAU is currently revising
12 ORAU-PROC-44 to match the applicable content
13 in DCAS-PR-004, Rev 1." So it's basically
14 that their revised procedure, the ORAU-PROC-
15 44, the revised one when it comes out, will
16 address all of these issues.

17 A lot of those issues arose
18 because there was mismatch between the ORAU
19 PROC and the DCAS-PR-004. And, of course,
20 there's five or six years' difference in the
21 issue date between the two.

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1 So the first -- all six of the¹⁹⁸
2 the first six of the findings are all, I
3 guess, in abeyance until we see the new
4 procedure.

5 MR. MARSCHKE: Well, wait a
6 minute. This is Steve Marschke.

7 We recommended they be put in
8 abeyance. The Subcommittee hasn't put them in
9 abeyance.

10 DR. OSTROW: Okay, yes. And can
11 we recommend the six going in -- the one
12 through six go in abeyance until we actually
13 see the revised PROC-44?

14 CHAIR MUNN: If we put this into
15 abeyance, then from our standpoint, SC&A has
16 accepted the proposals that have been made
17 with respect to changes.

18 DR. OSTROW: Well, Wanda, the
19 proposals, at least if I'm reading it
20 correctly, that NIOSH has made is basically
21 they're saying they're going to incorporate,

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1 you know, in the revised PROC. 199

2 CHAIR MUNN: Yes.

3 DR. OSTROW: Until we see it,
4 though, we can't actually comment on it, at
5 least not detailed. They're saying, yeah,
6 we're agreeing that we'll take care of it.

7 I mean, does NIOSH disagree with
8 that assessment?

9 MR. HINNEFELD: Yeah, when the
10 review came up, we recognized that the ORAU
11 procedure was badly out of date and needs to
12 be revised. And so it will be revised to make
13 it consistent. I mean, I don't see the issue.
14 I mean, almost every other time when we've put
15 something in abeyance, before we end up
16 closing it, you know, the Subcommittee takes
17 another look at how the change was actually
18 made. And did we make the change in
19 accordance with what was expected.

20 DR. OSTROW: Yeah.

21 MR. HINNEFELD: So I don't see the

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1 issue here. 200

2 DR. OSTROW: I think we agree with
3 you.

4 DR. MAURO: I think this is really
5 a matter of catch-up. Making sure that
6 everything lines up. And there's really
7 nothing -- certainly it would be good for --
8 certainly an abeyance. When the new version
9 comes out, we can just tick off, oh, yeah,
10 they revised it. Revised it. But we have no
11 doubt that it's a straightforward process,
12 just to update PROC-44.

13 CHAIR MUNN: I'm glad this
14 encompasses all six findings.

15 DR. OSTROW: Yes, the first six.

16 MR. HINNEFELD: The first six.

17 CHAIR MUNN: Then we'll make that
18 notation and place it in abeyance, if that's
19 in conjunction with --

20 MR. STIVER: Yes, we'll go ahead
21 and place it in abeyance, the first six.

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1 CHAIR MUNN: Yes. Ted? 201

2 MR. KATZ: Yeah. Just -- and I
3 think we talked about this, but the slip-up
4 here was just, as a whole, everybody, however
5 it worked out, which we want to do better is
6 that, if we had understood better the
7 situation with PROC-44, we would never have
8 assigned this. Because it was silly to assign
9 SC&A to spend their time doing something when
10 it was really just an out of date document
11 that was recognized already was out of date.

12 CHAIR MUNN: Any objection or any
13 comment from the Committee Members? Josie?

14 MEMBER BEACH: I agree.

15 CHAIR MUNN: Paul?

16 MEMBER ZIEMER: No objection.

17 DR. OSTROW: This is Steve Ostrow.
18 Can I just ask a question of NIOSH?

19 What's your schedule? When do you
20 think you'll actually issue the Rev 1?

21 MR. HINNEFELD: I don't think we

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1 have that on a schedule, unless ORAU wants to²⁰²
2 offer anything. I don't know of a schedule
3 date for it.

4 DR. OSTROW: Okay.

5 DR. MAURO: I could -- should I
6 continue now going on to the -- what I would
7 call now the more technical comments?

8 CHAIR MUNN: I believe so. Please.

9 DR. MAURO: Okay. Now, there are,
10 I believe, three technical comments that have
11 come out. And I think it's 7, 8, 9, maybe a
12 10 -- 7, 8, 9 and 10. And, again, we need to
13 group these -- and, Ted, in this case, I would
14 agree regarding the fact that we maybe jumped
15 the gun on 44, except that I think that some
16 of the things that we had to say in findings 7
17 through 10 add some value and are timely. And
18 the reason I say that is -- I'll explain.

19 You know, we could go through each
20 one, but it's more important to talk about it
21 conceptually. The way in which PROC-44 reads

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1 is the emphasis -- and this is starting with
2 finding 7, but they also pull together -- the
3 emphasis is on going back to Site Profile.
4 And, in effect, the Site profile becomes the
5 prime document that's used to evaluate the SEC
6 petition and prepare the Petition Evaluation
7 Report.

8 And, in addition, the way that
9 PROC-44 is written, it emphasizes that the
10 dose reconstructions that already were
11 performed as this is how you -- where you
12 start.

13 Our concern is really on two
14 levels. One, I think the place that you start
15 your review of an SEC petition is not with the
16 Site Profile or previously performed cases. It
17 should go back to the original data. And I
18 don't think the Site Profile, the kind of
19 words that are used in the write-up, was never
20 intended to be the protocol for reviewing SEC
21 petitions. And the kind of information that's

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1 there were developed as works in progress and
204
2 are useful to the dose reconstructor.

3 But it really doesn't go to the
4 issues related to data completeness, data
5 inaccuracy and data sufficiency. And so I
6 would -- one of our findings is that there's a
7 need to give more explicit direction to the
8 people doing the SEC Petition Evaluation
9 Report on the process you go through to check
10 data completeness, data accuracy and
11 sufficiency. And in a funny sort of way,
12 that's exactly what SC&A does when we are
13 asked to review an SEC.

14 We go in and we dive into the
15 data. Do you have measurements of this and
16 of that by different categories of workers, et
17 cetera, et cetera, it goes on. And to a
18 certain degree, the current version of PROC-
19 44, the old version we reviewed, has some of
20 that language, but that sort of comes toward
21 the end.

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1 And so the findings we have^I₂₀₅
2 would say are more along the lines of
3 suggestions. The finding is something where
4 we found something that was incorrect. And
5 I'm not saying there's anything incorrect
6 here. There's nothing about what was written
7 here that it could really be said is
8 incorrect.

9 What we are really, quite frankly,
10 trying to do is that, SC&A has benefitted from
11 ten years of reviewing -- well, yeah, ten
12 years of reviewing about 34 SEC petition and
13 Petition Evaluation Reports. And we've
14 encountered so many different kinds of
15 circumstances, each one is unique. There's no
16 doubt about it.

17 But it always goes toward the
18 completeness of the data, the accuracy of the
19 data, the adequacy of the data, and whether or
20 not there's an issue-related data
21 falsification. You know, if the data upon

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1 which everything is based can pass the test²⁰⁸
2 those tests, and we come out of this -- SC&A
3 comes out of it saying I think you've got
4 solid data and is complete and accurate and so
5 forth.

6 But you see that the emphasis goes
7 toward the data. And in each case what we do
8 is really creative. We sit down with the data
9 and we say, what do we have to do to convince
10 ourselves that you have enough trade worker
11 data, that you have -- you know, I would say,
12 the flagship of lessons learned in terms of
13 process would be Fernald. In terms of what we
14 just went through, as everyone's experienced
15 over the last couple of days.

16 So I guess all I'm really saying
17 here with my comment is that to get to data
18 completeness, data accuracy, and it turns out
19 I was listening to -- I was part of the group
20 listening to the original sufficient accuracy
21 Work Group meeting a week or so ago. And then

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1 again I listened to the discussion, and ^{the} ~~the~~ ₂₀₇
2 slides that were, you know, put up that NIOSH
3 prepared. It was yesterday or day before
4 yesterday. And I would say that those, the
5 slides, those three pages of slides were right
6 on target.

7 So I guess where I'm headed is
8 some of the concept suggestions concerns that
9 I wrote up and we wrote up in findings 7
10 through 10 are answered. They're answered
11 primarily with the three-page checklist or
12 outline that -- when I looked at it I said,
13 bingo, that's it. That's what -- that's the
14 answer. And it was the checklist or outline -
15 - and maybe Stu could address, you know, what
16 the intent was of that.

17 But what I saw there was exactly
18 the direction that I felt PROC-44 should be
19 based on. That type of approach.

20 So, in my mind, I think that a lot
21 of my concerns that were raised in 7 through

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1 10 have been resolved with regard -- by just²⁰⁸
2 looking at that three-page checklist. That is
3 exactly the direction that I feel needs to be
4 taken.

5 So these are kind of funny, these
6 findings 7 through 10, because they're more
7 like suggestions as opposed to findings. And
8 I think you folks are already working PROC-44,
9 you just heard. And the extent to which you
10 expect PROC-44, the next version, to start to
11 look a little bit more like that outline that
12 was presented during the full Board meeting, I
13 think these issues can be put in abeyance.

14 We'd like to see them, of course,
15 when they come out. I think those findings --
16 that goes a long way toward resolving some of
17 the concerns I have.

18 CHAIR MUNN: Any thoughts or
19 comments with regard to those three or four --
20 no, just three, right?

21 MEMBER BEACH: Seven, eight, nine,

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1 ten. I think they were -- 209

2 (Simultaneous speaking.)

3 MR. MARSCHKE: Ten is a little bit
4 different, I think. Ten -- you had
5 recommended ten be put in abeyance.

6 DR. MAURO: Oh, okay. Let's do--

7 MR. MARSCHKE: Seven, eight and
8 nine, you had recommended they remain in
9 progress.

10 DR. MAURO: Oh, yeah, 10 was
11 referring to surrogate data.

12 MR. MARSCHKE: Yes.

13 DR. MAURO: Oh, yes. And I think
14 that that was one of the items in your
15 checklist. I don't know, Stu, if you're
16 there, if I recall, when I was looking at your
17 checklist, I think surrogate data was one of
18 the items in it.

19 DR. NETON: Yeah, this is Jim.
20 It is in the list. That checklist, by the
21 way, is going to be developed, eventually, I

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1 think the concept is sort of an implementation²¹⁰
2 guide of sorts. That was really presented to
3 the Board as a concept as to what might go in
4 such a document.

5 DR. MAURO: Yeah. Well, I mean,
6 to me, that is exactly what PROC-44 is about.
7 The guidance on what do you -- you know, how
8 do you go about evaluating data and records,
9 you know, to determine the degree to which you
10 meet the test of sufficient accuracy. And
11 you've laid it out, the elements of it.

12 And so I guess all I have to say
13 is that those elements were what I was looking
14 for in PROC-44. Which I felt really weren't
15 there, and are not developed the way they were
16 developed and maybe will be developed as you
17 work through the sufficient accuracy process.

18 CHAIR MUNN: And that's --

19 DR. MAURO: This is another
20 example of trying to break down the stovepipe.
21 It sounds like some great things going on, on

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1 sufficient accuracy, which has a direct²¹¹
2 applicability to a procedure review.

3 CHAIR MUNN: True. So the bottom
4 line is we are carrying over 7, 8, 10,
5 correct?

6 DR. MAURO: Well, let me ask --

7 MR. MARSCHKE: No.

8 CHAIR MUNN: No?

9 DR. MAURO: Let me ask the
10 Subcommittee. As far as I'm concerned, given
11 what I saw the other day related to sufficient
12 accuracy presentation to the Board, I think
13 all these findings are in abeyance if that, in
14 fact, is a commitment that NIOSH is prepared
15 to make when they revise PROC-44.

16 MR. HINNEFELD: Yeah, sure, we'll
17 do that.

18 CHAIR MUNN: So that means they
19 are all in abeyance?

20 MR. MARSCHKE: We haven't got that
21 commitment from NIOSH at this point, have we?

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1 CHAIR MUNN: They just did²¹²
2 verbally.

3 DR. MAURO: And I have to say, I'd
4 really like to see it when it's done, because
5 this is about as tough as they come, you know,
6 to try to give these kinds of guidance. But,
7 yeah, as far as my recommendation, given that
8 commitment, I think you should put it in
9 abeyance.

10 CHAIR MUNN: Any comment from any
11 Subcommittee Members?

12 MEMBER BEACH: No, I agree.

13 MEMBER ZIEMER: This is Ziemer. I
14 do also question whether we would really call
15 them findings. I think that we certainly
16 would like NIOSH to respond to the
17 recommendation in terms of if they are --
18 they're not --

19 CHAIR MUNN: You're breaking up,
20 Paul.

21 DR. MAURO: You're breaking up,

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1 Paul. Yeah. 213

2 MEMBER ZIEMER: Yeah, I'm on a
3 cell phone, that's part of the problem. But,
4 anyway, I think they are recommendations, is
5 what they are.

6 DR. MAURO: Yeah.

7 MEMBER ZIEMER: Because, as you
8 say, you're not identifying errors or not even
9 really identifying shortcomings so much as
10 identifying ways to improve and expand what's
11 being done.

12 DR. MAURO: Exactly.

13 MEMBER ZIEMER: But I think it has
14 to be tracked, and I think it's important.
15 That may just be a technical thing. Maybe
16 it's just as easy to call it a finding and
17 track it that way. But the implication is
18 there's an error that's made, that's what
19 concerns me.

20 CHAIR MUNN: No, it's really more
21 of an observation than a finding --

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1 DR. MAURO: Yeah. 214

2 CHAIR MUNN: -- as we've treated
3 things in the past. But if we want to
4 continue to have them appear as we have them
5 already loaded on the database, then that's
6 fine. Or we can change them to observations,
7 if that's -- I think either way they'll be
8 tracked.

9 MEMBER ZIEMER: And I'm not sure --
10 - it's not as clear at this point exactly what
11 NIOSH is committing to in this case, except as
12 a general concept. I think we all kind of
13 what to see what it looks like at the other
14 end.

15 MR. HINNEFELD: Yeah, that's
16 understood. And in fact, if in fact the
17 sufficient accuracy guidance gets written into
18 an IG, you know, that would be essentially --
19 that could be incorporated by reference to the
20 procedure. The procedure could just refer to
21 the IG.

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1 MEMBER ZIEMER: Right. 215

2 MR. HINNEFELD: I mean, it's an
3 evolving -- the sufficient accuracy discussion
4 is evolving process and so we can't commit
5 today to what we're going to say.

6 CHAIR MUNN: Yeah. We will place
7 it in abeyance.

8 DR. MAURO: Before we leave the
9 subject, there is a third element regarding
10 our report that I just wanted to alert
11 everyone to.

12 One of the things we did here is
13 included in an attachment. And this is
14 certainly again another suggestion; it's
15 certainly not a finding by any means. What we
16 found was -- in fact, we've done a lot of
17 this, in light of -- you know, on the program.

18 Every time we encounter an SEC
19 that becomes a struggle, such as Fernald and
20 Mound and General Steel, and every one of
21 these poses a unique problem. Nevada Test

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1 Site. But they start to fall into classes² of
2 problems. They almost like self-organize. And
3 you can actually start with examples.

4 What I mean by that is, here's an
5 example of a place where we did not have
6 enough data on tritium. Here's another place
7 where the actual data we had, the tritium
8 might be something like the tritide issue that
9 we encountered on Mound and how it was solved
10 or not solved.

11 Another case may be where there is
12 -- the data you do have, chest count data for
13 thorium, where you have lots of data, or DWE
14 data, you know, beautiful example there. What
15 I'm getting at is we collectively have been
16 through the wars, so to speak, for ten years,
17 you know, dealing with the most difficult of
18 problems that you could possibly deal with,
19 and did a lot of examples.

20 Now, we included in a few examples
21 an Attachment A of strategies that we have

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1 used to try to make a judgment and²¹⁷
2 recommendation to the Board related to
3 sufficient accuracy. You know, I didn't call
4 it -- whether we think we have complete data
5 or adequate data.

6 I think that -- and we have a lot
7 of this already ourselves, and I'm sure NIOSH
8 and their contract have it also. But these
9 examples could be collected and almost be
10 tutorial in nature for someone that is
11 struggling with coming up with a strategy that
12 would meet -- where we would agree when we see
13 it -- the test of sufficient accuracy. And I
14 think examples could be helpful.

15 So all I'm doing now is making the
16 suggestion that a compendium of that sort
17 trying to capture how issues were dealt with
18 in the past could very well be an attachment
19 to a procedure like this. But it would be
20 helpful. And I think -- and the reason I've
21 given a lot of thought to this is we recognize

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1 that the cost and the time that this program²¹⁸
2 has been burdened with -- and rightly so --
3 has to do with issues resolution related to
4 complex SEC Petition Evaluation Reports.

5 And I think a lot of the
6 disagreements and the site visits and the data
7 captures and the interviews went toward
8 filling in what we felt were apparent gaps.
9 Not in all cases did we agree, certainly, but
10 there was a process we went through.

11 I think if somehow that process,
12 with examples, could be captured and written
13 up, it would shorten the issues resolution
14 process. That is, your SEC Petition
15 Evaluation Reports, in my opinion, would be
16 improved. The ones that we found that were
17 problematic, there are others that were fine,
18 but some we at SC&A found problematic.

19 I think, you know, by having
20 examples like that, we may be able to clear
21 SEC Petition Evaluation Report reviews much

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1 more quickly if some of -- you know, if²¹⁹
2 little more thought -- it sounds like I'm
3 being critical of you guys, but I don't mean
4 to be. I'm just trying to say, I stand back
5 and I look at the ten years, I say, gee, look
6 at what we learned. Look at what we learned
7 on Fernald, for example.

8 The last time, and I'll stop
9 talking, is you may want to think about
10 putting together a compendium of examples that
11 would be helpful to your reviewers to draw
12 upon. And part of your training program, like
13 when you put people through training, and when
14 you put your people through training for SEC
15 Petition Evaluation Report reviews, examples
16 of precedent established through ten years of
17 experience might be very helpful.

18 CHAIR MUNN: Thank you, John. Any
19 comments with respect to those observations?

20 (No response.)

21 CHAIR MUNN: If not, then we're at

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1 a point where we're a little past due ~~for~~
220
2 lunch. I think we need to break now. We had
3 originally programmed our lunch for 45
4 minutes. I'd like for us to try to stick to
5 that if we possibly can, but I don't know if
6 we can. We'll make an effort to be back at a
7 quarter after the hour, if that's adequate,
8 and we'll see what the best thing is that we
9 can do in 45 minutes. We'll be back online at
10 a quarter after.

11 (Whereupon, the above-entitled
12 matter went off the record at 2:31 p.m. and
13 resumed at 3:37 p.m.)

14
15
16
17
18

1 Blockson, and we are now at the process ^{of} ~~222~~
2 sub-task 4, which is the review of two cases
3 that were selected by the Subcommittee back in
4 February.

5 I had thought that I was going to
6 have that report completed by this meeting,
7 but unfortunately I was not able to do that,
8 and I apologize. So I really don't have
9 anything to report, and I will promise to have
10 that report ready for the next meeting.

11 CHAIR MUNN: All right. Fine,
12 thank you, Kathy. Appreciate it.

13 PER 11 response? NIOSH?

14 MR. HINNEFELD: Yeah, this is Stu,
15 and I am struggling to get my computer going
16 so I can read our response. It was
17 distributed on the same email that I mentioned
18 a while ago with PER 14, it was sent
19 yesterday. And there is an attachment.

20 MS. MARION-MOSS: This is Lori.

21 Steve, I just sent you and Stu an

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1 update to the PER 11, because the findings are ²²³
2 not in the BRS I've sent a version of that, of
3 our responses with the findings attached.

4 MR. MARSCHKE: Yeah, I got that
5 note that you sent out at 2:26 this afternoon?

6 MS. MARION-MOSS: Correct.

7 MR. MARSCHKE: Yeah. That's what
8 I have up on my LiveMeeting now, the one that
9 you sent today.

10 CHAIR MUNN: Yeah, we see it now,
11 Steve. Thank you. Stu is just getting his
12 electronic equipment in the right place at the
13 right niche.

14 If you want to trust my screen,
15 Stu, I'd be glad to give it to you here.

16 MR. HINNEFELD: Let me try one
17 more thing here.

18 CHAIR MUNN: Okay. Just come join
19 me. You can even have the chair, since you're
20 going to be the speaker.

21 MR. HINNEFELD: Thanks.

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1 Okay. This is Stu, if -- other²²⁴
2 people, I think, can see LiveMeeting and the
3 response that Steve is, I guess, displaying.
4 This is a fairly extensive response, and so I
5 think we have an explanation for the cases,
6 and the particular issue of the finding.

7 I don't know that I need to -- I
8 think I can explain more than what's written
9 there, so I'd just say that, you know, this
10 response which we just provided, there's
11 really not much point in a discussion of it. I
12 think we'll get it in the system and then
13 SC&A, after this, can go ahead and follow up,
14 okay?

15 CHAIR MUNN: Has SC&A even had an
16 opportunity to take a look at what the finding
17 is?

18 MR. STIVER: Excuse me, I couldn't
19 hear you, Wanda.

20 CHAIR MUNN: I was inquiring
21 whether SC&A has even had an opportunity to

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1 look at this -- 225

2 MR. STIVER: No, we haven't.

3 CHAIR MUNN: -- at these
4 responses.

5 MR. STIVER: This is the first
6 we've seen them.

7 CHAIR MUNN: Okay. Very good.

8 So at a -- just a quick reading,
9 any comments or just prepare a response next
10 time?

11 MR. STIVER: I feel more
12 comfortable getting a more in-depth look at it
13 and preparing responses.

14 CHAIR MUNN: All right. Very
15 good. For each of the findings or --

16 MR. STIVER: Well, I haven't read
17 it, so I can't really --

18 CHAIR MUNN: Oh, okay.

19 MR. HINNEFELD: Yeah, I mean, some
20 of these things are -- I mean, they just got
21 it. I mean, the second one is a typographical

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1 error that was made in a couple of places,²²⁸
2 it's supposed to say "May 31st" instead of
3 "May 21st," or the other way around. It made
4 it look as if there were a ten-day gap that
5 may not have been considered. But in fact,
6 the actual decisions were made based on the
7 correct date. So the typographical error
8 didn't affect the selection in cases.

9 We've looked at those but, you
10 know, if you want to take an additional look
11 and verify that, that would be something --

12 CHAIR MUNN: That's fine. The
13 total number of responses we have here is, for
14 finding four. And further than that.

15 MR. HINNEFELD: Okay. Finding 4
16 was the finding that we talked about earlier
17 that, you know, we may ask for a claim back
18 that we don't get back. Everything we get
19 back, we do. But sometimes we ask for claims,
20 we don't get them back. I talked about that
21 and the reasons why, when we were talking

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1 about PER 14. 227

2 MR. STIVER: Yeah, that's similar
3 to the previous finding. I think we can
4 probably close that one.

5 MR. KATZ: I have a question.

6 CHAIR MUNN: Yes?

7 MR. KATZ: I was just wondering, I
8 mean, I know Kathy wants to review these. But
9 I wonder if the Subcommittee can't just take
10 it on faith that they do all -- that they do
11 all the reworks that they receive, and that
12 not be an issue for having --

13 CHAIR MUNN: We will probably be
14 able to do that once we are assured that
15 SC&A's had an opportunity to even see the
16 responses. The responses probably will be
17 self-explanatory in most cases. But --

18 MR. KATZ: No, I just mean on this
19 issue of this specific question of, did DCAS
20 do all the reworks that they were supposed to
21 do? I think -- I don't know --

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1 CHAIR MUNN: Finding 228⁴

2 specifically, let's take a moment --

3 MR. KATZ: This came up elsewhere,
4 and again we have a problem with -- I mean,
5 SC&A's in a bad position to be able to
6 actually identify. And then the answer, of
7 course, ends up being that, yeah, they've done
8 -- they did everything they got, but they
9 didn't get everything that they asked for
10 because of -- we all understand those reasons.
11 So I'm just wondering whether it's worth SC&A
12 spending time looking at that question, even.

13 CHAIR MUNN: Well, SC&A posed the
14 question, and so they may --

15 (Laughter.)

16 MR. HINNEFELD: This is for an
17 action going forward. I mean, this is -- Ted
18 is talking about going forward, there is no
19 need to bring this up again.

20 CHAIR MUNN: No, no.

21 MR. HINNEFELD: All these things

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1 that we've talked about so far were written²²⁹
2 before we had any discussion about it.

3 MR. STIVER: Exactly. So we're
4 going to see the same kind of finding pop up
5 again, and you know, we've cleared it. In the
6 future we won't -- we have an explanation now,
7 and I think that's satisfactory.

8 CHAIR MUNN: That's fine. It's
9 probably all you need --

10 MS. K. BEHLING: I think there's
11 one thing that we haven't addressed, though,
12 is that in future files or PER cases, it says
13 that the claim was reworked in the main
14 documentation, and that's not actually the
15 case.

16 MR. HINNEFELD: Now, I think
17 what's happening is that there is the
18 invitation. If the claim came back, it's been
19 reworked, I'm absolutely confident of that.
20 And so there may be a statement that this
21 should be reworked or it will be reworked, or

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1 there are -- sometimes in the PER process,²³⁰
2 there will be statements that this claim was
3 reevaluated. And for some reason -- you know,
4 and part of that reevaluation has to do -- you
5 know, the reevaluation indicated that there's
6 no need to give it back.

7 And so that's one of the items I
8 was going to check on from our discussion
9 earlier is, exactly what is that process and
10 where is that information kept? Because the
11 way that SECs -- or the PERs work now is that,
12 DOL does not return the claim unless the
13 decision, the compensation decision is going
14 to change. And we evaluate it beforehand. We
15 apply the -- you know, we take the PER, we
16 reevaluate the claim with respect -- you know,
17 in light of the new technical direction that
18 gave rise to the PER. And if the outcome does
19 not claim -- does not change, if the
20 compensability outcome does not change, then
21 DOL does not send it back, okay?

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1 So a claim can -- we might say²³¹
2 claim was reevaluated. That doesn't mean
3 another dose construction was done. It means
4 it was evaluated, given the new technical
5 direction and it didn't change. And so -- but
6 I'm going to have to see what those forms say,
7 because I kind of lost track of the process
8 and what's actually being written on those
9 forms.

10 CHAIR MUNN: So as I suggested
11 originally, do we have any problem with
12 placing all of these as an action item for
13 SC&A review next time?

14 MEMBER BEACH: No.

15 CHAIR MUNN: Do you have any
16 problem with that, Paul?

17 MEMBER ZIEMER: No problem with
18 that.

19 CHAIR MUNN: All right, very good.
20 Responses for SC&A next time.

21 MR. STIVER: We will take that as

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1 an action. 232

2 CHAIR MUNN: Thank you, John.

3 Let's move on to the next agenda

4 item which is PER 11.

5 MEMBER BEACH: That's what we just

6 did.

7 CHAIR MUNN: Yeah, that's what we

8 did. RPRT-53, I did see that. NIOSH.

9 MR. HINNEFELD: Well, give me a

10 minute.

11 CHAIR MUNN: Again, if you want to

12 be here, that's fine.

13 MR. HINNEFELD: I'd rather get

14 this one going.

15 Report 53, Jim, is that you?

16 DR. NETON: Report 53?

17 MR. HINNEFELD: Uh-huh.

18 DR. NETON: Yeah, that's the one

19 we just talked about at the Board meeting,

20 right?

21 CHAIR MUNN: Yes. The stratified

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1 coworkers. 233

2 DR. NETON: Yeah. Well, I'm not -
3 - I don't know what's more to say about it,
4 other than what we discussed at the meeting.
5 And Dr. Melius has decided that the --

6 MS. MARION-MOSS: Jim, I can't
7 hear you.

8 DR. NETON: All right, I didn't
9 have my microphone on.

10 I'm not sure what more to say,
11 other than what I presented at the Board
12 meeting, or we discussed at the Board meeting,
13 and that Dr. Melius has decided that the
14 issues are going to be discussed at a SEC Work
15 Group meeting in the near future.

16 CHAIR MUNN: Shall we compose such
17 a response for at least Item 1?

18 DR. NETON: What's item 1?

19 CHAIR MUNN: We have --

20 DR. NETON: My computer's locked
21 down, I can't get into it.

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1 CHAIR MUNN: Oh, I'm sorry. 234

2 DR. NETON: That's okay.

3 MR. STIVER: Can you scroll us
4 down a little bit so we can be on LiveMeeting
5 so we can see Item 1?

6 CHAIR MUNN: Let us know --

7 MR. HINNEFELD: Steve, can you
8 scroll us down a little bit so that we can see
9 53-1 on LiveMeeting, the text of it?

10 MR. MARSCHKE: Sure.

11 CHAIR MUNN: That's all there is.

12 DR. NETON: Item 1, our square
13 doesn't appear anywhere in report 53. So I'm
14 not sure where that's coming from. It's not
15 mentioned at all.

16 It has been a convention that has
17 been used in -- it has been used in other
18 datasets and other reports, but it's not used
19 in 53.

20 CHAIR MUNN: And it's hard for us
21 to define where -- how the finding was

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1 identified. Does SC&A have any -- 235

2 MR. STIVER: This is John.

3 I'd asked Harry to call in. He is
4 the reviewer of this report, and our
5 statistician who is in the best position to
6 comment on this.

7 Harry, are you online?

8 DR. CHMELYNSKI: Yes, I am.

9 MR. STIVER: Okay, great. Could
10 you kind of lead us through finding 1?

11 CHAIR MUNN: Tell us where that
12 came from?

13 DR. CHMELYNSKI: Yeah. The --
14 basically it comes out of the report, the
15 PROC-0095, and then again in report 44, both
16 of which are incorporated by report 005.

17 MR. STIVER: Yeah.

18 DR. CHMELYNSKI: And I have to
19 admit, yes, I don't see where ours was quoted
20 on any of the graphs. We used to always be on
21 the graphs. They don't provide much

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1 information in the way it fits. And I -- 236

2 MR. STIVER: And this --

3 DR. CHMELYNSKI: I know what we're
4 asking for here is, we'd like to know how you
5 intend to measure the degree of it.

6 DR. NETON: It's really a matter
7 of professional judgment, a person looking at
8 the curve. I mean we -- this has been a
9 finding before, I think when 95 was reviewed.
10 And we went around and around about this, and
11 we acknowledged that the R-square value is
12 biased towards higher correlation because it's
13 ranked. But you know, it comes down to just
14 reviewing the dataset, looking at it and
15 getting a judgment call, professional judgment
16 that the data are adequately represented by
17 that fit.

18 CHAIR MUNN: Well, in view of the
19 fact that this particular report does not
20 specifically refer to the R-square
21 application, then is this still an appropriate

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1 finding for this report? John? 237

2 MR. STIVER: I'll have to defer to
3 Harry on this. What do you think, Harry?

4 DR. CHMELYNSKI: Well, I don't
5 think this is that at all. The earlier
6 reports were -- it was included, and now it's
7 not included in this, but nothing has replaced
8 it.

9 CHAIR MUNN: Well, I personally am
10 hard pressed to try to identify how we can --
11 at least given the current wording, I don't
12 see how we can apply the finding to the
13 existing report.

14 There is a question in my mind
15 whether it's appropriate for this particular
16 report review.

17 MR. STIVER: Could possibly
18 consider transferring it to one of the other
19 reviews and -- I'm not completely -- it sounds
20 like we've talked about this before.

21 DR. NETON: I'll tell you what

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1 I'll do. I'll go back and resurrect the ²³⁸
2 how this issue was discussed in reviews of the
3 other documents. We put this issue to bed, I
4 mean, this is not a new finding. We continued
5 to use 95, it's been reviewed, and we
6 definitely acknowledge that the R-square value
7 was biased toward high correlation.

8 So I'll take that on as an action
9 for NIOSH, to find out how that was eventually
10 resolved in the other reviews.

11 CHAIR MUNN: And perhaps all we
12 need is just a statement that it was resolved
13 in the other reviews, and it is now --

14 DR. NETON: Yeah, I'll verify
15 that. I mean, I'm pretty clear on this was a
16 long time ago, but I was very involved in
17 those discussions.

18 CHAIR MUNN: Yeah, if we could
19 have a clarification, where and when it was
20 resolved, then we can close it here for that
21 purpose.

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1 DR. NETON: Yeah. With regard to
2 the remainder findings, I'm not sure at this
3 point I really would -- it would be beneficial
4 to get involved in a point/counterpoint
5 discussion of these very detailed technical
6 issues. We have prepared a draft response
7 that I am reviewing that we will provide. And
8 it would be better, I think, to speak from
9 that once SC&A has the draft response.
10 Although again, I'm a little bit concerned
11 because we're going to be discussing these
12 outside of this Work Group at the SEC Work
13 Group level. So I'm not sure how we really
14 want to proceed.

15 MR. STIVER: Yeah, this is John.

16 It appears that there's going to
17 be some duplication of effort here.

18 DR. NETON: Yeah. So I don't --

19 CHAIR MUNN: Can we simply defer
20 it? Let's defer it.

21 DR. NETON: I think it might be

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1 best. Because I don't -- having had ^{the}₂₄₀
2 discussion at the working -- at the Board
3 meeting, yesterday, I talked to our
4 statisticians, and they already want to revise
5 some of our responses based on what they're
6 heard. And so I think -- yeah --

7 MR. STIVER: Maybe deferral is the
8 best option until we see how this all plays
9 out, and then we can decide what to do.
10 Because I think --

11 DR. NETON: We'll be meeting
12 within the next several months at the SEC Work
13 Group level to convene this.

14 As much as I'd like to engage in a
15 spirited discussion here --

16 (Laughter.)

17 DR. NETON: -- I think it would be
18 -- I would be better served to --

19 CHAIR MUNN: That's just as well.
20 We can defer that for -- do we have any --
21 when is the Work Group going to convene?

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1 DR. NETON: That hasn't been²⁴¹
2 scheduled. But it will certainly be before
3 the next -- the Board's conference call in --
4 no, not the conference call, the Rocky Flats
5 meeting in October. So I suspect it would be
6 either late August, early September.

7 MR. KATZ: Although it's going to
8 take more than one meeting to resolve it --

9 DR. NETON: It may, yeah.

10 MR. KATZ: -- at that level. It
11 does make sense to have this revised issue
12 addressed first before we plow through the
13 details at this level.

14 CHAIR MUNN: Yeah, it does. Good.
15 We'll defer it with the hope that we might
16 have some report next -- at our next meeting.
17 But since we don't know when that is yet,
18 we'll just say it's deferred.

19 Next item on the agenda is OTIB-
20 55, specifically finding 4. We're going to
21 have a status report from SC&A.

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1 MR. MARSCHKE: Yeah, we looked ~~at~~²⁴²
2 that. That was -- I'm trying to pull it up
3 here now. That was about the conversion
4 factor or quality factor. And it was just
5 basically they were going to -- NIOSH was
6 going to change a reference on a historical
7 quality factor to a different document. And
8 at the last meeting of SC&A, we wanted to go
9 back and check and make sure that, you know,
10 that we could find in that reference the
11 appropriate number. And I did that.

12 And BRS does not seem to be timing
13 here, but -- and so we're ready. Our
14 recommendation has been put into the BRS, that
15 finding 4 will be changed to "in abeyance."

16 CHAIR MUNN: Well --

17 MR. SMITH: This is Scott. ORAU
18 team, that sounds good, and we'll go ahead and
19 do that update, then.

20 CHAIR MUNN: And you tell me, did
21 you Steve, that it's already been uploaded?

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1 Since we're not seeing it on the screen, ~~we~~²⁴³
2 don't know.

3 MR. MARSCHKE: It's been uploaded
4 and -- yes, it has been uploaded.

5 CHAIR MUNN: All right. I guess -
6 -

7 MR. MARSCHKE: It would seem the
8 computer has let me down here.

9 MEMBER BEACH: Steve, we're having
10 the same trouble here.

11 MR. HINNEFELD: Yeah, ditto that.
12 I can get online laboriously. CITGO seems
13 like it's going to take me there but it
14 doesn't. You can open CITGO, you click on
15 virtual desktop, and you don't go anywhere. Or
16 I got a failure.

17 MR. MARSCHKE: Yeah.

18 MR. HINNEFELD: Jim hasn't been
19 able to get on since after lunch.

20 MR. MARSCHKE: Yeah. I'm in the
21 in the BRS, but it won't go off of report --

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1 it just won't move on from report 53. 244

2 CHAIR MUNN: Okay.

3 MR. MARSCHKE: So but it is in
4 there, and basically we do recommend that it
5 be changed to "in abeyance." And that, you
6 know -- so I guess it's up to the Subcommittee
7 if they accept our recommendation. And then
8 we can change it to "in abeyance" when we get
9 a chance.

10 CHAIR MUNN: Of course, it is our
11 tendency to agree with you when you say it's
12 in abeyance. It's a little difficult to be
13 happy about not being able to see what we're
14 agreeing to.

15 MR. MARSCHKE: Yeah. Well you
16 know --

17 CHAIR MUNN: There's nothing we
18 can do if the system is behaving as it is.

19 Assuming -- can I ask my other
20 Subcommittee Members if you could make a
21 notation to check the database yourself

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1 offline when we have an opportunity to ^{do}₂₄₅
2 that? And look at the specific item to see if
3 you have any problem with it. And barring
4 that there's no problem with it, can we assume
5 that it's going to be closed -- I mean, in
6 abeyance as suggested?

7 MEMBER BEACH: I agree with that.

8 CHAIR MUNN: Paul? Unless we hear
9 from you to the contrary, we're going to
10 assume that we're -- that the response is
11 acceptable to all and that it's going to be in
12 abeyance pending the expected action.

13 Paul, okay with you?

14 MEMBER ZIEMER: Yeah.

15 CHAIR MUNN: Fine.

16 MEMBER ZIEMER: I was on mute
17 there. Very good.

18 CHAIR MUNN: Okay. If we don't
19 hear from you, then it will remain as is
20 currently on the database that we can't see.

21 The next --

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1 MR. MARSCHKE: It will remain 246
2 right now it's in progress.

3 CHAIR MUNN: Then it will be
4 changed to "in abeyance" as of this meeting,
5 okay?

6 MR. MARSCHKE: As of this meeting?

7 CHAIR MUNN: Yes.

8 MR. MARSCHKE: Okay.

9 CHAIR MUNN: Thanks, Steve.

10 OTIB-37, TBD closure status, SC&A?

11 MR. MARSCHKE: We recommend that
12 all three of them be closed. The other day,
13 Tuesday I sent an email to Wanda and the
14 Subcommittee. It was a little couple sheets
15 of paper that Joyce sent to me. And in it, it
16 contained -- there were three open findings,
17 2, 3 and 4. And it -- if you -- under each
18 finding, Joyce has a little blurb at the end
19 where she says, you know, basically that we
20 recommend that the item be closed. The
21 information that was in OTIB-37 has now been

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1 moved, I think, into the Site Profile. And
247

2 Joyce went back and looked in the Site
3 Profile, and she says that that has taken care
4 of her concerns.

5 CHAIR MUNN: So SC&A concedes that
6 the concerns voiced in the findings 2, 3 and 4
7 have been met, and recommends closure. Is
8 that acceptable to my Subcommittee Members?
9 Josie?

10 MEMBER BEACH: Wanda, this is
11 Josie.

12 I thought -- Steve, didn't you
13 just say that that paragraph had been to the
14 BRS system? Because the last response I see
15 was from Wanda last year, July 31st. I don't
16 see Joyce's in there.

17 MR. MARSCHKE: It's not in the BRS
18 system. I tried --

19 MEMBER BEACH: Oh, okay.

20 MR. MARSCHKE: -- we had a problem
21 with the BRS when I tried to put them in. And

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1 I think it's been taken care of at this point. 248

2

3 MEMBER BEACH: Okay. I
4 misunderstood.

5 MR. MARSCHKE: So when I get a
6 chance, I will put them in, I'll put Joyce's
7 responses in. But when I tried to do it the
8 other day, it -- there was a hiccup and it
9 wouldn't work.

10 MEMBER BEACH: Okay, thank you. I
11 just misunderstood you.

12 CHAIR MUNN: Very good. You okay
13 then, Josie?

14 MEMBER BEACH: Yes.

15 CHAIR MUNN: Paul?

16 MEMBER ZIEMER: Okay by me, yes.

17 CHAIR MUNN: Accept closure? Very
18 good.

19 And Steve's going to make sure
20 that the database reflects --

21 MR. MARSCHKE: I'll do -- yeah.

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1 CHAIR MUNN: Yeah. 249

2 MR. MARSCHKE: what I will do on
3 the database is I will incorporate Joyce's
4 responses, and then I will make a note that,
5 if you're in the meeting today, the
6 Subcommittee has closed these three findings.

7 CHAIR MUNN: Good. Thank you.

8 Next item on the agenda is status
9 reports for four of the PERs that are working.
10 Begin with PER 33, please?

11 MR. STIVER: It's John Stiver. I
12 can give you an update on that.

13 Combined PER 33/25 for Huntington
14 Pilot Plant was delivered I believe this
15 morning. We just finished it up and so we
16 will prepare a presentation for the next
17 meeting.

18 CHAIR MUNN: Both 33 and 25?

19 MR. STIVER: Thirty-three and
20 twenty-five are both for the Huntington Pilot
21 Plant, so we combined them into one review.

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1 CHAIR MUNN: Right. 250

2 MR. STIVER: PER 37 is Ames. We
3 have -- it was continued upon review of the
4 latest Site Profile, and that has been
5 completed. And I believe Hans is in the
6 process of working on PER 37.

7 MR. KATZ: For Ames the deal was,
8 until we -- can't hear you, Kathy. But --

9 MS. K. BEHLING: Okay, I'm sorry.

10 All I'm saying is that the Ames
11 review has been completed. And Nancy has sent
12 it off to DOE to accept, so you should be
13 receiving that shortly.

14 MR. KATZ: Right. And all I'm
15 saying is that the agreement at the Board
16 level was that we would not proceed with the
17 PER review until the Ames TBD review, the Site
18 Profile review, was reviewed by the Work
19 Group.

20 MS. K. BEHLING: Yes, that's
21 correct. Yes. I'm sorry if I interrupted

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1 you. 251

2 MR. KATZ: It's okay. I just
3 wanted to make sure that was clear. That's
4 all.

5 MS. K. BEHLING: Yeah, that's
6 correct.

7 CHAIR MUNN: So for our purposes,
8 do we need to identify on the review that this
9 is in abeyance pending action by the Work
10 Group?

11 MR. KATZ: Or it's really just all
12 deferred.

13 CHAIR MUNN: Okay.

14 MR. KATZ: I mean, SC&A is not
15 going to proceed with doing it until the TBD
16 has been resolved.

17 MS. K. BEHLING: Oh, I cannot hear
18 Ted.

19 MR. KATZ: I'm sorry. I'm just
20 answering -- Wanda and I are sharing a mic.

21 But anyway, I was just explaining

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1 what you already know, which is that the Site
2 Profile will get resolved, and we'll just
3 defer SC&A doing this until the Site Profile
4 is resolved.

5 MS. K. BEHLING: Okay. But that
6 leads to a question that I have.

7 Now the Site Profile review was
8 initiated because of this PER. When -- now
9 it's my understanding that there is -- has
10 been an Ames Work Group established. Am I
11 correct?

12 MR. KATZ: Yes, you are correct,
13 there is one. It hasn't actually been peopled
14 yet, but there is -- I mean, there is a
15 decision that we'll have one.

16 MS. K. BEHLING: Okay. Because we
17 -- I was trying to make a decision as to who
18 should be getting a copy of this, and I
19 thought that there was already an Ames Work
20 Group established. But when we know who that
21 is, we'll -- Nancy will certainly forward

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1 this. 253

2 MR. KATZ: Right. Well the Site
3 Profile review goes to the whole Board anyway.

4 MS. K. BEHLING: Okay.

5 MR. KATZ: So that will be fine.

6 MS. K. BEHLING: Very good. I'm
7 sorry.

8 MR. KATZ: No, that's good.
9 Thanks.

10 CHAIR MUNN: All right. We're
11 likely to hold that for a little while.

12 PER 38?

13 MR. STIVER: This is John.

14 Per 38 is Hooker. It was recently
15 delivered. We will prepare a presentation
16 along with Huntington for the next
17 Subcommittee meeting.

18 CHAIR MUNN: All righty. And in
19 the meantime, I'm assuming that magic is going
20 to happen with the BRS, and that these items
21 are -- these PERs are going to be peopled,

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1 right? Someone reassure me? 254

2 MR. HINNEFELD: Yes, the BRS will
3 be working and we'll keep talking to Steve and
4 make sure that it works and that he is able to
5 enter findings.

6 CHAIR MUNN: That's very good.
7 Next time, SC&A.

8 The next item on our agenda is
9 OTIB-54. The status report on the revision.

10 MR. HINNEFELD: The revision was
11 published on the K: drive on June 25th.

12 CHAIR MUNN: Do we need to do
13 anything other than to just close out the item
14 on the BRS?

15 MR. HINNEFELD: Well, I suspect
16 there are findings in abeyance, correct?

17 CHAIR MUNN: I would imagine.

18 MR. HINNEFELD: I haven't looked
19 at BRS.

20 MS. MARION-MOSS: Yes, they are.
21 We've put in our responses and waiting SC&A's

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1 review.

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2 MR. MARSCHKE: Yes, this is Steve
3 Marschke again.

4 When we saw that OTIB was -- had
5 been revised, I asked Steve Ostrow if he was
6 the primary reviewer of it. And I had asked
7 him to actually take a look at it and see how
8 well it responded to our open findings or
9 findings that hadn't been closed yet. And
10 Steve put together a little information on
11 that.

12 And what he hasn't -- he didn't
13 have the benefit at that time of what Lori has
14 just updated on Monday on the NIOSH responses.
15 But if -- Steve, if you want to kind of
16 summarize?

17 DR. OSTROW: Oh, yeah, I just got
18 on the phone, I see we reached up ahead in the
19 agenda.

20 MR. MARSCHKE: No, we've been
21 going -- working our way through.

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1 DR. OSTROW: Really? 256

2 CHAIR MUNN: Oh, yeah. But you're
3 next. Yes, we are further along than the time
4 shows on the agenda. My apology, Steve. We
5 consider that a good thing.

6 DR. OSTROW: Quite all right.
7 Quite all right.

8 MR. MARSCHKE: I was just
9 explaining -- I don't know how much you heard,
10 but I was just --

11 DR. OSTROW: I just dialed in.

12 MR. MARSCHKE: All right. I was
13 just explaining that when we found out that
14 Revision 1 had been issued, I had asked you to
15 take a look at it to see how well it addressed
16 any of the outstanding findings that we had,
17 or findings that hadn't already been closed.
18 And you have done that, but without the
19 benefit of the NIOSH responses that Lori had
20 put up on the BRS on Monday. So I don't know
21 -- you know, we would take a look at those and

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1 see how they would influence, I guess, what²⁵⁷
2 you've determined.

3 And so if you want to go through,
4 I guess, and brief the Subcommittee on, you
5 know, what -- how you think Revision 1
6 addresses the -- I guess mostly "in abeyance"
7 findings. And I guess there were a couple
8 that were still in progress.

9 DR. OSTROW: Okay. Just hang on
10 one second.

11 Okay. This is Steve Ostrow.

12 We had originally -- hang on.

13 Okay. This OTIB-54 was originally
14 issued in 2007. 2008 SC&A -- March 2008, SC&A
15 did a review and made 26 comments. Of the 26
16 original comments, 10 -- there's a subsequent
17 Work Group meeting on January 5th, 2011. And
18 right now there -- of the original 26
19 comments, 10 have been closed. Seven are
20 stayed, and nine are in progress.

21 NIOSH issued Rev 1 of the OTIB on

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1 June 13th, 2013, just a month ago. And SC&A²⁵⁸
2 was told not to do a complete review of it,
3 but to do a -- just a quick look to see if any
4 of the items could be dealt with at this
5 point.

6 So we did do a quick look, and
7 primarily at the end of the items, first I'll
8 note that the revision of the OTIB was a
9 complete revision. And NIOSH felt that the
10 revision log at the beginning of the
11 procedure, they basically rewrote the whole
12 thing, read -- they created new models. And
13 have new tables and new results.

14 We haven't reviewed any of that at
15 this point, but we looked at the "in abeyance"
16 ones, which are comments number 1, 8, 11, 12,
17 13, 20 and 22. And our feeling of that was
18 that the -- since the OTIB underwent the
19 complete rewrite from Rev 0 to Rev 1, most of
20 our -- in fact, I think all of our original
21 "in abeyance" comments are now moot. They no

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1 longer apply. We made comments, but they
2 don't apply to the new revision.

3 So that basically summarizes what
4 we did in just a couple of days' time.

5 CHAIR MUNN: So am I interpreting
6 correctly that your -- it appears from your
7 current position that the findings are, as you
8 said, moot, due to the new version of the
9 OTIB?

10 DR. OSTROW: Yeah, NIOSH
11 fundamentally rewrote the OTIB. They didn't
12 rewrite the English, but they actually changed
13 the model, did new computer work, et cetera.
14 And we feel -- as discussed with John Mauro
15 who also looked at it, at this point, that
16 SC&A really has to do a relook at the Rev 1
17 OTIB and make new comments. Go through it
18 again.

19 CHAIR MUNN: Okay. So I'm -- if
20 I'm interpreting again, correctly, then we're
21 -- we anticipate that these probably will

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1 close automatically. But SC&A is taking a
2 look to make sure that's the case, is that
3 correct? No? I'm hearing something wrong?

4 DR. OSTROW: We want to actually
5 re-review the --

6 CHAIR MUNN: Yes, you're re-
7 reviewing it.

8 DR. OSTROW: -- OTIB.

9 MR. STIVER: I think the issue
10 here is -- Stiver -- that we would like to re-
11 view the revision, but we haven't been
12 tasked to do that at this point.

13 CHAIR MUNN: Right.

14 MR. STIVER: But for the findings
15 that were in abeyance that Steve looked at,
16 they're essentially closed. They're no longer
17 relevant.

18 CHAIR MUNN: Yes.

19 DR. OSTROW: They're not relevant
20 anymore.

21 CHAIR MUNN: All right. And we

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1 are going to close these, or are we going to
2 hold this in abeyance until you --

3 MR. KATZ: Close them. They're
4 not --

5 CHAIR MUNN: They're done. And
6 the only remaining question then is, are you
7 going to be given a request to review the new
8 revision? Is that --

9 MR. STIVER: That is correct, yes.

10 CHAIR MUNN: All right. Thank
11 you.

12 Steve, can we close the
13 outstanding finding then?

14 MR. MARSCHKE: Well, okay. I just
15 had a question, I was looking at the -- Steve
16 talked about the "in abeyance" findings being
17 moot. The question comes, there were a number
18 of "in progress" findings. Are they also
19 considered to be moot, and should we close
20 them as well?

21 DR. OSTROW: This is Steve Ostrow.

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1 We didn't look into that at this
2 point.

3 MR. MARSCHKE: So what we're --

4 DR. OSTROW: Because they require
5 -- the in-progress ones require us to do by
6 review of the Rev 1.

7 MEMBER ZIEMER: Well, Wanda, I
8 would suggest we close the "in abeyance" ones
9 since they apparently are moot anyway. And
10 then the rest of them which are in progress
11 can be consumed by whatever we decide to do,
12 whether to continue the review or to review
13 the revision.

14 CHAIR MUNN: Yes, we have quite a
15 number still. If I am reading what I think
16 I'm reading on my screen, we have a number of
17 the 26 that are still in progress. Which --

18 DR. OSTROW: Yeah, we have nine
19 that are in progress, seven that are in
20 abeyance, ten that have been closed already.

21 But the point is, though, in

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1 addition to looking at the in-progress ones,
2 since NIOSH went ahead and changed the model
3 for the better, we assume, and did new
4 computer runs, we -- in looking at the
5 Revision 1, we may find that a number of the
6 in-progress ones no longer apply, because
7 they're not using that model anymore. That we
8 originally commented on.

9 In addition, when they find
10 additional items to comment on, since there's
11 new material.

12 CHAIR MUNN: All right, thank you,
13 Steve.

14 Just at random, I went down to
15 select the last of those findings, finding 26,
16 and I see that it reads, to this reader,
17 almost as though it falls in the same category
18 as others, as the "in abeyance" group that you
19 were looking at. It still looks like the
20 revision is going to cover it. So --

21 DR. OSTROW: It's possible.

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1 CHAIR MUNN: I guess the question²⁶⁴
2 is, are we -- do we as a Subcommittee need to
3 look at each of these "in progress" findings
4 to see where we are with them? Because since
5 they're not covered under the review that's
6 taken place so far, if we don't check them --
7 I'm unsure of even who has the action with
8 respect to each of those findings.

9 MR. MARSCHKE: This is Steve
10 Marschke.

11 I guess if -- I think if I'm
12 hearing Steve Ostrow correctly, what we would
13 do is, if you give us the green light to go
14 ahead and do a thorough review of Revision 1,
15 we would probably include as part of that
16 thorough revision of -- review of Revision 1,
17 we would include a recommendation as to the
18 findings that are currently in progress. But
19 and in all likelihood, like you just pointed
20 out, Wanda, the -- we would probably find that
21 a number of them are also moot and could be

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1 closed. But we really haven't gone through
2 that exercise at this point in time.

3 CHAIR MUNN: So the only thing I'm
4 hearing from SC&A is that, absent authority to
5 review the new revision, we don't have a clear
6 path forward with respect to our in-progress
7 findings?

8 DR. OSTROW: That's correct.

9 DR. MAURO: This is John.

10 Would it be fair to say if, for
11 some reason, NIOSH said, well, we're replacing
12 the old one with the new one, with a different
13 number, let's say write out 54, let's say they
14 withdrew 54 and added a new number, what would
15 we do? I mean, in effect that's --

16 MR. MARSCHKE: We would do the
17 same thing, John.

18 DR. MAURO: We'd do the same
19 thing. Okay.

20 MR. MARSCHKE: Basically they've
21 done that before. They've replaced -- like on

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1 OTIB-37, they replaced the OTIB, not with²⁶⁶
2 new OTIB but with a Site Profile, as a part of
3 the Site Profile.

4 DR. MAURO: Oh, I get you.

5 MR. MARSCHKE: So I mean, we've
6 always interpreted our charge to follow the
7 finding wherever it may go.

8 DR. MAURO: All right.

9 CHAIR MUNN: All right, thank you.
10 What's the feeling of the
11 Subcommittee Members with respect to
12 requesting SC&A to review the current revision
13 of OTIB-54?

14 MEMBER ZIEMER: I think that was
15 one simple -- of the ones "in abeyance" --

16 CHAIR MUNN: You're breaking up
17 again, Paul. We're not hearing you.

18 MEMBER ZIEMER: Okay, let me try
19 again. Are you hearing me now?

20 CHAIR MUNN: Yes, I am.

21 MEMBER ZIEMER: Okay. I think as

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1 a first step, why don't we just go ahead ^{and}₂₆₇
2 close the ones that were in abeyance. They've
3 already looked at them, they agree that
4 they're all moot, let's get them out of the
5 way. They haven't looked at the in-progress
6 ones, and that has to be done as part of an
7 ongoing review if we want to do that as a
8 second step. I'd just like to see the other
9 ones moved out of the way.

10 CHAIR MUNN: Yes. I don't think
11 we have any problem closing the "in abeyance"
12 ones. But the question that we have posed
13 before us right now is, are we authorizing
14 SC&A to proceed with the review of the new
15 revision?

16 MEMBER BEACH: Yes.

17 CHAIR MUNN: Josie says yes.

18 MEMBER ZIEMER: Yeah, I think
19 that's appropriate.

20 CHAIR MUNN: Very good. Without
21 any comment to the contrary, we will request

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1 SC&A to proceed with that review. And please ²⁶⁸
2 do keep in mind that we would like you to
3 specifically look at the findings that are
4 still showing on our reports as "in progress"
5 to assure yourselves that the new revision is
6 adequate to address them.

7 DR. OSTROW: Yes. And we'll
8 address the old -- the existing old comments
9 that we have now.

10 CHAIR MUNN: Good. Then this will
11 carry forward with SC&A responses anticipated.

12 The item that we've been looking
13 at for quite a while is where did the IG-003
14 Rev 1, how did that get on our BRS? And I
15 have done a considerable amount of looking to
16 try to identify in previous transcripts where
17 this might have come from. And in view of the
18 fact that I don't see any evidence of an SC&A
19 review where any findings would have appeared.
20 So I'm not sure exactly -- I'm wondering if it
21 might have been a typographical error in my

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1 transposition of some of the old, ^{old}~~269~~
2 activities from five years ago. Nothing else
3 seems to make sense.

4 I've been -- bottom line, I've
5 been unsuccessful in identifying how we came
6 to begin to carry that on our BRS. And if
7 anyone has any light to shine on that, I would
8 be delighted to hear it.

9 I have never seen any indication
10 of findings, and so that being the case, it is
11 my expectation that we will remove that item
12 from the BRS. I don't see any basis for
13 carrying it.

14 Any comment?

15 MR. MARSCHKE: One, I'm just --
16 it's just kind of -- does this fall into the
17 same category we kind of talked about this
18 morning, when Kathy brought up how do the --
19 how do the documents that are in the BRS get
20 in the BRS?

21 CHAIR MUNN: Well, yes, that's one

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1 of the things. But you see, we've been ²⁷⁰
2 carrying this since before the BRS was
3 established. We had this on our carrying list
4 as a placeholder.

5 MR. MARSCHKE: Okay.

6 CHAIR MUNN: And I'm very fearful
7 that I just simply made a typo when I was in
8 the process of putting together some of the
9 early lists that we used for the BRS
10 groundwork.

11 So since I can't find any
12 indication of any findings from you folks,
13 then --

14 DR. MAURO: This is John.

15 Boy, I've got to tell you,
16 reaching back now, and I seem to remember 003
17 being something that was maybe asked for. And
18 we then went back and said, there is no reason
19 for us to review it. And I haven't seen it on
20 a list. It may turn out that this is one that
21 we were asked to review, and once we started

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1 our review, we realized it's not something²⁷¹
2 that we should be reviewing.

3 CHAIR MUNN: Yeah, I think that's
4 possibly the case. Because --

5 MR. KATZ: It is.

6 CHAIR MUNN: Oh, now, Ted says
7 that is the case. Because I could find no
8 indication of any findings that would give us
9 a reason to continue to carry this on the BRS.

10 So if I may request that we remove
11 IG-003. I would appreciate it. I have done,
12 I think, a fairly thorough search of any --
13 looked for any findings. Thanks.

14 We have surprisingly covered the
15 information on the agenda. I had indicated
16 that there was a request from SC&A with regard
17 to potential reviews that we might be looking
18 at for them in the future. John, are you
19 going to address that for us?

20 MR. STIVER: I'm going to have to
21 defer to Steve on this. I've spent the last

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1 three weeks immersed in the proposal, and²⁷²
2 did not have time to make any substantive
3 reviews of the basis documents.

4 So Steve put together a list of
5 prospective documents that he thought SC&A
6 might review and might benefit from a review,
7 but as is usually the case, what we'd like to
8 do is kind of a high-level pre-review to begin
9 with just to see if it really merits a full
10 review. That would be the first step that
11 we'd want to take.

12 CHAIR MUNN: Very good. That was
13 on your CDC mail on Tuesday, I guess. Anyhow,
14 the Subcommittee Members should have a copy of
15 it, if you want to pull it up. And Steve,
16 would you like to go through it for us?

17 MR. MARSCHKE: Okay. Before I do
18 that, I do want to point out one thing. BRS
19 has decided to work with us now, and if you
20 wanted to go back to 55-04, OTIB-55, finding 4
21 and see that little statement that I added

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1 basically saying "SC&A has confirmed that NCRP
2 20, table 2 provides the RBE of three
3 different thermal neutrons and recommends the
4 status of this item be changed to in abeyance
5 until such time as NIOSH modifies TIB-55,
6 table 3-1."

7 So that was just to finish up that
8 little piece of outstanding thing there, when
9 we couldn't get the BRS to work.

10 CHAIR MUNN: Thank you, Steve. And
11 thank you for getting it up on the screen.
12 That certainly is reasonable to me. Josie?

13 MEMBER BEACH: I'm fine with that.

14 CHAIR MUNN: Is that acceptable,
15 Paul?

16 MEMBER ZIEMER: Yes.

17 CHAIR MUNN: Very good. And if
18 you will make that change to "abeyance" then
19 we would appreciate it. Thanks, Steve.

20 MR. MARSCHKE: I will do that.

21 CHAIR MUNN: Very good.

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1 MR. MARSCHKE: I put up on ~~the~~²⁷⁴
2 screen now, I guess this is the attachment
3 from my email. I notice that the formatting
4 is not very well, I don't know what's going on
5 with the formatting here. I can't even see --

6 CHAIR MUNN: Well, it looks like
7 everything else on my screen. So we'll read
8 through it if you will.

9 MR. MARSCHKE: Well, I can't even
10 see what --

11 CHAIR MUNN: Two, It looks like.
12 Well, there's a report 2.

13 MR. MARSCHKE: DCAS report 4, yeah,
14 I don't know what's going on. Hang on just a
15 sec.

16 Well, it's not really on the
17 original email, that's what's on your little
18 screen. I have this whole email, it's
19 supposed to look like that. It's all --

20 CHAIR MUNN: Over-printing.

21 MR. MARSCHKE: -- over-printing.

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1 CHAIR MUNN: Yeah. 275

2 MR. MARSCHKE: Basically it's a
3 DCAS report 4, and we thought that this was a
4 potential candidate. It's chronic lymphoma,
5 leukemia, those conversion factors. What I
6 think is one -- NIOSH has developed some of
7 those conversion factors for lymphoma,
8 leukemia, CLL. And that is a very technical
9 one. It's a potential, it probably should be
10 reviewed.

11 I guess the problem we see, as we
12 see it is that, to do a full review on that
13 would probably take beyond the end of the
14 contract. So but we could do a pre-review on
15 it and look at it. But that's what the first
16 one was.

17 DR. MAURO: Steve, this is John.

18 I don't know if Jim, is he there
19 with you folks in the room?

20 CHAIR MUNN: Yes, he is.

21 DR. MAURO: This was a major

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1 undertaking by NIOSH. They reported on it, ^{if}₂₇₆
2 you recall, during the full Board meeting --

3 CHAIR MUNN: Yes.

4 DR. MAURO: -- where I believe
5 they actually finished the work then had a
6 review done by six individual really world
7 class, internationally recognized scientists,
8 on how they came to this particular problem,
9 and how they reconstructed those in to the
10 complex set of organs that would be embraced
11 by chronic lymphocytic leukemia. And as a
12 result, this would be one of those big ones.

13 MR. MARSCHKE: Yeah.

14 DR. MAURO: And actually, it might
15 transcend again largely into the medical
16 field. It could be that -- I know it's all in
17 discussions, the Science Group, on matters. So
18 just keep in mind that we're talking about a
19 very unusual, unique and major new addition by
20 NIOSH that took quite some time to do.

21 MR. MARSCHKE: That's what we just

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1 said, yeah. 277

2 I mean, it is a document that is
3 out there, it's very technical in nature. It's
4 -- you know, I don't know. You say it's been
5 reviewed by outside peers. But whether the
6 Board wants their contractors also to do a
7 review on it, but it's probably not something
8 -- you know, it's not something we would
9 probably want to -- you know, we have to keep
10 in mind that we have a limited timeframe, I
11 guess, at this point, with the contract coming
12 to an end at the end of the year, I guess, is
13 my understanding.

14 DR. NETON: I might want to
15 correct -- this is Jim. I might want to
16 correct something.

17 The concept and the methodology
18 that we adopted was certainly reviewed by a
19 bunch of our -- a series of -- a number of
20 peer scientific experts. But I think -- I
21 don't have my computer, but report 4 is really

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1 sort of the technical implementation of those²⁷⁸
2 concepts. You know, it's to take the
3 calculation and mechanize it, essentially, and
4 how you actually do this in principle based on
5 the concepts that we vetted with the
6 scientific experts.

7 And you're right, it was a
8 tremendous amount of work, and it would be --
9 it would take some time to review how we
10 approached that.

11 CHAIR MUNN: Well, the initial
12 reaction to the information is that this
13 particular report is of a quality and of a
14 magnitude that that type of authorization
15 would need to come from the Board rather than
16 from this Subcommittee. That's just my first
17 blush reaction.

18 Paul, what do you think? Do you
19 have a thought?

20 MEMBER ZIEMER: Yeah. Well, first
21 of all, I don't think we want to estimate --

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1 or review the science of it. 279

2 So, as Jim suggested, the
3 implementation part of it could be part of
4 what is -- I guess is what's in this
5 particular document, is that correct?

6 DR. NETON: I believe that's the
7 case, although I have not looked at this most
8 recently. I know that we were writing it, I
9 don't recall -- Stu's bringing it up so I can
10 take a look at it. My computer is blocked.
11 It's getting there, I think.

12 MR. KATZ: Well, while they're
13 looking this up, Paul, can you hear me? I
14 think this is working.

15 I mean, generally our procedure
16 is, we've tasked Procedures anew at the Board
17 level and not at the Subcommittee level. So
18 the Subcommittee -- I mean, the Board has
19 sometimes said, for example, take this set of
20 PERs and decide which ones to do, for example.
21 They've done that. But I don't think we've

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1 done a lot of original, you know, de novo
2 tasking of procedure reviews at the
3 Subcommittee level.

4 MEMBER ZIEMER: Right.

5 MR. KATZ: So I'm a little
6 concerned about sort of taking over that
7 function without the Board's authorizing the
8 Subcommittee to do so.

9 CHAIR MUNN: Regardless of the
10 content of this particular report, which I
11 think everyone who's been involved --

12 MEMBER ZIEMER: I think maybe what
13 we've done in the past is bring to the Board
14 our recommendations from the list or something
15 like that.

16 CHAIR MUNN: Yes, that is what
17 we've done. Yes.

18 MEMBER ZIEMER: Rather than task
19 it outright.

20 CHAIR MUNN: Yeah, I don't think
21 that -- I've never felt -- yeah, I think so,

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1 too.

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2 MR. STIVER: This is John.

3 So this would be something that
4 would be tasked at the earliest in the Denver
5 Board meeting or the teleconference
6 beforehand? Yeah, so it would be September?

7 CHAIR MUNN: It would --

8 MR. STIVER: So we have to be
9 mindful that we'll have a task which would
10 have to be complete within three months?

11 CHAIR MUNN: Yeah.

12 MEMBER ZIEMER: So Wanda, what I'm
13 wondering, because I haven't had a chance to
14 absorb this, I think I just got this a day or
15 two ago.

16 CHAIR MUNN: Yes, you did.

17 MEMBER ZIEMER: But I'm wondering
18 if we could have a chance to go through it and
19 then feedback to you sort of our priorities.
20 And then we could probably do this by email
21 even, between the three of us or the four Work

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1 Group Members, and compile a list of the ones²⁸²
2 that we think are the ones that should be
3 looked at provisionally. And then the Board
4 can take action maybe at the phone call
5 meeting.

6 CHAIR MUNN: I think that's
7 probably true. This is not a long list that
8 SC&A has provided for us, and I think that
9 perhaps I might schedule --

10 MEMBER ZIEMER: Are they all
11 doable or just the list from -- I don't have a
12 feel for it.

13 CHAIR MUNN: Well, they -- there's
14 quite a gamut. But there's also very
15 technical documents here that are being
16 suggested. And certainly a great deal to do
17 with -- there's a suggestion for OTIB-82,
18 which is dose reconstruction for chronic --
19 that's not what I wanted to see. That's what
20 we were just talking about.

21 But yes, they are highly

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1 technical, and perhaps -- I will suggest that
2 what I will do is make sure that we've cleaned
3 this format up a little bit so that you can
4 read it when you download it from your email.
5 And I will contact the Subcommittee Members
6 with -- we will transmit this cleaned-up list
7 to you when SC&A provides that to us. And I
8 can get your comments by email as to whether
9 or not you think each of these individually
10 should be presented to the Board as
11 possibilities for future work.

12 If that's amenable -- is that okay
13 with you, Paul?

14 MEMBER ZIEMER: Yes. I'm
15 wondering, aside from the first one which was
16 suggested, that would be a really extensive
17 effort. Are the others doable within the
18 existing contract timeframe, if they were all
19 passed?

20 MR. STIVER: Dr. Ziemer, this is
21 John Stiver.

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1 I think we would need to do^a₂₈₄
2 cursory kind of very high-level pre-review of
3 them to see if we could get them done in three
4 months. And then we'll have a revised list.
5 Obviously, the first, the really big one here
6 is going to be off that list. But then we'll
7 submit that to Wanda who can then distribute
8 that among the Subcommittee Members.

9 CHAIR MUNN: Yes, I think that
10 would be appropriate.

11 We have others that look
12 technical, but not that -- not that involved.
13 There's some internal dosimetry data, and
14 there's dissolution models for insoluble
15 plutonium. It's one of those that was
16 requested.

17 So yes, John, if you will clean
18 this up so that we have a revised list, then I
19 will circulate it. That okay with you, Josie?

20 MEMBER BEACH: Yeah, that was
21 going to be my suggestion as well.

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1 CHAIR MUNN: And we'll take
285
2 opinion of the Members of the Subcommittee as
3 an action to present -- suggest that we
4 present this to the Board at -- during the
5 teleconference meeting.

6 MEMBER BEACH: And how many are we
7 looking at, Wanda? Just two? Are we decided?
8 Or more?

9 CHAIR MUNN: There are about four.

10 MEMBER BEACH: Four.

11 CHAIR MUNN: Four, five on this
12 list.

13 MR. MARSCHKE: I think there's
14 six.

15 MR. STIVER: Yeah, there are six,
16 but we're going to have to review them for the
17 time attention.

18 CHAIR MUNN: Yeah, they'll clean
19 them up. So good.

20 MR. MARSCHKE: I apologize about
21 that, Wanda. It looked okay when I sent it,

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1 but then it didn't look so good when²⁸⁶I
2 received it.

3 CHAIR MUNN: Well, there's
4 something that happens when it comes through
5 my computer, regardless of source, that seems
6 to turn it to mush half the time.

7 MR. HINNEFELD: Steve, on that
8 Word file, if you can try highlighting like
9 the top two rows, it will only highlight the
10 overwritten part, and then cut that and paste
11 it down below. I think you'll be able to read
12 it.

13 MR. MARSCHKE: Okay, thank you.

14 CHAIR MUNN: Good. Our next
15 meeting, we need to take a look at when we're
16 going to see this next -- if you have
17 calendars, given what we've just heard in
18 terms of what's on the plates already, it
19 seems unlikely to me that we're going to have
20 a great deal of opportunity to pursue
21 outstanding issues prior to the September

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1 Board meeting. Although -- yeah, I know. 287
2 know.

3 So October is -- how is the first
4 full week of November for our next meeting?
5 Say something like Thursday the 7th?

6 MR. KATZ: That's clear on my
7 schedule. I don't have any -- there are no
8 holidays then.

9 CHAIR MUNN: No, not that week.
10 It's election day that week, but no holidays.

11 MR. KATZ: So November 7. How
12 does that work for you, Paul?

13 MEMBER ZIEMER: That will work for
14 me.

15 CHAIR MUNN: Josie?

16 MEMBER BEACH: That's okay for me.

17 MR. KATZ: Okay, Josie. And we'll
18 let Dr. Lemen know that.

19 CHAIR MUNN: Yes, very good.

20 MR. KATZ: Is that good for NIOSH?

21 MR. HINNEFELD: Right now it looks

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1 CHAIR MUNN: If not then we stand
2 adjourned. Thank you all very much. This is
3 not easy for me, and I know it's not easy for
4 a lot of you as well. Thank you for sticking
5 with us and we're going to make this work one
6 way or the other.

7 Thanks so much. Bye-bye.

8 (The meeting was adjourned at 4:44
9 p.m.)

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