

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

+ + + + +

ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

+ + + + +

SUBCOMMITTEE ON PROCEDURES REVIEW

+ + + + +

WEDNESDAY
APRIL 16, 2014

+ + + + +

The Subcommittee convened via teleconference at 11:00 a.m., Eastern Daylight Time, Wanda I. Munn, Chair, presiding.

PRESENT:

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

ALSO PRESENT:

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

TED KATZ, Designated Federal Official
HANS BEHLING, SC&A
KATHY BEHLING, SC&A
LIZ BRACKETT, ORAU Team
RON BUCHANAN, SC&A
BOB BURNS, ORAU Team
DOUG FARVER, SC&A
ROSE GOGLIOTTI, SC&A
DeKEELY HARTSFIELD, HHS
STU HINNEFELD, DCAS
LORI MARION-MOSS, DCAS
STEPHEN MARSCHKE, SC&A
JOHN MAURO, SC&A
JAMES NETON, DCAS
STEVE OSTROW, SC&A
MUTTY SHARFI, ORAU Team
SCOTT SIEBERT, ORAU Team
MATTHEW SMITH, ORAU Team
JOHN STIVER, SC&A
ELYSE THOMAS, ORAU Team

NEAL R. GROSS

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

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

2 11:01 a.m.

3 MR. KATZ: Let's get started.

4 This is the Advisory Board on Radiation and
5 Worker Health, the Procedures Review
6 Subcommittee and let's get right into it with
7 roll call.

8 There is an agenda for the meeting.
9 It's posted on the NIOSH website. It should be
10 posted on the NIOSH website and there maybe some
11 other materials posted along with it. And the
12 materials for today I think have been
13 distributed to everybody agency related, staff
14 and so on.

15 So roll call. And I don't think we
16 have any materials that relate to conflict of
17 interest but Wanda and Josie have Hanford
18 conflicts and I think it would be nothing else
19 related to Paul.

20 So let's go with roll call.

21 (Roll call.)

NEAL R. GROSS

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

1 Okay. Wanda, it's your agenda.

2 CHAIR MUNN: Thank you much, Ted.
3 And thank you all for joining us today. Thank
4 you especially to, I'm assuming it's Steve
5 Marschke who has the BRS upon on the screen
6 already. Is that you, Steve?

7 MR. MARSCHKE: Yes, it is, Wanda.

8 CHAIR MUNN: Thank you very much
9 for that. I doubly thank you because my
10 ability to stay in this part of Live Meeting is
11 probably very tenuous. I have had problems
12 with losing the screen before and I have not had
13 an opportunity to, because of the problems I
14 have with the system, haven't had an
15 opportunity to be in the BRS myself and check
16 what's been going on this last week.

17 So I am relying on you to keep us
18 honest and to keep us on the right page because
19 I'm often going to be operating blind, I think.

20 But thank you for having it up now,
21 I'm appreciative of the fact that I'm on and

NEAL R. GROSS

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

1 able to see it for the moment because it's very
2 difficult to operate without it.

3 We're going to stick pretty close to
4 the agenda unless someone has additions or
5 changes that they wish to bring to our attention
6 now.

7 Hearing none, then let's just go
8 right into the status of the BRS.

9 I have not been aware of any major
10 changes that have been made other than
11 additions in population of activities that have
12 occurred since our last meeting. Is there any
13 other information regarding the status of the
14 database and whether we've made any changes to
15 its capability since we last spoke?

16 MR. MARSCHKE: I'm unaware of any
17 changes, Wanda. This is Steve. I'm unaware
18 of any changes that were made since last time,
19 again, other than, you know, adding some
20 discussions and, you know, back and forth.

21 CHAIR MUNN: Right. I don't

NEAL R. GROSS

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

1 believe I've seen anything from Lori that would
2 indicate that there had been any NIOSH changes.
3 Is anyone in NIOSH aware of any additions or
4 upgrades that have been made?

5 MS. MARION-MOSS: This is Lori.
6 No, no changes or upgrades to date.

7 CHAIR MUNN: Okay, that's good.
8 Then we'll assume that we're well populated and
9 are ready to start where we left off.

10 The first item that we have on the
11 agenda for discussion is the localized skin
12 exposures, a continuation of the White Paper
13 from last time. I am uncertain of exactly
14 where we left off. My notes had told me that
15 SC&A was going to have further comments at this
16 time. I hope that's correct.

17 John, can you help us out here?

18 DR. MAURO: This is John Mauro.

19 MR. STIVER: Yes, this John Stiver,
20 actually, I was just looking through the
21 transcript and I was under the impression that

NEAL R. GROSS

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

1 Jim Neton was going to make some comments.

2 I think that was something about the
3 fine particle deposition and retention on
4 clothing and then there was some other
5 information about David Kocher and SENES
6 reviewing the dose from uranium oxide.

7 Also, there was going to be some
8 continuing discussion that John Mauro wanted to
9 take up or not, maybe NIOSH could weigh in on
10 that.

11 CHAIR MUNN: Yes, Jim, are you
12 prepared to continue where we were or are we in
13 error?

14 DR. NETON: This is Jim. Yes, I
15 can give a status update as to what we've been
16 doing. My recollection though, there are
17 three concerns listed here under this, really
18 concerns, not findings, and two of them I
19 believe have been listed as being in abeyance,
20 meaning that SC&A and NIOSH fundamentally agree
21 on the path forward and we're awaiting our

NEAL R. GROSS

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

1 revision to the procedures and that are
2 affected by these issues.

3 The one issue related to skin
4 contamination and contamination of clothing, I
5 can talk about briefly.

6 SC&A's concern, I think it was a
7 finding, or was it concern one, I don't remember
8 exactly which one it was.

9 But was that we would only assume
10 skin contamination for a duration of the
11 workday that is eight or ten hours or whatever
12 we assume the worker works for and SC&A's
13 concern and they've provided some references
14 that supported their position that the skin
15 contamination is not very easy to wash off. It
16 doesn't come off in the shower very easily, that
17 sort of thing.

18 The reference that was provided
19 related to, I believe it was atmospheric
20 testing and so these were more fission
21 activation-type products which represent more

NEAL R. GROSS

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

1 type-specific activity material. And it is
2 true that type-specific activity materials,
3 activity per unit mass is going to be much
4 greater so that there's a chance for fine
5 particulates to get embedded more deeply into
6 the crevices, if you will, of the skin and
7 become more difficult to wash off.

8 Our position was last time that
9 uranium doesn't behave necessarily that way and
10 based on our empirical observations, with
11 workers that worked at uranium facilities so
12 that it's fairly easy to remove from the skin
13 with just regular showering and soap.

14 We were tasked with going back to
15 find some more documentation that supported
16 that and honestly, it's been very difficult to
17 find documentation.

18 I've scoured the literature and
19 have not come up with anything specific for a
20 uranium facility but I did locate and I'll be
21 writing this up to provide to the Work Group or

NEAL R. GROSS

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

1 the Subcommittee a Defense Threat Reduction
2 Agency Report titled Radiation Doses to the
3 Skin from Dermal Contamination.

4 It's a fairly detailed report of how
5 to deal with dermal contamination. It is
6 specifically related to the atmospheric
7 weapons testing program, but there are some
8 fairly good discussion of what will skin
9 contamination with some experiments that are
10 cited.

11 And I found one experiment that was
12 done that related to washing contaminated soil
13 that was actually artificially labeled with
14 lanthanum-140, interestingly, and they did
15 some experiments with just general rinsing,
16 washing with soaps, scrubbing, using chelating
17 agents, those sort of things and it turns out
18 that at least soil contaminated with
19 lanthanum-140 is removed pretty readily just
20 with soap and water. I forget the exact
21 efficiency of removal from the first washing

NEAL R. GROSS

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

1 but it was in the 90-plus percent range which
2 supports our position and I'll be writing this
3 up and providing that as soon as I can get it
4 out. So that's the first issue.

5 And the other, we were talking about
6 the clothing contamination issue, we're still
7 working on.

8 If you'll remember SC&A had
9 essentially agreed to our deposition model for
10 skin contamination that was put forward. But
11 also, opined that not only was the surface of
12 the exposed skin contaminated, but also the
13 clothing that was in the workplace would be
14 contaminated. And we agreed with that and we
15 just need to come -- and some risk with how we're
16 going to deal with that issue.

17 I indicated that we had located some
18 data that we used from Mallinckrodt where we
19 have surveys of anti-contamination clothing
20 that was done prior to laundering and some
21 pretty detailed surveys on what those levels

NEAL R. GROSS

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

1 are. And we're wrestling right now with how to
2 incorporate those into our procedures and dose
3 reconstructions.

4 CHAIR MUNN: Great. Thank you,
5 Jim.

6 Any comment from SC&A?

7 DR. MAURO: This is John Mauro.
8 Yes, I'm glad to hear that these two subjects
9 are being addressed and it sounds like, you
10 know, making a lot of headway.

11 Procedurally, though, does this
12 type of material, the material that you're
13 developing which is new material, is that
14 something that goes into the record as part of
15 the Subcommittee or do you plan to make this
16 like a supplement eventually to things like
17 OTIB-17 where the B-

18 DR. NETON: Yes, it would have to be
19 incorporated in our program documentation
20 because, you know, there would be specific
21 guidance on how to deal with these situations.

NEAL R. GROSS

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

1 It's a fairly complicated issue,
2 more so, like many things, it's more
3 complicated than you would think.

4 For example, a lot of what we do with
5 skin contamination is going to maybe be related
6 to what type of facility. Right now, I'm
7 speaking specifically about uranium
8 facilities, but whether, for instance, it was
9 an AWE that had zero monitoring data for
10 external or it was another facility that
11 monitored skin dose, you know, a film badge
12 monitoring program.

13 If you look at the AWEs that didn't
14 have monitoring programs and we apply TBD-6000,
15 for example, even though it's an external dose
16 assignment from uranium, the doses are fairly
17 large. In fact, the 95th percentile of the dose
18 that is assigned to workers or AWEs, is about
19 equal to a 100 percent direct contact with
20 uranium metal.

21 So we couldn't have any more dose

NEAL R. GROSS

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

1 related to skin contamination on the worker. I
2 mean, it's essentially the workers in contact
3 100 percent of the time with a slab of uranium.

4 So in those situations, I would
5 argue that we probably don't need to address the
6 skin contamination issue, even though that
7 value is assigned as, you know, from an external
8 exposure scenario, you can't get any higher
9 dose.

10 When you get into the film badge
11 area, it becomes a little more complicated and
12 we're wrestling right now with how to deal with
13 that.

14 DR. MAURO: Yes, Jim, this is
15 again, an overarching issue and I understand
16 where you're headed with, and it originally
17 triggered, of course, when we were discussing
18 these AWEs, just for the benefit of everyone on
19 the phone, right now, we are looking pretty
20 closely at INL Site Profile review and one of
21 the issues as you folks may be aware of, there

NEAL R. GROSS

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

1 were high particle issues at INL where the we're
2 dealing with a fairly high specific activity
3 materials.

4 So all I'm saying here is that this
5 issue is going to extend beyond AWEs and I'm not
6 quite -- and it may be not the appropriate place
7 to talk about it now, but I just wanted to alert
8 that we are right now, SC&A's looking fairly
9 closely at the Site Profile for INL and one of
10 the issues that has emerged during the -- and
11 we're preparing for the a number of White Papers
12 are being exchanged on INL. But embedded in
13 these is this overarching issue of hot
14 particles and this data is high specific hot
15 particles.

16 So I just wanted to alert everyone
17 that I think we're going to be revisiting this
18 overarching issue again from a different
19 context.

20 CHAIR MUNN: We've come at it from
21 a number of different sites already and I

NEAL R. GROSS

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

1 suspect it's not the first time we've actually
2 looked at it at INEL but it still appears from
3 this perspective, I believe, that overarching
4 is the appropriate place for us to be addressing
5 it, unless B

6 DR. NETON: This is Jim, Wanda.

7 I'm not convinced of that. I mean
8 a hot particle issue; I mean we know how to deal
9 with hot particles in terms of assignment of
10 dose and the IREP input in those sort of things.
11 I think we've come to grips with that actually
12 and in one of these concerns.

13 The hot particle issue, though, I
14 believe, is a fairly site specific situation.
15 You know, INL has the potential for hot
16 particles and depending upon the strength or
17 weakness of the monitoring program to detect
18 them, I think one needs to develop some sort of
19 approach.

20 But I think that that's going to be
21 specific for each site. It's not, I don't

NEAL R. GROSS

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

1 think, I can't conceive of an overarching
2 document that would address how one determines
3 if hot particles were relevant to
4 reconstruction at different sites.

5 CHAIR MUNN: Well, I didn't mean to
6 infer that, Jim.

7 DR. NETON: Okay.

8 CHAIR MUNN: What I meant to
9 address was that the way we do address it, once
10 that's been established should be fairly
11 uniform I would expect. And it was my
12 understanding is that was what we were
13 addressing at the current time.

14 How we address it once the presence
15 has been identified, certainly, the level of
16 expectation with regard to contamination at
17 different sites varies widely. There are a
18 number of sites; I'm sure, where this type of
19 contamination would be virtually unheard of and
20 others for its hourly occurrence.

21 But once that's been determined, it

NEAL R. GROSS

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

1 would appear that the approach to dealing with
2 it in our dose reconstructions would appear to
3 be fairly uniform, I would think.

4 DR. MAURO: No, thank you for that
5 clarification.

6 I do largely agree that the
7 overarching aspect of these issues has been
8 resolved except for these few items we'll be
9 talking about today.

10 But I do point out, though, that the
11 high specific activity issue and the cleaning
12 of the skin and the clothing issue would apply
13 even more so where at sites where we're dealing
14 with high specific activity hot particles.

15 So from that perspective, the
16 discussion of this matter, even though Jim
17 pointed out earlier, let's say washing of the
18 skin of uranium, flakes of oxide really is not
19 a big issue and I accept that. But we are going
20 to encounter other circumstances.

21 I'm not quite sure, I think Hanford

NEAL R. GROSS

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

1 had a hot particle issue, I seem to recall. And
2 I have to admit I don't recall, you know, the
3 degree to which we wanted the depth on that and
4 how it was dealt with the way we are doing it
5 right now.

6 CHAIR MUNN: Certainly INEL would
7 be one of those sites where it would be
8 pertinent.

9 DR. MAURO: Yes, I have to say, I am
10 very close to the INL Site Profile and
11 intimately involved in that and we are engaged
12 in a discussion on hot particles. And right
13 now we are, I would say we're at just the
14 superficial stage.

15 When you read the Site Profile and
16 the way in which it deals with hot particles
17 when you can see clearly that what we're
18 learning and what we're developing here
19 including the overarching aspect of it and also
20 the new material that Jim is talking about
21 regarding cleaning, removal, all is going to

NEAL R. GROSS

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

1 have applicability as our work on INL
2 progresses.

3 CHAIR MUNN: Thank you much, John.
4 Any other thoughts or comments?

5 MR. MARSCHKE: Wanda, this is
6 Steve.

7 Just for a bookkeeping type of
8 question here. Right now we have these three
9 concerns or findings, if you will, concerns,
10 associated with this issue that are in the BRS.
11 Right now, they're all identified as being open
12 issues, open concerns.

13 Usually, we've done a lot of
14 discussion on them, both at this meeting and at
15 the previous telecon. Usually, when we do the
16 discussion, we change the status to in
17 progress.

18 I also notice that in a couple of
19 these, it's been SC&A's recommendation that we
20 change the status to at least in abeyance and
21 potentially maybe even closed.

NEAL R. GROSS

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

1 I guess the question would be, does
2 the Subcommittee wish to change the status of
3 any of these three findings? Or all these
4 three findings or concerns? And if so, what
5 should we change it to and B

6 CHAIR MUNN: Thank you for a very
7 pertinent question, Steve.

8 That's certainly true. We need to
9 be changing that status as we go along and if
10 I heard properly from the early discussion that
11 we had here, I was under the impression that
12 both our contractor and the agency are of the
13 opinion that the first two of these is fairly
14 well addressed and can be closed. Am I
15 incorrect in that? Perhaps we should read
16 through the statement of each of those to make
17 sure that what we think we're covering in our
18 discussion is, in fact, what's been identified
19 by the finding.

20 Would you like to read the first
21 finding for us, Steve, in case there are others

NEAL R. GROSS

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

1 who don't have the screen in front of them?

2 MR. MARSCHKE: The first finding it
3 says, concerns related to NIOSH's dose model
4 for chronic deposition of fine particles on
5 bare skin. It says, the derived dose of 16
6 milligram per year to bare skin is based on
7 unsupported and unrealistic assumptions which
8 include the following: (1) daily skin
9 contaminations for each of 250 work days per
10 year that only persist for eight hours; (2)
11 implication that after eight hours, each skin
12 contamination is 100 percent removed by a
13 standard daily shower; and (3) only bare skin
14 is subject to contamination and result in
15 radiation exposure.

16 For additional information on this
17 concern, just see the attached SC&A report. So
18 I guess that's it for there.

19 And then we had B

20 DR. MAURO: Could we deal with the
21 one at a time?

NEAL R. GROSS

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

1 DR. NETON: Can we stop there for a
2 second, Steve?

3 CHAIR MUNN: Let's don't go any
4 further until we B

5 DR. NETON: First, I don't think
6 that the SC&A report is attached. I could not
7 find it attached on this -- in the BRS.

8 MR. MARSCHKE: Click on the
9 open/edit message.

10 DR. NETON: Yes?

11 MR. MARSCHKE: And it says right
12 there, basically there it is.

13 DR. NETON: What?

14 MR. MARSCHKE: Draft White Paper
15 Reconstruction Local Skin Dose --

16 DR. NETON: Where is that?

17 MR. MARSCHKE: Are you seeing me on
18 Live -- do you see -- are you following me on
19 Live?

20 DR. MAURO: Yes, I'm Live, too. I
21 don't see what you're saying. Oh, okay, let's

NEAL R. GROSS

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

1 see.

2 MR. MARSCHKE: Yes, I just opened
3 it.

4 DR. NETON: Okay, all right, I just
5 didn't know how to find it.

6 MR. MARSCHKE: Yes, it gets a
7 little tricky to find it but it's B

8 DR. NETON: So you say edit message
9 and it's there, that's how you do that?

10 MR. MARSCHKE: Yes.

11 DR. NETON: Okay, all right.

12 And then is the -- that was the
13 original B

14 MR. MARSCHKE: That was the
15 original one.

16 DR. NETON: That was the original
17 one and then there was a follow-up one on
18 January 7 issued by, it was a memo from John
19 Mauro that was issued subsequent to that
20 document where John actually reviewed these
21 findings and this is where the recommendation

NEAL R. GROSS

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

1 was that they be held in abeyance.

2 MR. MARSCHKE: Yes, if you scroll
3 down, yes, I mean, let's see where that one is.
4 That one's on and then we expand it and then we
5 go down and you see, there you can see it. It's
6 right there. You don't have to B

7 DR. NETON: Okay.

8 MR. MARSCHKE: You can see that
9 that finding is attached right there.

10 DR. NETON: Okay.

11 MR. MARSCHKE: And that's where we,
12 you know, basically we -- SC&A recommends NIOSH
13 provide documentation for this experience or of
14 this experience with respect to uranium
15 decontamination of skin and clothes, and I
16 believe that's what you just said that you've
17 been working on.

18 DR. NETON: Right.

19 DR. MAURO: This is John. I think
20 we're all on the same page here, that the
21 history of the documentation is just as I

NEAL R. GROSS

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

1 remember it and that the B

2 With regard to concern number issue
3 number one, the only question that I think was
4 remaining, everything else was closed, first of
5 all is, I believe, that, Jim, in the write-up
6 in OTIB-17, I believe -- do you talk about this
7 idea of the settling velocity of the .0075, the
8 buildup for some time period. I forget how
9 long you will allow it to build up -- eight hours
10 and then the wash.

11 I mean, I know that you and I talked
12 at length about it on Bridgeport Brass. We
13 have agreed in principle on all of these issues.
14 I'm just not sure whether or not the language
15 itself of this -- is that all part of OTIB-17?
16 I'm just not sure. Is it part of any procedure?

17 The reason why I'm asking is because
18 if it's already written down and it's captured
19 the sentiment that we've all agreed to, well
20 then at least those aspects could be closed.

21 And the one question that was

NEAL R. GROSS

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

1 everyone agreed was sort of in abeyance or not
2 so much of in abeyance but still under the
3 discussion was this idea of when you shower,
4 you, you know, do you remove all the uranium?

5 And I heard what you said and I have
6 to say, you know, I believe that this difference
7 in specific activity is important and that you
8 folks have, you know, looked into it as best you
9 can and you don't find any reason to think that
10 it's going to linger beyond the eight hours
11 after you shower.

12 So as far as I'm concerned, as long
13 as those issues have been -- are actually some
14 place written, you can either put -- if they're
15 not written down anywhere yet as part of your
16 procedures, then I think it does go into
17 abeyance, this concern number one.

18 However, if it's written up
19 somewhere and its part of a procedure such as
20 that appendix to OTIB-17 which I just don't
21 recall, then as far as I'm concerned, it could

NEAL R. GROSS

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

1 be closed.

2 DR. NETON: Well, these aren't
3 written down in any of our formal documentation
4 so I would be more comfortable if we just left
5 them in abeyance until we actually do that.
6 You know, that would be the best option for me.

7 DR. MAURO: I think the timing is
8 good that to the extent to which we can get that
9 because I can say right now that I've been
10 involved in a number of other Site Profile
11 Review issues where this issue of skin
12 contamination is now becoming part of our way
13 of doing business and I noticed that, you know,
14 all the other -- the other Site Profiles, maybe
15 some of the old DRs haven't caught up yet to
16 that. And you know, as soon as that gets into
17 the formal set of protocols that everyone is
18 using, I think everything will sort of catch up.

19 So I agree.

20 MR. MARSCHKE: Can we follow the --
21 we have basically three findings, or three

NEAL R. GROSS

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

1 concerns here. Can we basically, you know,
2 kind of act on the first one first and then go
3 to the second and the third one.

4 The first one B

5 CHAIR MUNN: That's our intent to
6 do exactly that.

7 MS. MARSCHKE: And so the first one
8 basically as I understand it, from what Jim said
9 just now, NIOSH is still basically developing
10 it and still looking for references and doing
11 the write up.

12 So, I don't know, I don't want to
13 speak for John but I mean so are we ready to sign
14 off on this and put it basically agreement which
15 is in abeyance or are we still in the in progress
16 phase?

17 MEMBER ZIEMER: This is Ziemer, I
18 think probably since you haven't actually seen
19 any on this you're probably in progress.

20 Usually in abeyance, you have
21 agreed to the final document but it just hasn't

NEAL R. GROSS

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

1 shown up or it's not in the procedure yet. Is
2 that correct?

3 CHAIR MUNN: That would be my B

4 MEMBER ZIEMER: I mean, Jim Neton
5 has been preparing the documentation, right?

6 DR. NETON: Correct. I'm
7 comfortable with in progress, either one is
8 fine by me.

9 DR. MAURO: Paul, this is John.
10 The only reason I'm bringing this distinction
11 up is that usually, and this is what a process,
12 you know, how we go about doing business.

13 It was my understanding when in the
14 record, on the transcripts, we discuss a
15 technical issue, it's described and we agree in
16 principle that is the approach even though it
17 may not be written up formally in a White Paper
18 and this is a judgment, you know, it was my
19 understanding once we have that verbal
20 agreement after discussing the issue, for all
21 intents and purposes, it's in abeyance just

NEAL R. GROSS

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

1 awaiting for the writing to make its way into
2 a procedure.

3 However, you know, so in my mind,
4 this issue is actually in abeyance. But, you
5 know, I, of course, bow to the judgment of other
6 folks here.

7 CHAIR MUNN: John, you are
8 absolutely correct with respect to the process
9 that we have followed in our individual
10 findings from our Site Profiles and other
11 documents, it would be reasonable, it seems to
12 me, to follow that same process here although
13 if others think otherwise, we can always adjust
14 our thinking in terms of these overarching
15 issues they do provide us with a different set
16 of parameters for evaluating them. But we've
17 certainly followed the procedure that you
18 suggest in the past.

19 DR. MAURO: If we defined it as in
20 progress right now, for example, the
21 implication in my world is that we still have

NEAL R. GROSS

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

1 some disagreement, technical disagreement.

2 MR. MARSCHKE: No, in my world,
3 John, is that we haven't seen NIOSH's final
4 position. We haven't seen the documentation
5 that Jim has been working on and basically, you
6 know, he says he's having a lot of trouble
7 getting that -- obtaining the documentation and
8 what happens when we get that documentation and
9 we take a look at it and we have a different
10 perspective on it.

11 DR. MAURO: Fair enough, fair
12 enough.

13 MEMBER BEACH: Yes, this is Josie.
14 I believe it should stay in progress also.

15 CHAIR MUNN: I have no objection to
16 that. Paul?

17 MEMBER ZIEMER: Yes, I think the
18 same thing's going to happen either way. The
19 only point I was making was that I think we've
20 agreed -- in principle on the final thing but
21 we're still awaiting the documentation so I

NEAL R. GROSS

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

1 think from SC&A's point of view, they need to
2 see that so that they're comfortable with that
3 that actually does exist.

4 And that's in preparation and
5 again, can you clarify -- is it only the one
6 small paper that is that going to be the key to
7 it or is there anything where we have uranium
8 specifically?

9 DR. NETON: Sorry, Paul, you were
10 breaking up, I couldn't hear B

11 MEMBER ZIEMER: Well, I'm on a cell
12 phone here. All right, is it only the paper
13 dealing with soil and the spike with the
14 lanthanum? Is that the main document we're
15 talking about?

16 DR. NETON: Steve, could you scroll
17 back up to the three issues that were in concern
18 one? There were three issues identified
19 somewhere you had three points, I thought.

20 CHAIR MUNN: Yes, they're in one.

21 MR. MARSCHKE: Those three?

NEAL R. GROSS

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

1 DR. NETON: There we go.

2 CHAIR MUNN: Yes.

3 DR. NETON: Okay, this has to do
4 with -- all of these have to do with the washing
5 of the skin while the third one, only bare skin
6 and subject contamination result in radiation
7 exposure. These are kind of commingled. I
8 mean that also appeared in finding two or
9 concern two.

10 But the first two, in my mind, has
11 to do with the ability of washing to remove
12 contamination.

13 MEMBER ZIEMER: Yes, and not just
14 in uranium but in general, right?

15 DR. NETON: Well, this original
16 finding was for a uranium facility, that was
17 transferred here. My intent was to address
18 that the uranium facilities at this point and
19 not to expand it beyond that right now B

20 MEMBER ZIEMER: Yes, I was feeling
21 that. I was trying to get a feel for whether

NEAL R. GROSS

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

1 there's any specific data that uses uranium in
2 the experiment versus -- or is spiked with some
3 other nuclide?

4 DR. NETON: I've not found any.
5 I've looked fairly rigorously and I've not
6 found any journal articles or reports that have
7 dealt with washing of uranium specifically.

8 Although we can get into specifics
9 of how I address those exposed layers, I'm still
10 working on it.

11 MEMBER ZIEMER: Yes.

12 DR. NETON: But I would prefer to
13 keep this concern related to uranium, which is
14 where it originated because uranium is a
15 somewhat different animal than when you start
16 trying to treat fission activation products B

17 MEMBER ZIEMER: Right, right.

18 DR. NETON: It's unique that AWEs
19 in particular where there were just large
20 quantities of material being moved about.

21 MEMBER ZIEMER: Well I don't think

NEAL R. GROSS

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

1 we need to debate it a long time here. I think
2 if we just say it's in progress, we're still
3 going proceed. That's my opinion.

4 CHAIR MUNN: Yes, I think I hear
5 Josie agree to that and I certainly do. Steve,
6 will you please make a notation that we're
7 awaiting paper from Jim to clarify these items
8 and that finding number 1 is in progress.

9 I believe that that was generally
10 agreed to, was it not? Anyone who feels
11 otherwise should speak now. Then we'll wait
12 just a minute and give Steve an opportunity to
13 make that entry.

14 MEMBER ZIEMER: And I think it's
15 showing up on the screen for me already.

16 CHAIR MUNN: It's very helpful for
17 us, Steve.

18 MEMBER ZIEMER: He's still writing
19 the words there. Okay.

20 CHAIR MUNN: Yes.

21 MR. MARSCHKE: Any comments, any?

NEAL R. GROSS

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

1 MEMBER ZIEMER: Yes, send it back
2 to NIOSH.

3 MR. MARSCHKE: Okay.

4 CHAIR MUNN: Fine with me. Any
5 concerns? Want to expand in any way? That's
6 good. Thank you, Steve. Let's go on to item
7 number two.

8 MR. MARSCHKE: The recommendation
9 from SC&A back in January was we recommend this
10 concern be in abeyance until NIOSH issues a
11 revision to the procedure confirming our
12 understanding of the protocol NIOSH plans to
13 use.

14 So, SC&A as I understand it is
15 recommending that this concern be put in
16 abeyance.

17 CHAIR MUNN: And is NIOSH in
18 agreement with that assessment?

19 DR. NETON: Well, specifically,
20 this concern, yes. It's the way IREP derives
21 PoC and it's relevant to how gross dose is

NEAL R. GROSS

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

1 assigned, that's actually covered already in
2 TIB-17 and SC&A had some concerns about the --
3 what happens if you have partial body
4 irradiation and the appropriateness of the IREP
5 risk models and such and that there are three
6 specific conditions dealt with in TIB-17.

7 You know, one is if the
8 contamination is directly under the skin, the
9 partial contamination is it directly where the
10 skin cancer occurred; one is if the
11 contamination was not present where the skin
12 cancer occurred; and one is if the
13 contamination -- the area of the contaminate --
14 the skin cancer location was unknown in
15 relation to contamination.

16 Those three are specifically dealt
17 with. I actually asked SENES Oak Ridge to
18 review our position on that in TIB-17. And I
19 have received a report from them and they concur
20 with our approach to handling these issues.

21 So I believe the issue has been

NEAL R. GROSS

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

1 addressed.

2 CHAIR MUNN: May we ask that SC&A
3 take a look at that position and respond to us
4 at our next meeting as to whether they concur
5 that the TIB adequately addresses the issues?

6 MR. MARSCHKE: Well, if you look at
7 the next, again, I'm not sure I'm not following
8 this just looking the words on the concern
9 number three.

10 We say basically we talk about
11 TIB-17 in that one or at least in our latest
12 response to that one and we say SC&A recommends
13 using the protocols described in TIB-17 and
14 basically, again, so, John Mauro, you indicate
15 that you're the one who basically made this
16 recommendation.

17 I guess the question is, are we
18 satisfied with what's in TIB-17 and if so, I
19 guess we can basically put both of these either
20 in abeyance or closed.

21 DR. MAURO: I'm okay with it and

NEAL R. GROSS

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

1 I'll explain why it's important.

2 This idea of averaging under the
3 conditions Jim described, I think it's
4 important that that distinction -- and I have
5 to say at the time I raised the issue, didn't
6 have a full appreciation of that appendix
7 OTIB-17 and what was concerning me is this idea
8 of averaging.

9 But, you know, and the way I
10 understand it, Jim, and we've discussed this
11 before is that, you know, if there's reason to
12 believe that the cancer might have occurred
13 near or under the particle, this is under the
14 particle, we have a localized exposure, you
15 don't average the exposure over the entire
16 body. You know, you don't bring down the dose,
17 you actually assume that the dose is as if he
18 got his entire body.

19 But if there's reason to believe
20 that, no, that you do have the location of the
21 cancer of skin, it really bears no necessary

NEAL R. GROSS

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

1 relationship to where there might have been
2 some contamination. Then you do this
3 averaging the way you do in OTIB-17.

4 Is that a correct characterization?

5 DR. NETON: That's exactly
6 correct, yes.

7 DR. MAURO: Okay, on that basis, I
8 am fully comfortable with the approach and it
9 sounds like it's already in OTIB-17. I just
10 was -- the problem was that I didn't have a full
11 appreciation of the subtlety.

12 Originally, my concern had to do --
13 and Jim, you and I talked about this -- where
14 if you're dealing with a partial body skin
15 exposure, you're going to be hard pressed to
16 say, okay, here's the whatever partial part of
17 the body is getting this dose and then you're
18 going to put that in, that dose. Then, you
19 know, you have the problem, the baseline for the
20 risk coefficient, for your baseline risk. The
21 population is really the whole body baseline

NEAL R. GROSS

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

1 risk.

2 But now I understand that no, you
3 know, given the circumstances you would dilute,
4 it out over your whole body. So then the
5 baseline works. I don't know if everyone is
6 following that, but so, now I have that
7 understanding and it's more my part than it is
8 on NIOSH's part. I didn't fully appreciate
9 OTIB-17 and the nuances. So I'm fine with it.

10 CHAIR MUNN: Any comments from
11 anyone else?

12 DR. H. BEHLING: This is Hans.

13 I was just questioning whether or
14 not we're really still talking about a partial
15 body exposure if, in fact, as Jim Neton has
16 mentioned earlier, that we might consider also
17 the clothed area and so is there such a thing
18 as a partial body exposure if in fact we include
19 the clothed areas also a source for skin
20 contamination or skin dose.

21 DR. NETON: Hans, this is Jim.

NEAL R. GROSS

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

1 I think that would be covered in the
2 other findings is how we deal with
3 contamination in general in the plant. You
4 know, whether the deposition model would also
5 apply to skin and clothing, but how we deal with
6 partial irradiation of the IREP risk model
7 which is the subject of this concern, I think
8 is a separate issue.

9 I mean if you had uniform
10 contamination of the body, then it's the same
11 as if you had partial contamination, it goes in
12 as a dose to that -- it was calculated for that
13 tissue, that area, whether it's whole body or
14 a partial, there's no difference.

15 DR. H. BEHLING: Okay.

16 DR. NETON: The idea was the
17 baseline risk is offsetting. I mean, you know,
18 it's the risk over the baseline risk and if the
19 baseline risk is a smaller portion of the skin,
20 then it's offsetting than if the baseline risk
21 was the entire skin. That's the concept behind

NEAL R. GROSS

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

1 this.

2 So whenever you calculate the dose
3 to whatever piece of tissues it's irrelevant
4 for input directly into IREP without any
5 adjustment if the cancer is known to be in the
6 area that was contaminated.

7 DR. H. BEHLING: Also, Jim, while I
8 have you on the phone, I was going to go make
9 a comment with regard to the removal rate by
10 ordinary washing and you mentioned we're really
11 focusing on the uranium.

12 But when we talk about
13 decontamination, are we talking about the
14 specific isotope whether it's an activation of
15 fission product or the carrier materials?

16 For instance, in the case that I had
17 initially cited as an example, we were talking
18 about fallout from the atmospheric testing
19 program in the Marshall Islands inclusive of
20 Shot Bravo where the issue was obviously large.
21 Contamination that was produced by fallout that

NEAL R. GROSS

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

1 was largely coral that had initially been
2 vaporized at the test site and then condensed
3 and also in the process of condensation, the
4 coral obviously absorbed the activation of
5 fission products.

6 And so the removal is not really
7 dictated by necessarily the activity of that
8 source of activity meaning these specific
9 isotopes, but the removal of coral.

10 And so I'm not sure when we talk
11 about uranium as opposed to the carrier
12 material which, in this case, turned out to be
13 coral, is there a difference?

14 DR. NETON: You said coral? Is
15 that you're saying?

16 DR. H. BEHLING: Yes.

17 Shot Bravo, the particular example
18 that I cited to you was a surface detonation,
19 that was a 15 megaton device that was tested in
20 the Marshall Islands on March 1, 1954 and it
21 produced heavy, heavy fallout that actually was

NEAL R. GROSS

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

1 described as the equivalent of snow coming
2 down. And it was the coral that had,
3 obviously, was initially vaporized at ground
4 zero and then obviously, it was picked up in the
5 mushroom cloud, and condensed back again in the
6 process, obviously, was heavily contaminated
7 with the activation fission products in the
8 primary condensation.

9 So the removal rate which is really
10 dictated by the coral as opposed to the
11 individual isotopes.

12 DR. NETON: Right, but isn't that
13 going to be a fairly fine particulate size?

14 DR. H. BEHLING: Oh, no, no, no.
15 This was described as coming down snow, in fact,
16 on Rongerik where there 14 airmen. They
17 described it as snow falling out and they
18 actually picked up huge pieces and actually put
19 it on the cathode ray tube and had it glow.

20 DR. NETON: Right, I would expect
21 that this would be very friable material,

NEAL R. GROSS

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

1 though. I mean you just touch it; it's not like
2 hard chunks. That's how you get contaminated
3 from it.

4 And my thinking here is that if you
5 have a high specific activity material, like a
6 fission activation product, the amount of
7 activity per unit small mass, a very small mass
8 of a particulate that's embedded in your skin,
9 is going to have much more activity than uranium
10 would have because it's got a low specific
11 activity.

12 A milligram of uranium only has
13 slightly more than 1,000 dpm of activity.

14 The skin, according to most studies
15 I've look at, I can't support, moist skin which
16 is a worst case condition, can't support in
17 general more than 2 milligrams of uranium per
18 square centimeter without falling off.

19 And so you have a maximum of 2,000
20 dpm per square centimeter of uranium, most of
21 which is visible. It's a visible amount of

NEAL R. GROSS

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

1 material that would be washable.

2 The amount of uranium that's in the
3 very fine, fine particulate that would be
4 embedded in the microscopic folds of the skin.
5 If you looked under a microscope, is going to
6 be a very small amount of activity compared to
7 something that has a half-life of 30 years.

8 So my position is that uranium
9 behaves more like dirt, not like a high specific
10 activity material that -- well a fine particle
11 that has a lot of B-

12 A fine particle of fallout is going
13 to have a lot more activity than a fine particle
14 of uranium. I guess that's my point.

15 DR. H. BEHLING: I don't doubt it
16 but as I said, the question I had was what is
17 the removal of -- is the carrier material which,
18 as I said in the case that I include it in the
19 write up with real coral that had been vaporized
20 and then condensed and in the process
21 condensation picked up the radioactivity in the

NEAL R. GROSS

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

1 mushroom cloud.

2 And so when it came down and the
3 people were exposed to it, they were exposed to
4 very large particles.

5 DR. NETON: Yes, but, Hans, the
6 skin contamination that persisted wasn't a
7 large part of sitting on their skin. If they
8 can't wash it off, by definition, somehow
9 embedded deeply within the matrix of the skin
10 itself on the surface.

11 And those fine particles have
12 embedded themselves and they have a high
13 specific activity per unit mass.

14 With uranium, you have a visible
15 amount of uranium on you; it's pretty easy to
16 wash it off. If it's visible when you get above
17 a few milligrams per square centimeter or get
18 two milligrams per square centimeter. I mean
19 it's a visible amount of dirt basically.

20 So you have to think in terms of the
21 microscopic structure of the skin, what it

NEAL R. GROSS

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

1 looks like and why it can't be washed off. I
2 don't think it's true that it had a particular
3 affinity like electrostatic attraction for the
4 surface of skin and I think it's how far it
5 embedded itself into the nooks and crannies, if
6 you will, of the skin itself.

7 But I'll deal with this. I mean I'm
8 working on it and that's my position. I'm
9 having difficulty finding exact matches for
10 uranium contamination but the experiments that
11 I've see with soil and stuff, which is more like
12 what our experience with uranium is, is it
13 washes off pretty readily. That's been the
14 empirical observation of people that have
15 worked in uranium facilities; it doesn't behave
16 like high specific activity material.

17 That's about all.

18 CHAIR MUNN: So, back to the
19 specific question with respect to findings two
20 and three. Do we agree generally that those
21 two items can be closed based on the agreement

NEAL R. GROSS

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

1 that's been reached orally between SC&A and
2 NIOSH? Is there converse opposition to that?

3 MEMBER ZIEMER: This is Ziemer; I'm
4 fine with closing this.

5 CHAIR MUNN: Josie?

6 MEMBER BEACH: Yes, I agree with
7 that as well.

8 CHAIR MUNN: Steve, will you please
9 indicate on findings two and three that NIOSH
10 and SC&A have agreed these items have been
11 agreed to and closed?

12 I suppose the appropriate word is
13 resolved and posted.

14 MEMBER ZIEMER: Steve, check your
15 spelling on agreed.

16 MR. MARSCHKE: Thank you.

17 CHAIR MUNN: I think we can say the
18 Subcommittee also agrees -- okay, we can say
19 this concern, we can say this item, which ever,
20 this finding.

21 MR. MARSCHKE: Well, we called it a

NEAL R. GROSS

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

1 concern here as opposed to B

2 CHAIR MUNN: That's fine, yes. I
3 understand. Let's stay as consistent as
4 possible for us to do.

5 MR. MARSCHKE: Okay.

6 CHAIR MUNN: Okay, fine. Ditto
7 number three. Very good. Are we ready to move
8 on to PER-0031? If so, am I correct in my
9 statement that NIOSH will have a report on
10 SC&A's review?

11 MR. HINNEFELD: Do we want to talk
12 about PER-0031, is that what you're asking us
13 about?

14 CHAIR MUNN: Yes, that's what I'm
15 asking, Stu, are we ready for it?

16 MR. HINNEFELD: Well, we really
17 don't have anything to deliver today. Maybe if
18 we can bring this out and refresh my memory
19 about the exact -- yes, okay, that's what I
20 thought.

21 The finding has to do with the chest

NEAL R. GROSS

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

1 count -- interpreting the chest count data and
2 assigning doses of thorium in vivo at Y-12 since
3 the algorithm there was essentially the
4 algorithm that was used during the early years
5 of multiple counter and reported in vivo
6 results in milligrams per thorium.

7 And I've been looking at this a
8 little bit. We're getting involved in it.
9 You know, I can name the reasons why this isn't
10 going forward real quickly but they are the
11 sites that we're all working on, you know,
12 Savannah River, Hanford, Kansas City, Rocky,
13 yada, yada, Fernald.

14 So this isn't moved up the list
15 fairly far yet.

16 There are a couple of things that
17 are different like at Y-12 compared to the
18 information we know at Fernald.

19 One is that Y-12, I believe there's
20 a fairly healthy supply of thorium air
21 monitoring data which may be an alternative for

NEAL R. GROSS

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

1 intakes. But I mean, no matter what happens,
2 there's going to have to be some look at how the
3 Site Profile says to consider internal thorium
4 exposures for some period of years.

5 So the air monitoring is a data
6 source that really hasn't been evaluated to see
7 if it's feasible for assessment, for dose
8 assessment.

9 And then the second item has to do
10 with a question of whether or not there was some
11 sort of consistency in the thorium that was at
12 Y-12 and I mean consistency in terms of the
13 relative abundance of a chain isotopes there.

14 Most of Y-12's thorium market, at
15 least that I've been able to find and I've only
16 done a little bit of research on this, but it
17 appeared to mainly have been metal working. So
18 if you're shaping, it says essentially, thorium
19 or cladding it and canning it essentially,
20 there, you know those kind of physical
21 manipulation activities would disturb the

NEAL R. GROSS

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

1 isotopic distributions in a relative abundance
2 of daughter products.

3 And so if you had a supply of uranium
4 or thorium that that was your thorium and it had
5 had a particular production of experience and
6 you get this metal and then you take a piece of
7 that metal and you make that your in vivo
8 calibration standard. Then you would have a
9 calibration standard that would essentially
10 mimic your thorium inventory and that
11 calibration standard would reflect the isotope
12 mixture of the production inventory.

13 And so a milligram assignment would
14 be calculatable by comparing the inventory, you
15 know, the in vivo count, that actual lung count
16 to that calibration standard because the
17 calibration standard and the material the
18 person was exposed to would have the same
19 processing history and, therefore, the same
20 isotope per ratio.

21 Now it's not clear to me that that's

NEAL R. GROSS

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

1 the case. For instance, there was some melting
2 of thorium-232 or thorium done at Y-12 at least
3 for some time. I don't know when that occurred
4 yet, but the melting would certainly disturb
5 the equilibrium.

6 And so there's still some more work
7 to do to look into this, and it's going to be,
8 like I said, it's not on the front of these other
9 sites, so it's going to take a while to get to
10 it, but we are continuing to look at it.

11 CHAIR MUNN: All right, do we have
12 any idea what the time line is likely to be when
13 you'll be looking at that, Stu?

14 MR. HINNEFELD: Well, no, I don't
15 have any time line for delivering a product to
16 Procedures.

17 CHAIR MUNN: All right. So I hope
18 that it says, frankly, if we continue to carry
19 it as we are B

20 MR. HINNEFELD: Yes, we can. I
21 think just -- I don't think we should have a

NEAL R. GROSS

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

1 large expectation for a lot of progress between
2 meetings.

3 CHAIR MUNN: All right, we'll just
4 expect a status next time and we'll just hope
5 things work so that you can address it a little
6 more, move it forward a little and that's all
7 we can do.

8 Appreciate the report, thank you.

9 Per-0030, we do have a couple of
10 cases that were chosen to look at and we had that
11 report. SC&A, do you want to expand on that?

12 DR. BUCHANAN: This is Ron Buchanan
13 of SC&A. I'll address that if you wish.

14 CHAIR MUNN: Good, thank you for
15 your paper, Ron.

16 DR. BUCHANAN: Okay, essentially
17 what this was, was a change in the way that skin
18 dose and some internal intakes assigned at the
19 Savannah River site and this occurred early on
20 in the issuance of the TBD so there wasn't too
21 many cases involved that used the Rev 0 instead

NEAL R. GROSS

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

1 of Rev 1.

2 So what we did it went back and
3 reviewed these cases with NIOSH and they gave
4 us two cases that we evaluated to see if the dose
5 reconstruction was done correctly by the
6 PER-0030.

7 And what we found out was that when
8 they reviewed them, they found that the dose
9 reconstructor originally had used conservative
10 values of 2,500 instead of 2,000 hours in the
11 skin dose and so those were correct.

12 And in all the affected cases, they
13 had used a hypothetical overestimate in the
14 internal dose assignment. So the isotope
15 intakes did not impact dose reconstruction.

16 And so we wrote up a report and we
17 find that, as issued, PER-0030 was correctly
18 addressed and we had no findings in that report.

19 CHAIR MUNN: Ron?

20 DR. BUCHANAN: Yes, that's all we
21 have on that.

NEAL R. GROSS

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

1 CHAIR MUNN: Yes, okay, very good.

2 I assume that everyone has had an
3 opportunity to take a look at Ron's report.
4 Are there any other comments? Any concerns?
5 May we close this item?

6 MEMBER BEACH: Yes, I agree with
7 that one. This is Josie.

8 CHAIR MUNN: Okay.

9 MEMBER ZIEMER: Yes, and this is
10 Ziemer, yes, I'm in favor of closing.

11 CHAIR MUNN: Josie? Josie, are
12 you with us?

13 MR. KATZ: Josie already agreed.

14 CHAIR MUNN: Oh, I'm sorry, I
15 didn't hear her, my ear or my phone, I'll blame
16 the phone.

17 Then let's indicate that the item is
18 closed here. My screen is blank. I don't see
19 any B

20 MR. MARSCHKE: Yes, I'm having a
21 problem with the BRS seems to have gone away.

NEAL R. GROSS

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

1 CHAIR MUNN: Oh, yes, well, it goes
2 away for me a lot, but B

3 MR. MARSCHKE: I don't know if it's
4 a problem on my end or if it's a problem on
5 NIOSH's end.

6 CHAIR MUNN: It may be the system.

7 MS. MARION-MOSS: It's the system.
8 Steve, this is Lori. I'm having the same
9 problem.

10 MR. MARSCHKE: Okay.

11 CHAIR MUNN: Hi, Lori. Thank you
12 for clarifying for us. We appreciate that.

13 MR. MARSCHKE: Wanda, can I just --
14 clarification.

15 Now this is PER-0030. This is the
16 Task 4 report and there's no findings as I
17 understand what Ron was summarized there. So
18 again, is this one of the cases where we need
19 to enter a finding of no finding under PER-0030?

20 CHAIR MUNN: That would be my
21 assertion, yes. Does anyone have any

NEAL R. GROSS

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

1 different position?

2 Yes, we just want to indicate that
3 it's been addressed and there are no findings
4 and we're good. We can close it.

5 Whenever we have an opportunity to
6 do that, Steve, can I ask you to make a note when
7 we have access again?

8 MR. MARSCHKE: Yes, I have it up.
9 I have it written down.

10 CHAIR MUNN: Thank you so much,
11 appreciate that. Let's go on to PER-0014. We
12 expected responses from SC&A on findings 1 and
13 3.

14 DR. H. BEHLING: Okay, this is Hans
15 Behling and I think we can resolve this very
16 quickly because that issue was discussed at the
17 last Procedure meeting and it centered around
18 the 1.4 multiplier which I had initially
19 questioned whether or not it was necessarily
20 claimant-favorable. And it was based on my
21 concern that we would perhaps talk about

NEAL R. GROSS

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

1 construction trade workers who were not
2 necessarily employed for the full duration of
3 the given year.

4 And as it turned out, Matt Smith
5 apparently provided us with information that
6 looked at the data and it turned out to be fully
7 normalized where partial work employment
8 periods by construction trade workers were, in
9 fact, normalized to represent a full year's
10 worth of exposure.

11 And, if you recall, we had a lunch
12 break in which time Kathy and I reviewed that
13 information that was provided to us and
14 concurred with the initial statement that 1.4
15 was, in fact, a legitimate number that can be
16 used both for the photon and the beta dose.

17 So I think after lunch, we made
18 knowledge or made mention of the fact that we
19 had verified the data, that they were correctly
20 normalized and I thought we had closed both of
21 those issues out.

NEAL R. GROSS

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

1 MS. K. BEHLING: This is Kathy.
2 The BRS is indicating that both those issues are
3 closed.

4 CHAIR MUNN: Good, so it's now been
5 incorporated into the system. We can't see at
6 this time. Then we have no reason to continue
7 to carry that. It will disappear. Thank you
8 for your clarifications.

9 NIOSH, have you had an opportunity
10 to verify the IG-1, finding 25 wording?

11 MR. HINNEFELD: Well, this is Stu
12 and I'll take a shot at this.

13 Now and for the last several weeks
14 or couple few months, this finding has to do
15 with wording in IG-001 that says that for
16 certain target organs, AP geometry is not the
17 highest DCF. It's either rotational or
18 something isotropic or higher.

19 And so, for those certain target
20 organs, you should use those higher DCFs as the
21 default, although you are allowed, if you feel

NEAL R. GROSS

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

1 like AP geometry is more descriptive to the
2 person's work, you are allowed to use AP anyway
3 if you feel it's more descriptive.

4 So, now, I mean pretty routinely,
5 dose reconstructions are coming out and saying
6 that AP geometry's considered the most
7 applicable and, therefore, it's being used.

8 And so, the way things are working
9 now, we don't know that there's a particular
10 need to amend IG-001 for this issue.

11 Now I don't know what that says
12 about anything, you know, there may have been
13 some dose reconstructions done that used the AP
14 where the dose reconstructor didn't
15 specifically say that I'm choosing AP because
16 it seems the most descriptive. So I'm not real
17 sure what to do about those.

18 But I think at this point, there's
19 some question in our mind about whether this
20 particular edit needs to be done, at least
21 that's the one we're talking about.

NEAL R. GROSS

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

1 CHAIR MUNN: Well, I see that we
2 have the system back and Steve's trying to pull
3 up finding 25 for us so that we can see what the
4 wording says, see if we can identify whether
5 it's possible to close that.

6 We're only one finding away. There
7 it is.

8 MS. K. BEHLING: This is Kathy
9 Behling, can I ask a quick question here?

10 Stu, can you repeat what you said --
11 are you now saying that you are not going to
12 apply maybe a rotational and isotopic geometry
13 for either more claimant-favorable approach
14 for these four cancers, that you've decided
15 that that is not appropriate? Or are you
16 saying that most likely these workers, it
17 should be an AP geometry as opposed to one of
18 these other two exposure geometries.

19 MR. HINNEFELD: Yes, I think the
20 second is that, in general, I think for most
21 jobs an AP geometry seems like it is probably

NEAL R. GROSS

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

1 more descriptive of a person's work than the
2 others.

3 Now, as it exists, IG-001, although
4 the structure of IG-001 is a little funky and
5 maybe, you know, might be nice to clean up some
6 wording there. But as it currently exists, it
7 allows a choice.

8 It says that if dose reconstructor
9 can choose AP if the dose reconstructor feels
10 that's a more appropriate for this particular
11 case.

12 And so, and that's being done, I
13 think, for most of the cases now that fall into
14 this category. And again, it's only for target
15 organs.

16 So that's what's being done and so,
17 in response to your question, it was the second
18 is that, in general, dose reconstructor are
19 considering that AP geometry is probably the
20 more applicable for most claims.

21 But it still leaves open the

NEAL R. GROSS

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

1 opportunity for using rotational or the job
2 would indicate maybe this really was a
3 rotational for, you know, not so much an AP
4 geometry situation.

5 MS. K. BEHLING: Because I guess
6 what we've been seeing with the dose
7 reconstructions that we're auditing is we have
8 never seen them use the data from this
9 particular table, I think there's a 4.1 A or B,
10 something like that and so we often make this
11 a finding. And I have to admit, it's difficult
12 to determine with certain jobs. With certain
13 job functions, I guess you can say it's AP as
14 opposed to rotational or isotropic. But we
15 have never seen this used.

16 And so we were even questioning
17 whether there was a PER that should be necessary
18 for the cases. I'm not sure.

19 MR. HINNEFELD: Yes, that's kind of
20 an open question I think we're still thinking
21 about here. Is there something we can do about

NEAL R. GROSS

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

1 cases that were done before this really overt
2 look at the geometry of the case was done?

3 Now, I would suspect that, you know,
4 dose reconstruction review only looks at cases
5 that are finally adjudicated and so anything
6 that we've started doing in the past several,
7 you know, past few months would not have been
8 showing in DR reviews yet. And so that would
9 be why you wouldn't have ever seen the
10 discussion in a dose reconstruction where the
11 dose reconstructor explains why an AP was
12 chosen.

13 But we're still kicking around the
14 question of do we need to look back at some
15 claims that were done prior to the most recent
16 emphasis, you know, prior simply to this
17 finding being brought to us and saying that,
18 okay, should we take a careful look at these
19 other cases and/or is there a population of
20 cases we can look at to see if perhaps there
21 should have been some, even if, you know, see

NEAL R. GROSS

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

1 if it should have been a selection of something
2 other than AP geometry.

3 So we're still kind of kicking that
4 one around.

5 CHAIR MUNN: So how are we going to
6 be able to status this for our purposes and for
7 the other Subcommittee's purposes? Are we
8 going to call it in progress? Are we going to
9 see some kind of a brief statement, not
10 necessarily a full-blown paper? But it seems
11 that we need to have some sort of statement in
12 the record to identify where we are in terms of
13 our observations.

14 MR. HINNEFELD: Yes, I agree with
15 that one. I don't know if we've put any entries
16 in BRS yet or not. I think only that -- I don't
17 know if there's anything below this finding or
18 not.

19 CHAIR MUNN: I have a hunch that
20 there's not. I think we're kind of hanging out
21 here.

NEAL R. GROSS

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

1 MR. HINNEFELD: Yes, we'll try to
2 get something in here and we'll continue to
3 address the question of, is there a population
4 of cases that we need to look at and then we can
5 communicate back to the DR Subcommittee.

6 CHAIR MUNN: Yes, I'd appreciate it
7 if we had at least a paragraph or two of what's
8 been stated here so that we know where we are
9 and so that we can -- as a matter of fact, right
10 now I would like to make an entry saying that
11 -- brief statement from NIOSH regarding their
12 deliberations on this matter will be
13 forthcoming and call it in progress. Can we do
14 that? Can we indicate that NIOSH will prepare
15 a brief status response and change the item to
16 in progress? Any problem with that?

17 MEMBER ZIEMER: Sounds good to me.
18 This is Ziemer. So basically, it would just be
19 based on what Stu just summarized a few minutes
20 ago, right?

21 CHAIR MUNN: Exactly, yes.

NEAL R. GROSS

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

1 MS. K. BEHLING: Wanda, while Steve
2 is updating the BRS, can I ask a question a
3 little bit off the subject, but to Stu regarding
4 the PER process -B

5 CHAIR MUNN: Certainly.

6 MS. K. BEHLING: -- while we're
7 waiting?

8 Okay, I'm just curious, Stu, as to
9 what is the protocol for your PER process and
10 how the PERs, if I can say, get in to at the
11 queue? How do you decide which PERs you're
12 going to tackle next? Because during our Dose
13 Reconstruction Subcommittee meeting, we were
14 talking about the fact that we may not get to
15 a PER for a year or more and it just got me to
16 think, I'm curious as to how these PERs actually
17 get into a queue and how do you address them,
18 in what order?

19 MR. HINNEFELD: Well, I think there
20 are probably a number of factors that go into
21 that. I mean, there's a tendency toward first

NEAL R. GROSS

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

1 in, first out, but we don't necessarily do first
2 in, first out.

3 There are some that don't require a
4 lot of work and so the decision might be said,
5 well, let's get this one out of the way and do
6 that.

7 And there may be some that affect a
8 lot of claims and that would place it up on the
9 priority list, as well.

10 So, it's a kind of a balancing act
11 between getting stuff off the list and getting
12 claims going and then if you have -- you know,
13 complicated ones can take a longer time. So
14 even though you're working on it, it will take
15 a longer time for it to come out, you may put
16 out a little one in between.

17 So to me, I don't know that I can
18 give you a lot more detail than that. It's not
19 exactly a formal system, but we do meet
20 regularly internally on what we call our
21 project plan and make sure that we're moving

NEAL R. GROSS

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

1 forward with as many things as we can.

2 It's not just PERs, that's also
3 responses to Site Profile Reviews and SECs,
4 whether they're new or were contributions to
5 SEC discussions once the Evaluation Report's
6 been delivered.

7 So, I guess that's about all I can
8 offer on that.

9 MS. K. BEHLING: Very good, yes.
10 That answers my question. I was just curious
11 as to whether there's any consideration given
12 to the fact that there may be a lot of claims
13 involved in one particular PER, so it would get
14 a little bit more attention, a higher priority.

15 MR. HINNEFELD: Now it may not move
16 it up. I mean if you have a lot of claims to
17 do, you know, it's going to take you a long time
18 to do it, regardless.

19 MS. K. BEHLING: Yes.

20 MR. HINNEFELD: So you wouldn't
21 necessarily abandon everything else, all the

NEAL R. GROSS

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

1 other PERs, if there's some you can do quickly,
2 you might slip those in the process. And once
3 you get to the point of evaluating individual
4 claims and there are quite a large number of
5 people involved in those evaluations, you know
6 the re-looking at those claims.

7 There are quite a number of people
8 evaluating this to determine whether, in fact,
9 you can just write them up and say they're not
10 affected or whether you have to ask for them
11 back.

12 And so that work then kind of gets
13 dispersed and the key individuals who kind of
14 kick these things off and do the searches and
15 stuff, can move on to something else. So, you
16 know, multiple ones working at any one time.

17 MS. K. BEHLING: Okay, very good,
18 understood. Thank you.

19 CHAIR MUNN: Thanks for the
20 question, Kathy, the discussion, I think, helps
21 all of us a little bit and thank you, Stu.

NEAL R. GROSS

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

1 Back to IG-001 finding 25, Steve has
2 entered the statement that NIOSH is preparing
3 a response and that we've changed it to in
4 progress. Are we changed to in progress and is
5 that statement satisfactory with all?

6 MEMBER ZIEMER: The statement
7 looks fine.

8 CHAIR MUNN: Okay, that's fine.
9 We are in progress on 25.

10 Our agenda item says we are to
11 review the status of the other findings that we
12 have in 001. Can we take a quick look and see
13 whether we have items that are not closed that
14 we need to be paying better attention to?

15 One and two are both closed, Steve
16 shows.

17 MR. MARSCHKE: Three and four are
18 closed.

19 CHAIR MUNN: Okay.

20 MR. MARSCHKE: Five, six, seven,
21 eight, nine B-

NEAL R. GROSS

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

1 CHAIR MUNN: Eight, nine.

2 MR. MARSCHKE: Twenty, well
3 everything shows closed, Wanda.

4 CHAIR MUNN: Good, 25 is the only
5 outstanding one we have, right?

6 MR. MARSCHKE: Yes, and that shows
7 in progress at this point.

8 CHAIR MUNN: Good, that's
9 marvelous. Thank you so much. We will look
10 forward to more on that later.

11 Now B-

12 MS. MARION-MOSS: Wanda?

13 CHAIR MUNN: Yes?

14 MS. MARION-MOSS: This is Lori. I
15 have question about PER-0030.

16 CHAIR MUNN: Okay.

17 MS. MARION-MOSS: I think at the
18 time that Ron was going over the PER, the system
19 went down so, Steve, I guess I have a question
20 for the committee as to whether or not you want
21 to capture in the BRS that that

NEAL R. GROSS

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

1 is the sub-task four version of that review for
2 that document has been done. Because
3 currently, there's no update in the BRS that
4 shows that sub-task four was completed.

5 CHAIR MUNN: Yes, I certainly would
6 like to see that occur.

7 MR. MARSCHKE: Yes, Lori, we're
8 going to enter a finding of no finding.
9 They'll probably do that over the lunchtime if
10 that's okay.

11 MS. MARION-MOSS: Okay.

12 CHAIR MUNN: It's a good thing.

13 MR. MARSCHKE: Yes.

14 CHAIR MUNN: Now, since it is very
15 close to lunchtime, I'm going to leave it up to
16 you folks on the East Coast as to whether or not
17 we should go ahead and address our next agenda
18 item or whether you'd like to break now a little
19 early. Tell me what you think. If you think
20 you're willing to hang in while we talk about
21 the new distribution option on the IREP and it's

NEAL R. GROSS

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

1 up to you. Give me some feedback.

2 DR. NETON: Wanda, this is Jim. I
3 think it can be covered very quickly. It's not
4 too complicated an issue.

5 CHAIR MUNN: All right.

6 DR. NETON: That's just my opinion.

7 CHAIR MUNN: Any other concerns?
8 Otherwise, we'll just forge on.

9 MEMBER ZIEMER: This is Ziemer; I'd
10 like to forge on. I'm actually not on the East
11 Coast, we're traveling in Missouri today and
12 so, you know, I'm more apt to turn up early
13 anyway, but if we can forge on, I'd appreciate
14 it.

15 CHAIR MUNN: Well, it's wonderful
16 to be in Missouri. Has anybody shown you
17 anything interesting yet?

18 MEMBER ZIEMER: No, I've -- you
19 know, they've offered to show me, but yes, okay.

20 CHAIR MUNN: That's good, sorry, I
21 couldn't pass that up.

NEAL R. GROSS

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

1 All right, Jim, do you have the lead
2 on the IREP discussion?

3 DR. NETON: I believe I do.

4 CHAIR MUNN: Very good. Sorry?

5 MR. STIVER: This is John, if I
6 could just maybe get on and set the stage here.

7 CHAIR MUNN: All right.

8 MR. STIVER: This is something that
9 kind of welled up though the dose
10 reconstruction process and I guess the issue
11 that this latest version that I read, 5.7,
12 includes an option for the Weibull distribution
13 and, you know, at face value, I don't see
14 anything wrong with that. Our main concern is
15 that we have never seen any technical
16 justification for using it as opposed to some
17 other type of distribution.

18 And we also saw that it's being used
19 in the new and the latest version of the Fernald
20 TBDs and I believe also for Pantex.

21 And so we brought this up just to

NEAL R. GROSS

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

1 kind of engage NIOSH and it sounds like Jim has
2 a response prepared for us, so, Jim, you can go
3 ahead.

4 DR. NETON: Yes, this is Jim.

5 The Weibull distribution was -- the
6 driver for adding the Weibull distribution
7 originally B- for adding it to the IREP was the
8 changes we made to add chronic lymphocytic
9 leukemia to the risk models.

10 The original -- if you remember, the
11 CLL model ended up having a weighted dose based
12 on the distributions of the antigen stimulated
13 B lymphocytes in the body. I mean the site of
14 origin of a cancer of the CLL is not well known.
15 It would have to be in place where lymphocytes
16 reside so SENES Oak Ridge, our contractor for
17 this first model of research actually went
18 through the literature and developed all these
19 distributions based on literature of where the
20 cells could be and, in fact, many of the
21 distributions fit a Weibull better than

NEAL R. GROSS

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

1 anything else.

2 Just as a point of reference for
3 background, Weibull distribution is a fairly
4 adaptable distribution. It's kind of like
5 chameleon almost where it has three parameters:
6 shape, scale and threshold. And without those
7 three parameters, you can fit distributions
8 fairly well that are not amenable to things such
9 as normal or log-normal and you get a very good
10 fit.

11 So the Weibull distribution was
12 input into IREP specifically to handle the CLL
13 weighted dose values.

14 As John pointed out, though, it has
15 -- since it's in there, it has now been used in
16 several other instances beyond the CLL model.

17 I would say that our distributions
18 are selected based on goodness of fit criteria,
19 the AIC criteria which is, I'm not sure how you
20 pronounce the fellow's name, but Akaike, I
21 think, is the information criterion. That's a

NEAL R. GROSS

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

1 goodness of fit, somewhat akin to a chi-squared
2 but a little more sophisticated in the sense
3 that it penalizes you for adding more
4 parameters because obviously, the more
5 parameters you add the better fit you have and
6 so that's been our goodness of fit criteria of
7 choice.

8 And that's sort of the history
9 behind it. There's nothing magical about it.
10 It's just another distribution that gives us a
11 tool to look at some of these data sets that do
12 not fit real well to our standard tools.

13 That's about all I have to say
14 unless there's any questions about that.

15 MR. STIVER: Okay, that makes
16 perfect sense.

17 I guess our concern was really that
18 there's no documentation as to why it was
19 introduced, so we were kind of left scratching
20 our heads as to whether, you know, it could
21 possibly be made a finding of Dose

NEAL R. GROSS

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

1 Reconstruction Review or not.

2 Is there -- you said the SENES
3 actually did the developmental work on this.
4 Did they publish a technical note or a paper or
5 anything that can be referenced on it?

6 DR. NETON: Well, they did publish
7 the technical review of the Weibull. I mean
8 the Weibull was used in their review, or in the
9 development of the CLL weighted distribution
10 model and that's actually out there, I believe
11 it's on our website.

12 But specifically, where we ended
13 using the Weibull in our CLL is documented
14 fairly well in focus report of DCAS Report 4
15 which is a report that talks about the CLL dose
16 conversion co-efficients. And that's in there
17 where it talks about, you know, using the AIC
18 criterion and the, you know, or goodness of fit
19 and that sort of thing and that's where the
20 Weibull is first introduced.

21 MR. STIVER: Okay, well that

NEAL R. GROSS

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

1 satisfied me. I don't know if Doug, if you're
2 on the line at this point.

3 MR. FARVER: Yes, I'm here, John.

4 MR. STIVER: Okay, did you have any
5 other questions regarding that?

6 MR. FARVER: I still don't --
7 haven't been convinced that it's appropriate to
8 use and there still should be some
9 documentation about how it's applicable for
10 other than the CLL cancers.

11 DR. NETON: Well, maybe someone on
12 the phone that fits these distributions more
13 than I do can weigh in on this. But we don't
14 willy-nilly use a distribution that would be
15 based on goodness of fit, statistical goodness
16 of fit and that's been a normal part of our
17 business since day one, whether we use a normal
18 or log-normal or a Weibull or a triangular. I
19 mean they are statistically selected. They're
20 not just willy-nilly thrown out so I'm not sure
21 how to B

NEAL R. GROSS

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

1 MR. FARVER. How did you determine
2 these three parameters, the scale, the shape,
3 and what type?

4 DR. NETON: They follow the AIC
5 criterion or the AIC values.

6 MR. SMITH: this is Matt Smith with
7 ORAU Team. Our statistician I don't believe is
8 on this particular call, but we typically use
9 a package called @RISK these days to do the
10 statistical fitting that was the package used
11 to do the bulk of the CLL work that Jim has
12 described.

13 It's commercially available. I
14 want to say that in terms of being vetted, it's
15 been, you know, vetted by the statistical
16 community and bottom line is another
17 statistical tool for us to use to get a good
18 valid fit and then get a good valid dose
19 distribution and put into IREP.

20 MR. STIVER: Okay, thank you, Matt.
21 This is John again.

NEAL R. GROSS

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

1 I guess the only question I would
2 have kind of taking off on what Doug was
3 staying. I don't want to stray too far into the
4 Dose Reconstruction Subcommittee purview here,
5 but is there a guidance out there for the dose
6 reconstructor, you know, and again indicate
7 that you don't use these things willy-nilly,
8 other certain types of distributions and data
9 sets that obviously derived from processes that
10 are best fit by certain distributions.

11 How does the dose reconstructor
12 know when to apply this? Is that actually
13 written into a procedure somewhere? Is there
14 an update or?

15 MR. SMITH: Again, I'll just state
16 specific to CLL, it's really, in a sense, baked
17 into the model.

18 MR. STIVER: Okay, so it's already
19 kind of hard wired into a B

20 MR. SMITH: It's hard wired into
21 the tooling, if you will.

NEAL R. GROSS

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

1 MR. STIVER: Oh, okay. So there's
2 no decision process on the part of the dose
3 reconstructor?

4 DR. NETON: Yes, whatever these
5 dose -- these unique distributions are selected
6 they are usually part of a hard wire type
7 analysis. It's already been done and will be
8 used generically for specific cases like the
9 Weibull and the CLL as we pointed out or the use
10 of a log-normal, you know, is it clearly
11 specified in any of our internal dose
12 calculations so it's B-

13 Yes, these things are not left up to
14 the individual dose reconstructor to be fitting
15 Weibull distributions.

16 MR. STIVER: Okay, well that
17 satisfies me. I don't know if anybody else has
18 any concerns or questions.

19 MR. FARVER: John, it doesn't
20 satisfy me because it's being used for more than
21 just CLL. It's being used on all cancers.

NEAL R. GROSS

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

1 MR. STIVER: Jim, it sounds to me
2 like it's basically for CLL.

3 DR. NETON: Well, it was developed
4 for CLL but I have heard that it's been used in
5 other situations for dose distribution.

6 I would have to get back to you with
7 more specifics on what it's been used for. I
8 mean I'm not familiar intimately with all the
9 reviews but, again, it's not used randomly.
10 It's using a statistical procedure then, I
11 don't know why that's any different than why we
12 would use a normal versus a log-normal on a
13 distribution. I mean I don't see the
14 difference.

15 MR. FARVER: The difference is B

16 DR. NETON: Especially, how do you
17 what fit to use, that's been going on since day
18 one of this program.

19 MR. FARVER: The difference is,
20 your technical guidance tells you that you'll
21 use a normal for such and such. You'll use

NEAL R. GROSS

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

1 constant, you'll use log-normal, that's the
2 difference.

3 DR. NETON: In what context was it
4 used. Can you give me a more specific example,
5 I guess?

6 MR. FARVER: Of how it's used?

7 DR. NETON: Yes, obviously outside
8 CLL.

9 MS. GOGLIOTTI: Doug, this is Rose.

10 MR. FARVER: Yes.

11 MS. GOGLIOTTI: When I ran into it,
12 it was being used for prostate cancer to assign
13 external measured dose and external dose from
14 x-rays.

15 MR. STIVER: Correct. It's in the
16 Fernald Revised Medical Dose Procedure.

17 MS. GOGLIOTTI: This is for an SRS
18 case, but B-

19 MR. STIVER: It's in a Pantex also.
20 And the case I'm looking at also it was used for,
21 gosh, it was prostate cancer.

NEAL R. GROSS

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

1 DR. NETON: For the external dose
2 of a person?

3 MR. STIVER: Yes.

4 MS. GOGLIOTTI: Yes.

5 DR. NETON: Not a coworker model?

6 MR. STIVER: For a person.

7 MR. SIEBERT: This is Scott
8 Siebert. I'm not sure with my multiple mutes
9 whether I'm actually getting through. Am I?

10 DR. NETON: Yes.

11 CHAIR MUNN: Yes, you are. You're
12 fine.

13 MR. SIEBERT: Thanks.

14 I just wanted to let you know, you
15 will see it in external dosimetry calculations
16 when we need to do a best-estimate claim where
17 we are doing Monte Carlo calculations to
18 combine various of the six distributions that
19 Doug is speaking about, we may have to combine
20 multiple distributions together and the Monte
21 Carlo package will then, the Vose package will

NEAL R. GROSS

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

1 then fit that resulting distribution the best
2 distribution it can find and Weibull is
3 sometimes one of those distributions used.

4 It's not the dose reconstructor
5 making a decision, it is the Vose package doing
6 the calculations in Monte Carlo and then
7 fitting the best distribution to the result.

8 MR. SMITH: And this is Matt again.

9 Just for context, previous to doing
10 the work with CLL, we did not have the Weibull
11 function available to us when we did our Monte
12 Carlo work with Vose.

13 We went ahead and got that module
14 and that ability to use a Weibull because of CLL
15 and not that it's included in our Vose engine,
16 if you'll put it that way because it's now
17 available, it gets used for other situations,
18 other types of cancers.

19 MR. MARSCHKE: This is Steve
20 Marschke. I have a thought.

21 Has there been any comparisons made

NEAL R. GROSS

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

1 between how the code works or how the
2 distribution fitting will work with Weibull as
3 opposed to without Weibull? I mean how better,
4 I mean, what I'm hearing is that the Weibull
5 distribution gives you a better fit. How much
6 better as measured by, you know, I guess the
7 R-squared or some other means of measuring the
8 goodness of fit.

9 How much better does the Wiebull
10 give you versus what you were using previously?

11 DR. NETON: Well, Steve, as I said,
12 it's this AIC value, the Akaike information
13 criterion which is a goodness of fit measure
14 that our statisticians are telling me is a
15 better fit than -- a better indication of
16 goodness of fit than something like a
17 chi-squared distribution.

18 There are criteria for selecting
19 the best fit but this is all built in to the B

20 MR. MARSCHKE: But, Jim, are we
21 talking about, you know, percentage changes in

NEAL R. GROSS

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

1 best or are we talking about the best fit, it's
2 a much better fit? Or are we talking about
3 small changes or large changes or?

4 DR. NETON: I'm not sure what
5 difference it makes, Steve. I mean if it's a
6 better fit, I mean, and we have it available,
7 why wouldn't we use it?

8 MR. STIVER: This is John. I
9 guess, I see those kind of revolving around the
10 whole idea of the V&V for software changes.

11 DR. NETON: Well this is a standard
12 commercial product we're using, John. This is
13 not something that we written ourselves.

14 MR. STIVER: Oh, I understand that
15 but it's just that there's a change being made
16 but I don't see that there's really been any
17 kind of a formal testing of it, whether it
18 really works better. You know, what, as Steve
19 was saying, is there five percent change? Is
20 there a negligible change?

21 But this is something that's come up

NEAL R. GROSS

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

1 again and again mainly the Dose Reconstruction
2 Subcommittee, some notion of changes being made
3 to sort of becoming more and more like a black
4 box-type applications and it can become really
5 difficult to audit without some sort of a easy
6 trail that we can look at.

7 MR. HINNEFELD: This is Stu. To be
8 fair, you've never really audited the goodness
9 of fit of these outcomes when the selection was
10 limited to normal, log-normal, triangular,
11 etc.

12 I mean I don't understand quite the
13 issue here when you have a better, you know, the
14 ability to use a distribution that better fits
15 the data. I don't understand that issues.

16 MR. STIVER: I guess the question
17 is how much better is it? Is it really better
18 resolved?

19 MR. HINNEFELD: Well if we could
20 monitor, then the program would select
21 log-normal or normal.

NEAL R. GROSS

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

1 MR. STIVER: Yes, so it just
2 converges to a -- it takes the distribution that
3 allows the conversion to a more precise B

4 DR. NETON: Can I give you the exact
5 criteria and we could probably provide that to
6 you. I spoke to our statistician yesterday and
7 he assured me that it's not just because you
8 have more parameters and more freedom that
9 allows you to select that value. It's like I
10 said, the AIC value actually penalizes you for
11 putting more parameters because, obviously,
12 the more parameters you have, the better fit you
13 get.

14 So I mean we could provide you
15 possibly with the criterion but -B

16 MR. STIVER: Well it sounds like
17 that might be the way to go at this point. If
18 you can provide that to us then we can look at
19 it and maybe we can come back.

20 I don't think that that -- I mean
21 it's not several further discussions today or

NEAL R. GROSS

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

1 it may not be the most productive use of our
2 time.

3 DR. NETON: What I'm hearing is the
4 SC&A is interested in knowing, you know, how the
5 goodness fit is actually selected using the AIC
6 value.

7 MR. STIVER: That would help me, I
8 think. Harry, are you on the line by any
9 chance? I'd ask Harry to jump in. I guess he
10 didn't get the message.

11 But in any case, I think we're going
12 to have to kind of look at this and think about
13 it some more and then we can discuss it at the
14 next meeting.

15 Yes, if you can provide us with the
16 criterion we can maybe look into a little more
17 in depth.

18 CHAIR MUNN: So I'm recording it as
19 an action item that NIOSH is going to provide
20 criteria that's used when selecting the options
21 for the IREP runs.

NEAL R. GROSS

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

1 Is there anything else that we need
2 to record for next time? If not then B

3 MR. STIVER: I think that will
4 probably give us what we need to formulate some
5 -- if there are further questions, somebody can
6 bring them up at the next meeting.

7 CHAIR MUNN: Very good. That will
8 be on our next agenda items.

9 It's now 20 minutes to the hour and
10 we've completed our discussion of this item.

11 We'll return at 20 minutes to the
12 next hour with OTIB-83 and SC&A will be leading
13 that, am I correct?

14 MR. MARSCHKE: Wanda, this is
15 Steve. This is the one that I sent you the
16 email on.

17 CHAIR MUNN: Yes.

18 MR. MARSCHKE: I think we talked
19 about. I think actually we talked about this
20 at the last meeting in quite some detail and I
21 think actually the action item is with NIOSH on

NEAL R. GROSS

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

1 this.

2 DR. NETON: I'm sorry, I was
3 distracted. Were we talking about OTIB-83?

4 MR. MARSCHKE: Yes.

5 CHAIR MUNN: We're talking about
6 OTIB-83. Are you folks B-

7 DR. NETON: Well, OTIB-83, if you
8 remember, I think OTIB-83 is the review of the
9 Type J, Type L plutonium-238, how we approach
10 modeling that, actually Y-12?

11 CHAIR MUNN: Yes.

12 DR. NETON: And I think I was pretty
13 clear last time. We're not going to have
14 anything to report at this meeting. We're
15 working on it. We're looking into the various
16 issues that have been raised. To me, the two
17 key issues were, hang on, I wasn't quite ready
18 to -- excuse me while I find my notes.

19 Yes, but the issues were to address
20 our belief that the Type J material is actually
21 unique to Los Alamos. If you remember that Los

NEAL R. GROSS

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

1 Alamos had this very non-monotonically
2 decreasing inhalation intakes that extend over
3 quite a period of time, hundreds of days unlike
4 the B

5 I mean Los Alamos had that material.
6 Unlike Mound which was a much shorter period.
7 And we described in Section 6 of that document
8 the unique situation at Los Alamos that
9 generated that type of material.

10 This is what's called a cermet,
11 which is a ceramic metal material it had
12 molybdenum in it and they were doing
13 destructive testing on this radioisotope
14 thermal generator. Some electric generator
15 that plutonium-238 source where they vibrated
16 it quite a bit to simulate re-entry which
17 created a lot of small particulate that was
18 respirable and then they cut into it and inhaled
19 this material.

20 We're not convinced that that type
21 of situation exists anywhere else with people

NEAL R. GROSS

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

1 working with plutonium-238. We're
2 researching that and we'll cover that issue.

3 And the other situation is that the
4 Type L model we used at Mound, SC&A had
5 identified a couple of cases that may be the
6 model we used in covering the range of potential
7 excretions that we had observed based on some
8 incident sampling. And we're looking into that
9 but we're not ready yet to -- I would say that
10 this is in progress.

11 CHAIR MUNN: Yes, I do remember
12 that you indicated it wasn't going to be ready
13 this time and that we shouldn't expect it. So
14 we'll continue to carry it as an open item until
15 the report's ready.

16 And with that. I think we can then
17 indicate that when we come from lunch we'll
18 start with PER-0020.

19 And that is going to be NIOSH again,
20 I believe. Correct?

21 MR. HINNEFELD: Yes, that's us.

NEAL R. GROSS

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

1 CHAIR MUNN: Very good. Then we'll
2 see you. It's now 15 to the hour, so we'll see
3 you at 15 minutes to hour, one hour from now.

4 Thank you all. We'll talk to you
5 soon.

6 (Whereupon the foregoing matter
7 went off the record at 12:46 p.m. and went back
8 on the record at 1:48 p.m.)

9 CHAIR MUNN: Good, let's go
10 PER-0020. And is the BRS up?

11 MR. MARSCHKE: Yes it is. Can you
12 see it?

13 CHAIR MUNN: I may have a shot at
14 it. They've let me through the wall this time
15 but I may not be able to get where I need to go.
16 Hey, yes, there it is, oh no, it's gone. Okay,
17 but I'll keep trying.

18 Who's leading off?

19 MS. MARION-MOSS: Wanda, this is
20 Lori, I have a question or a comment.

21 CHAIR MUNN: Okay.

NEAL R. GROSS

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

1 MS. MARION-MOSS: Steve, I see that
2 you've made an entry for PER-0030.

3 MR. MARSCHKE: Yes.

4 MS. MARION-MOSS: Okay. I just
5 wanted to say you had a typo in the first
6 sentence.

7 MR. MARSCHKE: Doesn't surprise
8 me. I didn't have Paul there proofreading for
9 me.

10 CHAIR MUNN: We need surveillance.

11 MR. MARSCHKE: SC&A, that would be
12 two cases that related to the issues -- PER not
13 REP.

14 MS. MARION-MOSS: Right.

15 MR. MARSCHKE: That's it.

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

17 CHAIR MUNN: Very good. Thank
18 you, Lori and thank you, Steve.

19 Back to PER-0020, closure of five
20 and six.

21 MS. MARION-MOSS: Stu, you want to

NEAL R. GROSS

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

1 discuss this one?

2 MR. HINNEFELD: Yes, I'll start
3 off, as soon as I get it up there.

4 MR. MARSCHKE: Where are we at on
5 five, exactly?

6 The response by Kathy is the last
7 entry is in the BRS anyway.

8 MR. HINNEFELD: Okay, well then I'm
9 not -- have we made the revised tool available
10 to Kathy, Lori?

11 MS. MARION-MOSS: Yes. The issue
12 here since the last meeting and, Kathy, are you
13 on?

14 MS. K. BEHLING: Yes, I am.

15 MS. MARION-MOSS: Okay, correct me
16 if I'm wrong, but the issue is whether or not
17 there needs to be a change to the wording in the
18 tool instruction sheet. Am I correct?

19 MS. K. BEHLING: That's correct.

20 During the last meeting, I had had
21 an opportunity to look at both the inhalation

NEAL R. GROSS

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

1 and the ingestion tool and I didn't have a
2 problem with the tool. It looked like they
3 were correcting consistent with what I saw in
4 the Blockson TBD.

5 The only question I have is there is
6 there is an instruction sheet that comes with
7 the tools and the instruction sheet provides a
8 table, Table 1, that gives the dose
9 reconstructors the option to use either the
10 inhalation or the ingestion pathway for the GI
11 tract tissues.

12 And according to these
13 instructions, it says that if there's a
14 multiple choice, that you should complete both
15 options and then determine which is the
16 highest.

17 However, and that's fine, but that
18 doesn't seem to be consistent with the
19 information in the Blockson TBD and I'm looking
20 at Page 21 of the most current TBD Revision 3,
21 Table 4(a) is the inhalation rate for building

NEAL R. GROSS

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

1 55 which gives a footnote indicating that the
2 gastrointestinal tract and tissues of the
3 gastrointestinal tract should be completed
4 using Table 4(b) which is ingestion.

5 And, in fact, what brought this to
6 my attention is when I was doing this Blockson
7 case, it was a stomach cancer and that had been
8 completed using inhalation rather than
9 ingestion.

10 But I was just questioning. And I
11 know that, I think Stu wonder if it was that
12 simple, my explanation last time. But I'm just
13 saying that there seems to be a conflict between
14 the TBD and the instructions.

15 MR. HINNEFELD: Yes, okay, this is
16 Stu and I will take that up then. You're right;
17 there is a conflict between the TBD and the
18 instructions.

19 What happened here is that the Site
20 Profile was originally written and it included
21 that statement you just talked about that said

NEAL R. GROSS

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

1 for GI tract use ingestion.

2 And then there was a revision to the
3 Site Profile that added additional
4 radionuclides I think in the building 55
5 portion or something.

6 And after that was done and we
7 worked with that, you know, essentially the new
8 tools, we recognized that under certain
9 circumstances, the inhalation is actually more
10 favorable to the claimant than ingestion for
11 some GI target organs in some circumstances.

12 So because of that, the
13 instructions were written to run both and chose
14 either ingestion or inhalation, the one that's
15 most favorable if you're dealing with the GI
16 tract.

17 However, you know, once we decided
18 that, we then didn't go back and change the
19 statement in the Site Profile, it just flat out
20 says for GI tract use ingestion. And so that's
21 what we will be doing going forward is changing

NEAL R. GROSS

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

1 the Site Profile so it aligns with the
2 instructions.

3 MS. K. BEHLING: Okay. I don't
4 know if that should.

5 MR. HINNEFELD: Probably, that
6 should probably be our entry and we can -- I mean
7 we can do that away from the meeting.

8 MS. K. BEHLING: Okay. I didn't
9 know if in the BRS B-

10 MR. HINNEFELD: I just talked about
11 six, didn't I? It looks like six actually is
12 what I just was talking about.

13 MS. K. BEHLING: Yes, six. And
14 five, based on my review and my presentation
15 last time, I felt that five could be closed and
16 the only thing we kept open with six was this
17 issue of the guidance document.

18 So I'm not sure how Wanda wants to
19 handle the BRS. Is that something that goes
20 into abeyance?

21 CHAIR MUNN: If we agreed last time

NEAL R. GROSS

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

1 that five was closed, then we have no reason to
2 continue having it open. Did we fail to close
3 it last time during our meeting?

4 MR. MARSCHKE: The BRS says the
5 Subcommittee determined that the finding will
6 remain open until SC&A can review the tool.

7 MS. K. BEHLING: If it was my
8 responsibility to go in and add another line to
9 the BRS, I'm sorry, I didn't do that. But
10 during that last meeting, I did have the
11 opportunity, as I said, to review the
12 inhalation tool and I found it to be correct and
13 I had no problem with that.

14 So at least my suggestion would be
15 that we can close five.

16 CHAIR MUNN: I think we just
17 overlooked it last time, Kathy. Can we make
18 that correction right now and say, SC&A has
19 reviewed the tool and finds it acceptable? The
20 finding is closed, or number five.

21 MEMBER ZIEMER: This is Ziemer. I

NEAL R. GROSS

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

1 agree that five should be closed.

2 CHAIR MUNN: Josie?

3 MEMBER BEACH: I agree with that
4 also.

5 MS. K. BEHLING: And now I guess
6 with regard to finding 6, based on what Stu just
7 told us, I'm not sure if that's something that
8 remains in abeyance until this change gets put
9 into the Blockson TBD or how you'd like to
10 handle that.

11 CHAIR MUNN: Well, my note says
12 that Stu said he would complete the change and
13 notify us. Is that correct, Stu? Did I
14 misstate that?

15 MR. HINNEFELD: That is correct; we
16 will revise the Site Profile to make it
17 consistent with the tools.

18 CHAIR MUNN: Very good. We will
19 continue to carry it with a NIOSH expectation.

20 MR. HINNEFELD: And I think in
21 abeyance would be the correct status.

NEAL R. GROSS

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

1 CHAIR MUNN: Right.

2 MEMBER ZIEMER: Yes, I agree in
3 abeyance.

4 CHAIR MUNN: Thank you for number
5 5, Steve and it looks like number 6, we'll say,
6 NIOSH will correct the too and change it to in
7 abeyance.

8 MS. MARSCHKE: The TBD, not the
9 tool.

10 CHAIR MUNN: I'm sorry; I'm
11 thinking one thing and saying something else.

12 My screen is stuck, so I can't see
13 what you're doing, Steve.

14 MR. MARSCHKE: What I've written is
15 NIOSH has agreed to modify the TBD to agree with
16 the latest version of the tool and, as such, the
17 Subcommittee has changed the status to in
18 abeyance.

19 CHAIR MUNN: Excellent. Any
20 problem with that from anyone?

21 MEMBER ZIEMER: No, just add a

NEAL R. GROSS

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

1 semicolon instead of a comma.

2 MR. MARSCHKE: I like commas, Paul.

3 MEMBER ZIEMER: Well, that's the
4 problem.

5 MR. MARSCHKE: Okay.

6 CHAIR MUNN: All right, we good?
7 Oh now I can see it, thank you. Very good.

8 So where do we stand now with the
9 rest of the items on PER-0020? Are we getting
10 there with Blockson or not?

11 MS. K. BEHLING: I believe
12 everything else should be closed.

13 CHAIR MUNN: We had such a slew of
14 findings here.

15 MR. MARSCHKE: They're all closed
16 except for six which is in abeyance.

17 CHAIR MUNN: Excellent, that's
18 very good. Then we can leave that and move on
19 to OTIB-0034.

20 MR. KATZ: But just for a not --
21 this is Ted -- why don't we put this on the list

NEAL R. GROSS

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

1 of procedures that could be presented then to
2 the Board because it's effectively closed if
3 that last item is just an abeyance.

4 CHAIR MUNN: Just about so, yes, I
5 think that's true.

6 MR. KATZ: So my note is just to, I
7 guess, John Stiver or Steve, whoever tracks
8 these.

9 CHAIR MUNN: Just to remind us that
10 we're B-

11 MR. KATZ: Yes, we're not on, by the
12 way, we're not slated to do, because we don't
13 really have time to do Procedures presentations
14 for the upcoming Board meeting, but then the
15 following one.

16 CHAIR MUNN: That's fine. You
17 know, that's just as well.

18 MR. STIVER: I'll go ahead now to
19 the queue.

20 MR. KATZ: Thanks, thanks, John.

21 CHAIR MUNN: OTIB-34 Rev 1.

NEAL R. GROSS

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

1 DR. H. BEHLING: I'll take that
2 one.

3 Let me just ask a question. Here on
4 my agenda it has OTIB-34 Rev 1 in reply to item
5 two and nine and I just want to make a comment
6 here.

7 The OTIB-34 that I reviewed was Rev
8 1 and we issued our report back in November of
9 2013.

10 CHAIR MUNN: Yes.

11 DR. H. BEHLING: That only covered
12 -- that was a focused review and in that focused
13 review, I did make mention of a previous audit
14 of Revision 0 which contained four particular
15 items and I assume that item number two refers
16 to the previous audit of Rev 1 -- of Rev 0, I'm
17 sorry and that was done by somebody that no
18 longer works for SC&A.

19 But I can respond to it. I looked
20 at the original finding 2 in the report that was
21 issued back in, I guess, 2007 and I looked at

NEAL R. GROSS

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

1 the finding and I also looked at NIOSH's
2 response and I feel very, very strongly in favor
3 of closing it out. I think the response
4 address the issue and I think we need to close
5 it out.

6 CHAIR MUNN: Thank you, Hans.

7 What is does the BRS tell us the last
8 entry on item two is?

9 MR. MARSCHKE: The last entry was
10 on February 13, the last meeting, and it was
11 basically since NIOSH has provided a response
12 to the finding, the status has been changed to
13 in progress and SC&A has been asked to review
14 the NIOSH response and I think that's what Hans
15 just did and he came back with his
16 recommendation or SC&A's recommendation.

17 CHAIR MUNN: Any position other
18 than acceptable to close? Resolved? Then
19 let's do close it.

20 MEMBER ZIEMER: Is that just two?

21 CHAIR MUNN: Yes, that's two.

NEAL R. GROSS

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

1 MEMBER ZIEMER: Okay, Right.

2 DR. H. BEHLING: Now on the issue of
3 number nine, I'm somewhat confused because in
4 my focused review, there were four findings in
5 the review of Rev 0 and there were four findings
6 in the more recent 2013 focused review of Rev
7 1.

8 So I'm not sure where finding number
9 9 comes in, if that is a typo or is a reference
10 to actually finding number 4 which if you
11 combined Rev 1 and Rev 0, would be number 8. So
12 I'm not sure I know what 9 refers to.

13 CHAIR MUNN: Well, I would have to
14 go back to our transcript to see that myself
15 because I'm not sure, it seems to me, hold on.

16 MEMBER ZIEMER: Wanda, I'm looking
17 my notes from the last meeting and on OTIB-34,
18 we carried over findings 2, 3 and 4 according
19 to my notes.

20 DR. H. BEHLING: Yes, and Paul,
21 that was the focused review of the Rev 1 of

NEAL R. GROSS

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

1 OTIB-34.

2 MEMBER ZIEMER: Right, but I don't
3 see any reference to finding 9 from last
4 meeting.

5 DR. H. BEHLING: Yes, there's only
6 a total of eight and I can only conclude that
7 it might be finding number 4 or, when combined,
8 finding number 8. And I think of the first two,
9 the issue of the 24 hour urine data excretion
10 because I had raised the question, it was a
11 conditional finding because I looked at some of
12 the data and I was questioning whether or not
13 one could really assume that the data in the
14 sheets that were being valued were truly
15 24-hour urine samples.

16 And so that was finding number 4 or
17 if you combined the two, finding number 8.

18 CHAIR MUNN: I think that I'm the
19 one who's responsible for that error because my
20 pencil notes say two and I read what I wrote as
21 nine. I can see that it very probably is four.

NEAL R. GROSS

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

1 I think you're correct, Tom. And it's my typo,
2 not a mistake -- a mistake other than mine.

3 So if we were to change our agenda
4 sheets to read two and four and we'll address
5 four.

6 DR. H. BEHLING: Okay. You know,
7 I'm not sure I have an answer or response from
8 NIOSH relating to that particular finding.

9 MS. K. BEHLING: This is Kathy.
10 It's actually finding 8. It was in parentheses
11 finding 4.

12 DR. H. BEHLING: Yes, we came to a
13 conclusion.

14 CHAIR MUNN: So we should
15 appropriately be calling it eight rather than
16 B

17 MS. MARION-MOSS: Excuse me,
18 Wanda, this is Lori.

19 I'm looking at Rev 0, there's a
20 finding 4 as well.

21 DR. H. BEHLING: Yes, I had

NEAL R. GROSS

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

1 mentioned there were four findings as Rev 0
2 which was done in 2007 and in this focused
3 review that I did back in November of 2013, I
4 also had four. So in combination, they would
5 be eight as a maximum.

6 MS. MARION-MOSS: Okay. The thing
7 is -- the issue is what we're concerned with.
8 We're dealing, I assume, that we are dealing
9 with the 24 hour question with the total of
10 eight.

11 DR. H. BEHLING: Yes, it is,
12 exactly.

13 I don't think there was a response
14 from NIOSH.

15 CHAIR MUNN: No.

16 MR. MARSCHKE: Hans, this is Steve.
17 If you look at the original finding 4 on Rev 0,
18 finding 4, if you look down and you look at the
19 -- from the last meeting, what it says was NIOSH
20 had provide a response through a finding and the
21 status has been changed to in progress. That

NEAL R. GROSS

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

1 SC&A has been asked to review the NIOSH
2 response.

3 So I think what we were supposed to
4 look at was the response to the original finding
5 4, not for Rev 0 finding 4, which is a total
6 finding 8.

7 DR. H. BEHLING: Okay, then I was
8 confused because I didn't really look at the
9 number four for Rev 0 as the number nine.

10 I just knew that nine was in error
11 regardless of which Rev 0 or Rev 1 was used.
12 And so that this point, I haven't really looked
13 at the finding number 4 Rev 0.

14 MR. MARSCHKE: Yes, I think that's
15 what it is because we have the same statement
16 in finding 4 that we had in finding 2.

17 DR. H. BEHLING: Yes, but in this
18 case, if we're talking about the finding number
19 4 Rev 0, I have not really looked at it carefully
20 to form an opinion as to whether or not we can
21 let this one go.

NEAL R. GROSS

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

1 CHAIR MUNN: All right, so we need
2 to carry this one over. Next time, it will be
3 an SC&A item to respond to Rev 0s finding 4.
4 Correct?

5 DR. H. BEHLING: Yes, correct.

6 CHAIR MUNN: All right, we'll carry
7 it over.

8 MS. MARION MOSS: And Wanda, this
9 is Lori.

10 CHAIR MUNN: Yes?

11 MS. MARION-MOSS: For Hans'
12 finding which is finding number 8 for Rev 1,
13 NIOSH has been tasked to look and to provide a
14 response and we need to carry that one over as
15 well. We're still looking into that.

16 DR. H. BEHLING: Yes, that's
17 correct, Lori.

18 CHAIR MUNN: Okay, Rev 1 is NIOSH.
19 All right, got it.

20 Next item, are we B

21 DR. H. BEHLING: Wanda, can we also

NEAL R. GROSS

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

1 go back and maybe for the findings 1,2 and 3 of
2 the Rev 1, I had a couple of comments.

3 I think last time we had only gotten
4 a verbal understanding that revisions had been
5 made in the subsequent Revision 2 -- that would
6 incorporate, for instance, in the first finding
7 for my Rev 1 focused review, my finding was that
8 Super S solubility plutonium should be
9 considered.

10 And they said yes, we did make an
11 addition to that in the most recent revision and
12 I looked at it and yes, I did see that this, and
13 I'll quote for the issue that I identified.

14 It's simply stated that the
15 potential for Type Super S solubility plutonium
16 should also be considered.

17 And I'm just questioning whether or
18 not additional information might be needed.
19 It's kind of a broad and general statement to
20 say that to a dose reconstructor that the
21 potential for Type Super S solubility plutonium

NEAL R. GROSS

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

1 should be considered.

2 I wonder if we can certainly now
3 that recommendation is done by identifying a
4 time frame, location and who the people are who
5 might be most likely subjected to Type Super S
6 plutonium whether it is an operator who is the
7 potential candidate for it or a certain time
8 period during which Super S was actually
9 processed and perhaps the location if that kind
10 of information were available.

11 MR. HINNEFELD: This is Stu. Is
12 there someone on the phone on our side who
13 recognizes what that would mean? I mean, to my
14 way of thinking, don't we do Super S plutonium
15 when there's potential from plutonium exposure
16 depending upon things like the monitoring
17 method by which the plutonium dose was
18 determined and essentially when the cancer
19 occurred compared to the monitoring ending and
20 things like that.

21 MR. SMITH: Stu, this Matthew.

NEAL R. GROSS

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

1 Yes, any time once we face Super S's
2 potential delegates, OTIB-49 gets applied to
3 really any plutonium assessment.

4 MR. HINNEFELD: Yes, I think Hans,
5 you know, I think you're right that there's the
6 language maybe has not been terribly elegant in
7 Rev 2.

8 But I think it accomplishes on our
9 program what we expect it to accomplish, which
10 is that if, you know, it points out that Super
11 S is a consideration there and so we have to go
12 to a Super S OTIB and there may be, depending
13 upon the characteristics of the case and it has
14 to do with characteristics of the claim, not so
15 much the workers' location. I don't even think
16 it depends very much -- don't think depends on
17 dates even.

18 And it should say -- you may need to
19 make adjustments and allow for Super S
20 plutonium depending upon the monitoring that
21 was used to determine plutonium exposure.

NEAL R. GROSS

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

1 DR. H. BEHLING: Yes, I think that
2 was verified, Stu. If B

3 MR. HINNEFELD: I think that we can
4 put that on a list for future, but I wouldn't
5 proposed to go off and make that change now
6 because the wording that's in Rev 2 means what
7 we want it to mean to the people who work on the
8 project. You know, they understand what we
9 mean when we say that, when we say that it means
10 go to the Super S OTIB.

11 DR. H. BEHLING: Okay. Yes, I
12 would say that would be a great change.

13 MR. HINNEFELD: Yes.

14 DR. H. BEHLING: The other thing
15 that, quickly, also is in the finding number 3
16 that I included in my focused review, there was
17 a question about providing guidance when the
18 95th percentile value should be used as opposed
19 to the 50th.

20 And again, in Rev 2, we were told
21 yes, that change has been included and the

NEAL R. GROSS

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

1 statement has been added that we take care of
2 it, and I will read you the statement.

3 Because my original concern was
4 there is not enough guidance to provide the dose
5 reconstructor to make a very, very focused
6 decision that says this is an instance where the
7 95th percentile should be used as opposed to 50th
8 percentile.

9 And I was hoping that it would be
10 somewhat more prescriptive so that you would
11 have a consistent use of the 95th percentile as
12 opposed to the 50th.

13 And what was added in the Revision
14 2, and I'll read you what was added.

15 It says, for cases in which there is
16 justification that the individual might have
17 had larger intakes than the 50th percentile
18 intake rates. Those reconstructions should
19 use the 95th percentile intake rates and put
20 into IREP as a constant.

21 Again, it's a very generic

NEAL R. GROSS

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

1 statement and I was hoping that, perhaps again,
2 there might be some more definitive information
3 used for guiding the dose reconstructor to the
4 use of the 95th percentile.

5 For instance, what his job title and
6 where were the job locations which that would
7 -- which gives you a reasonable understanding
8 of why the 95th percentile might be more
9 appropriate than the 50th percentile.

10 And the statement as it exists is
11 kind of wishy-washy. And my concern has always
12 been anytime you have an option where there's
13 a choice between the 50th/95th percentile to
14 not necessarily impose that weight ton those
15 reconstructors to make a decision that that
16 might be consistently employed by other dose
17 reconstructors.

18 MR. HINNEFELD: Okay, well I think
19 we can kind of consider what we can do there.
20 You know, we've -- have to, you know, this is
21 a general thing. I mean this is a standard

NEAL R. GROSS

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

1 approach we use.

2 DR. H. BEHLING: I know, I know.

3 MR. HINNEFELD: And I guess we
4 could look in to what we can do in terms of more
5 specificity. I think we resist being terribly
6 specific with respect to job titles for fear of
7 leaving out some, you know.

8 And so there might be information in
9 the file that would lead you to believe that --
10 or leads you to conclude that someone should
11 have the 95th percentile even though their job
12 title isn't on what we would generally think of
13 as the 95th percentile job title list.

14 So, you know we -- so I think I will
15 agree that we will consider if there's better
16 language we can use, but like in the previous
17 case, I don't want to make a commitment to do
18 something right away because I'm not exactly
19 sure what we do.

20 Now in the previous case, I kind of,
21 you know, when we were talking about Super S

NEAL R. GROSS

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

1 plutonium, I kind of know what we could say
2 there.

3 DR. H. BEHLING: Yes, you know
4 what's so confusing, Stu, is that you're
5 obviously dealing with a person who does not
6 have monitoring data for themselves and so
7 you're already starting out with a handicap for
8 that individual unless, for instance, a person
9 have missing data looking at his records and you
10 do note that he was, let's say, an operator
11 where you would have reasonable expectation of
12 having a maximum type exposure.

13 That would be very easy to define
14 but in other cases unless the records are
15 strictly missing, you would have a tough time
16 in saying on the basis of the statements and,
17 as I said, that the individual might have had
18 larger intake rates.

19 But that kind of makes me wonder how
20 the dose reconstructor would make an assumption
21 that says; let's use the 95th instead of the 50th.

NEAL R. GROSS

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

1 MR. HINNEFELD: Okay, well, yes, I
2 can understand sort of the discomfort with the
3 wording as it is, and so we'll take upon
4 ourselves to see if there's something we can do
5 better and I guess report back to the
6 Subcommittee if we decide on something.

7 DR. H. BEHLING: Yes, and I would
8 assume it would be a very limited usage where
9 the 95th percentile would be used, such as, for
10 instance, an operator who's bioassay data has
11 someone or another been misplaced or deleted or
12 something where you would say, you know, this
13 guy justifies the 95th percentile.

14 MR. HINNEFELD: Right, right.

15 DR. H. BEHLING: Okay, I think
16 that's it for me.

17 CHAIR MUNN: Okay, let me see if I
18 can summarize what I believe this discussion
19 just said.

20 I believe that we said on finding 5
21 relative to Super S, that we discussed the

NEAL R. GROSS

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

1 matter here and, Hans, did you accept what Stu's
2 rationale was with respect to the current
3 process for viewing Super S issues?

4 DR. H. BEHLING: Yes, I was saying
5 obviously, that option is going to be
6 determined, not by location, job or anything
7 like that, other than in the case of a lung
8 cancer. If Super S could have been used it'll
9 be tested to see if it generates the highest
10 dose and that would be, obviously, a very, very
11 maximized application of the Super Type S.

12 CHAIR MUNN: Right. So that is in
13 effect being done now and we close this issue
14 as we recall. All right.

15 May we please close that, Steve?
16 Resolves our discussion and closed today.

17 While Steve is doing that, with
18 finding 6, it's my understanding with respect
19 to the selection of 95th or 50th percentile that
20 NIOSH is going to take a look and see if better
21 words are possible or reasonable for B

NEAL R. GROSS

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

1 DR. H. BEHLING: Actually, that's
2 seven, Wanda.

3 CHAIR MUNN: Is it seven?

4 DR. H. BEHLING: Yes.

5 CHAIR MUNN: What was six?

6 DR. H. BEHLING: Six one we skipped
7 which I think we probably put to bed the last
8 time.

9 CHAIR MUNN: All right.

10 DR. H. BEHLING: So, let's see
11 here, maybe we did not put it to bed. But I
12 looked at it and I agree. I think we can put
13 that to bed.

14 CHAIR MUNN: Well, it's
15 frustrating for me because I don't have easy
16 access to the BRS.

17 DR. H. BEHLING: Yes, there were
18 just three separate values that were entered in
19 error due to strictly a calculational error and
20 I looked at the revised or Revision 2 and those
21 numbers were corrected, so finding number 6 has

NEAL R. GROSS

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

1 been taken care of.

2 CHAIR MUNN: Oh, the 95th/50th
3 percentile issue was finding 7.

4 DR. H. BEHLING: Yes, it was.

5 CHAIR MUNN: And NIOSH is going to
6 take a look at it to see whether the words are
7 appropriate as written. Correct? And we'll
8 hear from that next time.

9 All right. Does that complete our
10 discussion on B-

11 DR. H. BEHLING: OTIB-34.

12 CHAIR MUNN: -- TIB-34?

13 MR. HINNEFELD: Well, I think it
14 completes the discussion but I think we're
15 ahead of Steve.

16 MR. MARSCHKE: Yes, you guys are
17 racing ahead.

18 MR. HINNEFELD: I think we should
19 let Steve finish up his comment on seven and
20 then go back to what we talked about on to the
21 comments on six.

NEAL R. GROSS

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

1 CHAIR MUNN: I think so, too.

2 MR. MARSCHKE: What was it that we
3 agreed? NIOSH will revisit the directions
4 given in the -- regarding the usage of the 95th
5 percentile?

6 MR. HINNEFELD: Yes, just choose
7 your words, but you got the idea.

8 MEMBER ZIEMER: Check your
9 spelling.

10 MR. MARSCHKE: I think that's
11 right, I don't know.

12 MEMBER ZIEMER: That's good.

13 MR. MARSCHKE: I was on -B

14 MEMBER ZIEMER: Yes, currently the
15 status is showing it's closed there.

16 MR. MARSCHKE: Yes, it's currently
17 -- it was in progress and the BRS, when I change
18 it Wanda, the BRS wants to close it.

19 CHAIR MUNN: Because that's what
20 she does all the time.

21 MR. MARSCHKE: Okay and six was

NEAL R. GROSS

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

1 basically change the values in that table and
2 that was done and it should be closed. Is that
3 correct?

4 MR. STIVER: That's correct,
5 Steve.

6 CHAIR MUNN: Resolved and closed.

7 MR. MARSCHKE: Does anybody know
8 what the table number was?

9 CHAIR MUNN: No, but the it was a
10 typographical error and the corrections have
11 been made.

12 MS. K. BEHLING: Probably too late,
13 Steve, but it was Table 5-5.

14 MR. MARSCHKE: Thank you.

15 MEMBER ZIEMER: Steve?

16 MR. MARSCHKE: Yes?

17 MEMBER ZIEMER: Yes, I know you
18 love those commas. You can get rid of the first
19 one and change the second one to a semicolon.

20 MR. MARSCHKE: Got you. Okay.

21 CHAIR MUNN: Good. Do we have

NEAL R. GROSS

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

1 anything else on this OTIB?

2 DR. H. BEHLING: Not from me.

3 CHAIR MUNN: All right. What I
4 have now is we're going to have a reply for Rev
5 0 number 4.

6 MS. K. BEHLING: Next time.

7 CHAIR MUNN: And NIOSH is going to
8 respond to finding 8, Rev 1, finding 5, Super
9 S, we've closed. Correct? And finding 7 is
10 NIOSH taking a look. All right.

11 We'll go on to PER-0038. I'm
12 assuming Kathy's going to talk to us?

13 MS. K. BEHLING: Yes, I will.

14 CHAIR MUNN: Good.

15 MS. K. BEHLING: Even though NIOSH
16 isn't done here, I can probably explain this.

17 At the last meeting, we had
18 completed our review of PER-0038 which is the
19 Hooker Technical Basis Document Revision and we
20 had suggested that NIOSH select three cases at
21 random for our sub-task four review and NIOSH

NEAL R. GROSS

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

1 did that.

2 And when we went out and looked at
3 those cases, the files that we were sent didn't
4 have a revised dose reconstruction report in it
5 and so we actually asked for another one and
6 that didn't have a formal revised dose
7 reconstruction report in it.

8 However, thereafter, because I was
9 somewhat confused and I was writing back and
10 forth to Lori, she did provide us with a file
11 containing an internal evaluation that was done
12 by NIOSH where they looked at the data close
13 enough and their internal evaluation just
14 determined that they did not need to do a formal
15 dose reconstruction rework because none of the
16 cases would go over the 50 percent.

17 So, because this is the first time
18 that we encountered anything like this, I had
19 written to you, Wanda and Ted and asked whether
20 we could go in and rework three of those cases
21 just to ensure that, yes, using the revisions

NEAL R. GROSS

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

1 to the TBD, a complete rework does not put any
2 of three cases over the 50 percent and we were
3 granted permission to do that. And so we are
4 now starting on that task.

5 CHAIR MUNN: And will the report be
6 forthcoming?

7 MS. K. BEHLING: John Mauro, are
8 you on the phone?

9 DR. MAURO: Yes, I'm here. I
10 jumped back in about 15 minutes ago in
11 anticipation of this part of the meeting.

12 Yes, I actually have four cases in
13 front of me. I'm going to pick the three out
14 of the four that I think covers the landscape.

15 I'm almost through with the first
16 one. It looks like it's taking me about two to
17 three days per case to basically do them like
18 a blind and see where we come out.

19 And in effect, what we have is we
20 have the original DR that was done on the -- if
21 you remember Appendix AA to TBD 6001, it goes

NEAL R. GROSS

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

1 way back. The cases were done in accordance
2 with that. I think that was a 2007 document.

3 Through the PER process, as Kathy
4 explained, NIOSH's contractor took a look at
5 the cases and basically said that, well, we
6 don't see any that'll, you know, they're all
7 going to change a little bit of somewhat but not
8 flip.

9 So I have four cases. I'm looking
10 at them -- I'm only going to look at three. I
11 will have the first one done, I would say I'm
12 half way through and I started work on it
13 yesterday.

14 So a couple of days. I'm saying as
15 far as getting a draft, I think that Kathy, for
16 you to independently review, we're probably a
17 week or so away, maybe ten days, for me to get
18 that to you. So we're not that far away from
19 finishing this up and getting this out to the
20 Subcommittee.

21 CHAIR MUNN: Okay, will be next

NEAL R. GROSS

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

1 time before we hear from you, right?

2 DR. MAURO: Yes, my guess is you'll
3 have it well before the next Subcommittee
4 meeting, sure.

5 MR. KATZ: But, this is Ted. John?

6 DR. MAURO: Yes?

7 MR. KATZ: Because this is the
8 first I've heard of just how you're going about
9 this, but I'd like to suggest, if in case I
10 misunderstood you, what you said, I mean you do
11 not need to redo these entirely a full dose
12 reconstruction to do this.

13 All you need to do is confirm that
14 DCAS is right in their judgments about those
15 cases. Right? Because they didn't redo the
16 case in detail. So you're doing the case in
17 detail would make no sense.

18 DR. MAURO: Well, you know, I have
19 to say, I'm going to admit something. I find
20 it easier for these types of cases for me to --
21 I can run these very quick. The alternative

NEAL R. GROSS

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

1 would be to go through; I guess the folders that
2 were prepared where there was scoping
3 calculations done using various workbooks.

4 I have to say I stumble more and
5 spend more time trying to figure those things
6 out than just sitting down and doing B

7 Because these AWEs are not complex
8 sites. And quite frankly, I think it would be
9 faster for me just to do it.

10 MR. KATZ: I mean that's find if
11 that's if that's the most expedient way to do
12 it. All I'm saying is really, all your
13 addressing here is that they came to the right
14 conclusions since they didn't rework the DR.

15 DR. MAURO: Yes, I mean for me to do
16 it, I mean I hear what you're saying. The way
17 I'm doing it is just say, well I'll just run it
18 and it doesn't take me very long it's not like
19 I'm doing a complex site and see where I come
20 out.

21 Maybe I won't do it at this high

NEAL R. GROSS

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

1 level. In other words, I'm not going to look
2 at ingestion dose because I know it's only going
3 to contribute some extremely small fraction.

4 So I'll look at this, the big doses,
5 the big internal, the big external and see what
6 kind of magnitude change in the dose occurs,
7 compare it with the original one and, in effect,
8 convince myself pretty quickly that, you know,
9 there's no way this is going to even approach
10 a 50 percent.

11 So I find -- I mean the way I look
12 at it, that's probably the easiest and fastest
13 way for me to do it and feel most comfortable
14 with my work.

15 MR. KATZ: No, that's fine, John.
16 Again, my only point is just to do it as
17 expediently as you can. You don't need any
18 more detail than you need to determine that they
19 came to the right conclusion.

20 DR. MAURO: Yes, that's why I'm
21 saying it's probably only going to take me a

NEAL R. GROSS

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

1 couple of days per case.

2 Normally, when I do a full-blown DR
3 review, you know, it's at least a week, you
4 know, even for an AWE case. So I'm doing this
5 in an expeditious way, but maybe not the way you
6 had envisioned. I guess you envisioned I would
7 look at these folders with the workbooks in it
8 which is the way in which I think was done by
9 B-

10 MR. KATZ: Yes, yes, it's just
11 because I imagine they spent much less than a
12 couple days per case to be able to come to their
13 conclusion.

14 DR. MAURO: No, well Kathy, let's
15 talk a minute about this.

16 You know how I do my work. Do you
17 think you might be able to knock this out?
18 Because I know you're much more proficient at
19 these workbooks at manipulating them and
20 checking them and that sort of thing, than I am.
21 I'm pretty crude when it comes to that.

NEAL R. GROSS

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

1 Do you think you can knock this off
2 quicker, maybe that'd be a better way because
3 I know for me, I would struggle going through
4 these workbooks.

5 MS. K. BEHLING: I probably could
6 but -- and I agree with Ted, we want to go in
7 and make sure that -- and especially, we want
8 to be sure that we address all of the changes
9 that were introduced because of the PER and that
10 should really be our focus and to see if their
11 decision was correct.

12 But I, you know, I can look at it and
13 that's why I want to be on the peer review --

14 DR. MAURO: Well, you know what's
15 taking me more time right now; I guess I've been
16 spending about a day on it already. Is I'm
17 lining up the differences between Appendix AA,
18 the original, and all the assumptions that we
19 used regarding starting them all internal and
20 lining them up against Rev 1 to the Site Profile
21 and seeing how they change.

NEAL R. GROSS

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

1 In other words, how the changes in
2 dust loading occur? How did changes in
3 external exposure? So we can see, in other
4 words, I can see, oh okay, I see how they made
5 these changes.

6 And quite frankly, you know, and
7 then, you know, if it turns out that it's
8 self-evident right at that point, that in going
9 to Revision 1, the dose is going to go down, I'll
10 stop at that point and say listen B

11 So I'm not going to go -- I won't
12 even go, I mean, I'm at the point where I'm just
13 sort of lining up how the changes occur between
14 the original and the revision.

15 MS. K. BEHLING: Yes, that's what
16 makes -- excuse me, John, I'm sorry.

17 DR. MAURO: Yes?

18 MS. K. BEHLING: That's what makes
19 this a little more complex because in some cases
20 the doses do go up and in some cases, the doses
21 will decrease a bit.

NEAL R. GROSS

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

1 DR. MAURO: Yes.

2 MS. K. BEHLING: So that's why I
3 suggested looking at the whole picture.

4 DR. MAURO: Yes, okay. Okay.

5 Anyway, like I said, it's probably
6 easier for me, well I could certainly finish up
7 the first one. I'll be done tomorrow sometime.

8 Then there's the last two, perhaps
9 Kathy -- we know what it is. Ted, we will
10 figure out the path forward that is the most
11 expeditious.

12 MR. KATZ: Yes, that's good.
13 That's what I was asking. Thanks.

14 DR. MAURO: Yes.

15 CHAIR MUNN: Very good. So we'll
16 let SC&A work out who's going to do the last of
17 the two audits and in any case, regardless of
18 how that gets done on the agenda for next time,
19 we will have three audits from PER-0038.
20 Correct?

21 MS. K. BEHLING: Correct.

NEAL R. GROSS

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

1 CHAIR MUNN: Good. Then if
2 there's nothing else with PER-0038, let's go on
3 to OTIB-54.

4 We have both the agency and the
5 contractor have responsibilities on this one.

6 Who needs to go first?

7 DR. OSTROW: Hi, Wanda, it's Steve
8 Ostrow. I can go first, I you'd like.

9 CHAIR MUNN: Good, Steve, if you
10 would, that would be appreciated. We have your
11 information on which we can go forward.

12 DR. OSTROW: Okay. Just a real
13 quick background. We had originally made 26
14 findings on Rev 0 of the OTIB. NIOSH
15 subsequently issued Rev 1 of it back in June of
16 2013 and we went ahead and made -- we started
17 a new review of the de novo of the Rev 1 at the
18 direction of Subcommittee. And we came up with
19 ten findings and we came out with a report on
20 that.

21 And the findings were listed as

NEAL R. GROSS

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

1 going from 27 to 36. Okay.

2 There was a Procedures Subcommittee
3 meeting in February and we were tasked to look
4 at NIOSH's response to our ten findings on Rev
5 1. NIOSH had posted their responses on the BRS
6 directly on February 4, 2014. So we were
7 responding to that. That's one thing.

8 Second thing is, the Subcommittee
9 at that last meeting, also tasked SC&A to look
10 at the original findings we made in Rev 0.
11 There were findings that were listed in
12 progress. Those were findings 14, 15, 16, 17,
13 19, 23, 24, 25 and 26. They were all listed as
14 in progress.

15 We went ahead and reviewed those
16 findings and we recommended to you on April 9
17 in an email to you, Wanda, that these nine
18 findings be closed, changed from in progress to
19 closed because they're all superceded by Rev 1.

20 And we gave the, in this email to
21 you, we gave the reasoning behind closing the

NEAL R. GROSS

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

1 findings.

2 So if the Subcommittee agrees with
3 that, then we're just left with the ten new
4 findings against Rev 1.

5 We produced, SC&A, produced on
6 April 10, a new report looking at the ten new
7 findings, NIOSH's responses to that and we have
8 some recommendations of which of those ten
9 findings should remain open, in progress, and
10 which we believe should be closed. So that's
11 the background of this.

12 I recommend, it might be more
13 efficient before we get into -- oh yes, just one
14 more thing I want to mention.

15 While all of this was going on,
16 NIOSH subsequent to our latest review, NIOSH
17 issued Rev 2 of the OTIB. But we took a look
18 at that and the Rev 2 was not a material change
19 of the OTIB.

20 They just noted in the NIOSH
21 discovery by itself a -- just basically made in

NEAL R. GROSS

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

1 Rev 1 that in two of the tables of Rev 1 they
2 had put values for promethium-147 and Rev 2, I
3 understand just corrected that and based on our
4 quick comparison of Rev 1 and Rev 2, that seems
5 to be the only change.

6 And if NIOSH, you know, can confirm
7 our impression that that's the only change they
8 made, that our comments on Rev 1 of the OTIB will
9 apply to the new Rev.

10 Stu, is that the only change that
11 you guys made? Just corrected the promethium
12 value?

13 B MS. BRACKETT: Yes, this is Liz
14 Brackett and that was. It was just a page
15 change to make those corrections.

16 DR. OSTROW: Okay. Okay, we were
17 pretty sure, that with taking a look by
18 ourselves.

19 So the -- I don't know how you'd like
20 to mark this in the BRS, Steve Marschke, this
21 is a question for you, too. That because that

NEAL R. GROSS

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

1 would be listed in the BRS as Rev 1 comment, but
2 there should be some note somewhere that they
3 applied to Rev 2 so we'll be current version of
4 the OTIB.

5 MR. MARSCHKE: The best way to do
6 that, I would suggest would be to, again, make
7 a finding that could make a finding to that
8 effect.

9 MEMBER BEACH: And Steve, this is
10 Josie. I've got a question for you.

11 When I was reviewing this, number
12 27, 28, 29, 30 and 31, those are still in
13 progress and your email to Wanda didn't address
14 those.

15 DR. OSTROW: Those were all
16 comments made on Rev 1 of the OTIB. My email
17 to Wanda was just for the original Rev 0
18 comments which are, you know the first 26
19 comments.

20 MEMBER BEACH: Oh, yes, of course.
21 Thank you.

NEAL R. GROSS

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

1 MEMBER ZIEMER: Wanda, this is
2 Ziemer. Maybe we should just go ahead and
3 close out the Rev 0 as recommended by Steve in
4 his email last week sometime, April 7th I think.

5 CHAIR MUNN: I certainly can't see
6 any reason why not unless there is some
7 objection. Does anyone object to our doing
8 that exactly?

9 MEMBER BEACH: No, no objection
10 here.

11 CHAIR MUNN: Can we, therefore,
12 move forward and accomplish that today?

13 MEMBER ZIEMER: For the record, its
14 findings 14, 15, 16, 17, 19, 23, 24, 25 and 26
15 were all closed in the Rev 0 findings.

16 CHAIR MUNN: Correct.

17 MS. MARSCHKE: Wanda, this is Steve
18 Marschke. If it's okay with the Subcommittee,
19 can I do that maybe expedite matters if I did
20 that offline?

21 CHAIR MUNN: That would be just

NEAL R. GROSS

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

1 fine. I have no problem. Okay. Paul and
2 Josie?

3 MEMBER BEACH: Yes, my only
4 question is can you address, when you close it
5 which findings those are going to be looked at
6 in if that's B-

7 MR. MARSCHKE: Actually, what has
8 been added to the BRS, if Steve had indicated
9 that another finding was going to pick up the
10 finding that was closed, that has also been
11 included in the BRS.

12 Whatever Steve has in his email for
13 a particular finding, I'm just looking at one
14 here, finding 23, for example, he indicates
15 that it's basically going to be produced in Rev
16 1, finding 10 or all, you know, BRS finding 36.
17 That whole statement there that's in Steve's
18 email is now in the BRS.

19 DR. OSTROW: Steve, that's
20 correct.

21 I think Paul and I brought this up

NEAL R. GROSS

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

1 at the last Subcommittee meeting that we should
2 write down, you know, not just close it but
3 write down why we're closing it and also take
4 a look to see if any of the Rev 0 issues still
5 apply for the Rev 1 OTIB. So we tried to that
6 and we wrote it down in the email and Steve just
7 copied that into the BRS so the BRS reflects
8 what's on these items.

9 CHAIR MUNN: And that is exactly what
10 we wanted to have happen. I found the wording
11 to be just fine at the time that I read it and
12 unless someone who's on the call now finds some
13 problem with any of the wording, then from my
14 perspective, the wording should stand as it's
15 already been incorporated into the BRS and the
16 only statement that needs to be added in each
17 case now is that the Subcommittee agreed and the
18 finding was closed as of this date which Steve
19 has said he will do after we've gone offline,
20 if that's all right with everybody.

21 I thought we had agreement on. If we

NEAL R. GROSS

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

1 don't have, you should tell me now because
2 otherwise, Mr. Marschke will close each of
3 those items that Paul just read.

4 MEMBER ZIEMER: Well, let's do it
5 later. Let's do it later.

6 CHAIR MUNN: That's fine. All
7 right then that takes care of a whole slew of
8 issues that we had with this before.

9 Now we had also listed on our
10 agenda, that NIOSH would have some reply for
11 some of the findings that we had not seen
12 before. Is that correct? Do we have
13 anything, NIOSH?

14 MR. HINNEFELD: Lori, do you have
15 an answer on that?

16 MS. MARION-MOSS: Wanda, this is
17 Lori. I think we left that, and I could be
18 wrong, but I believe we left that at, waiting
19 for Steve to respond to our responses.

20 DR. OSTROW: I did. The report
21 that we put out in April 10 responded to all of

NEAL R. GROSS

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

1 the BRS entries you guys had made.

2 MS. MARION-MOSS: Okay, we have not
3 had an opportunity to look at Steve's
4 responses.

5 DR. OSTROW: Well, I can just
6 summarize, you know, maybe, you know, just a few
7 things we might be able to take action on.

8 All together there were ten new
9 findings for Rev 1. The first four of them
10 which is 27, 28, 29 and 30, are all refers to
11 the reactor modeling process, the origin code
12 input and a few other things.

13 NIOSH had indicated in their BRS
14 entry that they're preparing a reactor modeling
15 report. And we recommended that the first four
16 findings remain in progress until NIOSH
17 produces that report and we get a chance to
18 review it. So the first four, you know, we
19 recommend stay the same.

20 I'd like to ask NIOSH, do you have
21 any of those estimates when you're going to

NEAL R. GROSS

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

1 produce that report?

2 MS. THOMAS: Wanda and NIOSH Stu
3 and Lori, this is Elyse. Bob Burns is on the
4 phone who wrote OTIB-54. Oh, Bob are you
5 there?

6 MR. BURNS: Yes, I'm here, I can
7 respond on that.

8 The short answer is that's report
9 number 67, it does exist as a draft. That draft
10 is at DOE headquarters for classification
11 review. So, that's the next step in that
12 process. It'll come back from classification
13 review and then it'll continue on through the
14 document development process, so I can't give
15 you a specific date, but it's well on its way.

16 DR. OSTROW: Okay. So, all right,
17 so anyway for the first four findings then, SC&A
18 will look at it when we get the report, when
19 that's issued.

20 CHAIR MUNN: Okay, so with any luck
21 at all, you'll have that in the interim and

NEAL R. GROSS

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

1 perhaps be able to move forward by our next
2 meeting.

3 DR. OSTROW: Yes, whenever we get
4 it, we'll look at it.

5 CHAIR MUNN: Great. It's like
6 it's imminent.

7 DR. OSTROW: Okay. Well, if we can
8 figure it out, we'll, you know, evaluate and
9 everything.

10 That leaves six more findings, 31
11 through 36, and I don't know if it's profitable
12 to go through all the -- what we've written in
13 our report, but finding 31 which is new finding
14 number 5, we recommend that it remain in
15 progress. We've had some comments and I guess
16 NIOSH can take a look at those comments.

17 Finding 32 which is new finding 6,
18 we looked at NIOSH's BRS entry that Bob Burns
19 made and we find that we agree with NIOSH and
20 we recommend that that be closed.

21 The Subcommittee, I suppose, could

NEAL R. GROSS

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

1 decide now whether to agree with us and close
2 that or not. Okay? I think Steve Marschke has
3 on the screen now, that's 32.

4 CHAIR MUNN: Thank you, Steve
5 Marschke. I have lost all contact with CDC
6 network. So I'm not seeing anything, I'll have
7 to rely on what is on the screen.

8 DR. MAURO: I can really help you
9 out real fast on this. I made the original
10 comment that had to do with what the screening
11 process that they went through and I
12 misunderstood what they did.

13 I thought that they used what I call
14 the effective whole body dose conversion
15 factors as a tool to screen out radionuclides
16 that weren't important. I thought it was more
17 important to use the organ dose conversion
18 factors for our purposes.

19 Well, low and behold, that's
20 exactly what NIOSH did. So I misunderstood and
21 as a result, I withdraw the comment as long as

NEAL R. GROSS

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

1 everyone agrees that, yes, they in fact did use
2 the organ dose conversion factors.

3 So it's real simple and if the folks
4 on the phone say yes, that's correct, we use the
5 organ dose conversion dose factors as opposed
6 to effective dose conversion factors, the issue
7 is resolved as far as I'm concerned.

8 MEMBER ZIEMER: Yes, I think we can
9 close that one. In essence, the finding turns
10 out not to be a finding since it was simply a
11 misunderstanding.

12 DR. OSTROW: Yes, I think that's a
13 simple one. This is Steve again. I agree with
14 John, we discussed this, I looked at it also and
15 it appears that we misunderstood the steps that
16 are in the OTIB in this case.

17 CHAIR MUNN: Josie, do you have any
18 objection to simply making a notation that the
19 finding was a misunderstanding and the
20 Subcommittee agrees the issue has been resolved
21 and closed?

NEAL R. GROSS

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

1 MEMBER BEACH: I absolutely agree
2 with that.

3 CHAIR MUNN: Can you make that
4 notation, please, Steve Marschke?

5 DR. OSTROW: I think John Mauro had
6 commented last time we had a Procedures meeting
7 on this that this has to be one of the most
8 complicated OTIB's we've ever seen. And it
9 took a lot of reviewing by John, me B

10 DR. BUCHANAN: Ron Buchanan.

11 DR. OSTROW: -- and Ron Buchanan to
12 go through it and try to get a good
13 understanding of it and I think we have now.

14 CHAIR MUNN: Good, I'm glad to hear
15 that. You're probably ahead of me by a long
16 shot.

17 Going to our next step with OTIB-54.

18 DR. OSTROW: Yes, the next one is
19 number 7, our new comment seven, the BRS finding
20 33.

21 I'm just waiting a minute until

NEAL R. GROSS

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

1 Steve gets to that in the B-

2 CHAIR MUNN: Ready?

3 MR. MARSCHKE: Yes.

4 DR. OSTROW: -- on the screen.

5 CHAIR MUNN: Those of you who can
6 see it will have to guide me.

7 DR. OSTROW: Okay, up a little,
8 Steve.

9 Okay, so this one also, you can read
10 the long version in our report, but the short
11 version is that we had also a comment on the
12 procedure they're using and we ended up
13 agreeing with NIOSH.

14 We said that by eliminating -- well
15 NIOSH went ahead and reduced the number of
16 radionuclides they were considering in several
17 different stages and we were afraid that by
18 doing that, that they would be missing some
19 important contribution. NIOSH said no, that
20 it's actually a conservative process.
21 Claimant-favorable.

NEAL R. GROSS

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

1 We looked through it in more detail
2 and we ended up agreeing with NIOSH so we
3 recommend that issue 33 be closed.

4 CHAIR MUNN: Is there any
5 discussion with respect to 33?

6 MEMBER ZIEMER: Wanda, I agree with
7 that. It's very clear that if you eliminate
8 the less important ones, they're giving more
9 weight to the others and, in essence, it
10 increases the dose estimate, or is more
11 claimant-favorable. So I agree, it should be
12 closed.

13 CHAIR MUNN: Josie? You there?
14 Are you with us, Josie?

15 MEMBER BEACH: I was muted. Yes, I
16 agree.

17 CHAIR MUNN: All right, very good.
18 I think, someone tell me if we've moved ahead
19 so that that particular finding is up now?

20 DR. OSTROW: Steve is writing it
21 right now. Steve Marschke is putting an entry

NEAL R. GROSS

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

1 into the BRS.

2 CHAIR MUNN: Thank you.

3 DR. OSTROW: So, let's give him a
4 minute while he types.

5 Steve, you're typing a little on top
6 of the letters.

7 DR. MAURO: How do you like
8 everybody watching over your shoulder as you're
9 typing, Steve?

10 DR. OSTROW: Yes, realtime typing.

11 MEMBER ZIEMER: Well, that's the
12 same as shouting on the internet?

13 DR. OSTROW: Okay, Wanda, Steve
14 finished the entry.

15 CHAIR MUNN: Very good. That's
16 two down. Good job.

17 DR. OSTROW: The next issue which
18 is finding 34, new finding number 8. And this
19 is a longer one. This has to do with the
20 contribution of iodine and we were afraid that
21 the procedure or that perhaps the procedure of

NEAL R. GROSS

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

1 NIOSH was using would not be
2 claimant-favorable. But Bob Burns' entry
3 explained the procedure that they're using.

4 And in short, we ended up agreeing
5 with them that the iodine and other
6 radionuclides are taking into consideration on
7 Table 7-3.

8 So, we ended up agreeing with NIOSH
9 and recommended also that this finding be
10 closed.

11 DR. MAURO: Yes, this was -- just
12 for the benefit of the Work Group, this was one
13 of the ones that an interesting turn of events
14 that you don't -- it takes a little time for it
15 to sink in.

16 When you process the sample, the
17 urine sample, and you're looking for gross beta
18 or gross gamma, you lose the iodine; it's not
19 there in the sample. So, of course, the
20 immediate reaction, well there you go, you
21 know, you just lost the iodine.

NEAL R. GROSS

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

1 But no, you've got your gross beta,
2 but now you're going to prorate it according to
3 some mix which does include iodine as a relative
4 contributor. So the iodine's back in again and
5 in a claimant-favorable way because of the
6 weight that they give to the iodine.

7 So, we were sort of fooled, I have
8 to admit when we looked at it. It didn't -- you
9 know, it was one of these things, well this is
10 -- if you get into the procedure, it's quite
11 incredibly innovative.

12 I've struggled with a very
13 difficult problem and so I have to compliment
14 NIOSH and the Oak Ridge folks in coming up with
15 something very innovative and to deal with a
16 very difficult problem.

17 Anyway, I just thought I'd just
18 throw that in.

19 CHAIR MUNN: Thank you, sir.

20 MEMBER ZIEMER: Well, Wanda, this
21 is not obvious to me, but I'm willing to take

NEAL R. GROSS

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

1 John Mauro's explanation with some detail. I
2 don't know if he's very attentive on this so I'm
3 willing to accept that. It's not intuitively
4 obvious to me but I guess that's why you raised
5 it in the first place, John.

6 DR. MAURO: Exactly.

7 DR. OSTROW: There's nothing
8 intuitively obvious about this entire
9 procedure. I mean it's good, but it's not
10 obvious.

11 DR. MAURO: That doesn't mean we
12 don't have a couple of more issues we ought to
13 talk about, so we still don't understand all.
14 We think we understand, but maybe we've got it
15 wrong. The ones that we're pointing out right
16 now, I think we've, you know, we've come full
17 circle and have a better understanding of
18 what's been done and why, you know, the virtue
19 of their position.

20 MEMBER ZIEMER: I'm going to say
21 that I move that we close this when it's done.

NEAL R. GROSS

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

1 My confidence in those that have looked at it
2 in detail.

3 MEMBER BEACH: Yes, this is Josie;
4 I'm with you, Paul. I agree with that, also.

5 CHAIR MUNN: All right.

6 DR. OSTROW: Okay, with that
7 closed, then we're left with the -- one through
8 four are definitely open, are still in progress
9 since we're waiting for a report. We just
10 closed six, seven, and eight. So that leaves
11 five, nine and ten that we still consider in
12 progress.

13 We still recommend it to be kept in
14 progress and I think I heard NIOSH earlier say
15 that they haven't had a chance to evaluate our,
16 you know, latest findings.

17 CHAIR MUNN: Yes, that's what I
18 heard, too. So we will have five, nine and ten,
19 hopefully, responses from NIOSH next time. Am
20 I correct in making that notation on my proposed
21 agenda?

NEAL R. GROSS

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

1 MR. HINNEFELD: I think that's
2 right now. I think, Steve, you'll probably
3 enter the SC&A response in BRS after the
4 meeting, right?

5 MR. MARSCHKE: The SC&A responses
6 are in there.

7 MR. HINNEFELD: Oh, they're
8 already in there.

9 CHAIR MUNN: Yes, they're there
10 already, at least when we checked.

11 DR. OSTROW: They're there now.

12 CHAIR MUNN: Just a matter of our
13 indicating that we've discussed it here,
14 resolved and closed which he's going to do
15 offline.

16 Anything else with respect to
17 OTIB-54?

18 DR. OSTROW: No, I think that's it.
19 The only thing is I didn't, maybe it was said
20 but I didn't quite hear it, the first comments
21 I made is that we have Rev 2 now and I'm not sure

NEAL R. GROSS

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

1 that if we decided how we're handling writing
2 in the BRS that we're at Rev 2. I know these
3 Rev 1 findings carry over to Rev 2 because
4 they're essentially the same OTIB. How do we
5 mark this down?

6 MR. HINNEFELD: Steve, can you edit
7 a finding once it's already in there and there
8 are being comments made on it?

9 MR. MARSCHKE: Yes, I think you
10 can.

11 MR. HINNEFELD: Well, I would
12 suggest that if you could edit, just add a
13 sentence at the end of the original statement
14 of these findings on Rev 1 to say that this
15 finding also applies to Rev 2 then we don't get
16 stuck with adding a bunch of additional
17 findings that are duplicates of what's already
18 there.

19 CHAIR MUNN: And has already been
20 closed.

21 MR. HINNEFELD: You can keep track

NEAL R. GROSS

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

1 -- well, some have. But we can keep track of
2 the fact that Rev 2's review has been here by
3 making an annotation like that on the finding.
4 What does everybody think of that?

5 MEMBER ZIEMER: Good idea.

6 DR. OSTROW: Yes, and you might
7 just, if you're going to copy it through all the
8 findings, you might just add that line, you
9 know, refer to the date of Rev 2 also.

10 MR. MARSCHKE: Well, I thought it
11 refers to the date when I enter that one. I'm
12 not sure -- I have to look and see how the BRS
13 behaves, but I'm not sure that it will update
14 the date. So I'll date stamp them in the line
15 when I put it in.

16 DR. OSTROW: I see. Yes, but what
17 you write down, though, you might say, you know,
18 finding applies to OTIB Rev 2. I know the date
19 of Rev 2 B

20 MR. MARSCHKE: Right and I also put
21 the date when I made the change to the finding.

NEAL R. GROSS

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

1 DR. OSTROW: Yes, put something
2 like that.

3 MEMBER ZIEMER: Wanda?

4 CHAIR MUNN: Yes?

5 MEMBER ZIEMER: I'm going to have
6 to bail out here. On the next administrative
7 items there, do I need to require Work Group
8 actions on those reports?

9 CHAIR MUNN: I don't believe so
10 unless there is some activity with respect to
11 upcoming PERs of which we haven't -- I'm unaware
12 because we haven't addressed it yet.

13 The only other thing that's key for
14 me, Paul, is your availability when we are going
15 to be looking for our next meeting which B

16 MEMBER ZIEMER: Let's suggest a
17 date -- can we jump to that real quick or not?

18 CHAIR MUNN: Let's do.

19 MR. KATZ: We need to because once
20 you're gone, Paul, we don't have a quorum.

21 MEMBER ZIEMER: Oh, okay.

NEAL R. GROSS

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

1 CHAIR MUNN: So we need to be able
2 to do that. If we are looking our next -- I've
3 got -- is the end of June too soon to be looking
4 or not? Our Board teleconference in June is on
5 the 18th.

6 If we are looking out for something
7 like say the 26th, more than a week later. Is
8 that too soon or do we need to be looking at
9 July? What's the feeling? I would prefer the
10 end of June if we could do it, but if we're not
11 going to have any work done by then, then
12 there's no point.

13 MEMBER ZIEMER: I'm out of the loop
14 from the 26th through the 30th of June.

15 CHAIR MUNN: You're out?

16 MEMBER ZIEMER: Yes.

17 CHAIR MUNN: The 25th?

18 MEMBER ZIEMER: The 25th I could do.

19 CHAIR MUNN: Josie, the 25th okay?

20 MEMBER BEACH: Yes.

21 CHAIR MUNN: NIOSH?

NEAL R. GROSS

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

1 MR. HINNEFELD: Looks okay on my
2 calendar.

3 CHAIR MUNN: SC&A?

4 DR. OSTROW: This is Steve, it
5 looks okay to me.

6 MR. STIVER: It'd be fine by me.

7 CHAIR MUNN: Let's identify 11:00
8 a.m. teleconference on June 25th. Hopefully,
9 it'll be slightly more brief than this one
10 unless we encounter a lot of PER activity
11 between now and then. Is that okay with all
12 concerned? If so, let's do that and we'll let
13 you go, Paul.

14 MEMBER ZIEMER: Thank you.

15 CHAIR MUNN: Thank you for sticking
16 with us. I hope you enjoy Missouri.

17 MEMBER ZIEMER: Okay.

18 CHAIR MUNN: Bye-bye.

19 MEMBER ZIEMER: Bye.

20 MR. KATZ: Okay and Wanda, we are
21 adjourning, right?

NEAL R. GROSS

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

1 CHAIR MUNN: Yes, well, we are
2 going to take a look at some other
3 administrative detail, I think one or two
4 things, but we've identified the next meeting,
5 we won't be having any actions.

6 MR. KATZ: Well, it's not just
7 actions; we actually cannot function as a
8 Subcommittee without a quorum.

9 CHAIR MUNN: Well, then I guess we
10 can't even look at whether we have an upcoming
11 PER status.

12 MEMBER ZIEMER: Well, I'll hang on
13 a few more minutes. Go ahead. What do we need
14 to finish up?

15 CHAIR MUNN: Just wanted to look to
16 see if there is anything new with regarding
17 PERs, whether we need to be expecting something
18 in the next few weeks or whether we're on track
19 with what we've looked at from last time.

20 MR. STIVER: Actually, Hans and
21 Kathy had put together the pre-reviews for; I

NEAL R. GROSS

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

1 believe there were five that we had brought up
2 in the last time around. Hans, you might want
3 to just kind of briefly go through that.

4 DR. H. BEHLING: We would ask, Ted
5 to maybe look at a few PERs and then determine
6 whether or not, based on the brief
7 pre-evaluation whether some should be reviewed
8 and audited while other PERs may not warrant a
9 full review.

10 And so, I just I thought on April
11 10th we issued B

12 CHAIR MUNN: You're breaking up a
13 little for me, Hans.

14 DR. H. BEHLING: Okay, hang on.
15 Okay, I'm sorry.

16 CHAIR MUNN: Much better, thank
17 you.

18 DR. H. BEHLING: Okay. On April
19 10th, I believe we issued a brief report that
20 identified the five PERs and we gave them a
21 rating and if you have the report, you can

NEAL R. GROSS

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

1 probably -- It's only a few pages long so I'll
2 just jump to the end where we actually provided
3 some recommendations.

4 We pre-reviewed PER 41, 42, 43, 44
5 and 45 and of the five, we sort of dismissed PER
6 41 and 44 as perhaps not necessarily warranting
7 a review and, therefore, that leaves 42, 43 and
8 45 as ones that we do recommend.

9 And so based on that, maybe the
10 Subcommittee should make a recommendation of
11 which ones they would like us to look at.

12 CHAIR MUNN: Does anyone have any
13 suggestion other than the selection of 42, 43
14 and 45? If there is no disagreement with that
15 selection, then, Paul, is that all right with
16 you for us to -B

17 MEMBER ZIEMER: Yes, sure.

18 CHAIR MUNN: -- continue those
19 three?

20 Josie?

21 MEMBER BEACH: Yes, this is Josie.

NEAL R. GROSS

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

1 I'm okay with those three.

2 CHAIR MUNN: All right, very good,
3 then you are instructed to proceed.

4 MS. K. BEHLING: And Wanda, this is
5 Kathy. If I could ask another question here.

6 During the, quickly, the Dose
7 Reconstruction Subcommittee, we encountered a
8 finding on a Y-12 case and during those
9 discussions, we had determined that a coworker,
10 an external coworker model for Y-12 had not been
11 reviewed by SC&A with OTIB-64. I'm not sure if
12 that's something that you wanted to task us with
13 also or not.

14 CHAIR MUNN: OTIB-64?

15 MS. K. BEHLING: It was OTIB-64, it
16 was, yes, an external coworker dose model for
17 Y-12 and one of the findings, I guess, used that
18 and there was some question as to whether SC&A
19 had reviewed it yet and I'm not sure if that's
20 something that you ultimately want us to look
21 at.

NEAL R. GROSS

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

1 MR. KATZ: That's one that the
2 Board's going to have to consider. The
3 Subcommittee can make a recommendation to the
4 Board about a procedure review.

5 MS. K. BEHLING: Okay, I'm sorry.

6 MR. KATZ: That's fine, the
7 Subcommittee can make a recommendation to the
8 Board, but the Board's going to have to task
9 that.

10 MS. K. BEHLING: Okay.

11 CHAIR MUNN: All right, shall we
12 anticipate doing that at the next meeting?
13 There's no problem here. Paul and/or Josie,
14 you have any problem suggesting that SC&A do
15 OTIB-64?

16 MEMBER BEACH: No, I have no
17 problems with that.

18 MEMBER ZIEMER: It's fine with me
19 but I'm not sure sort of where does that fit into
20 the sort of the overall work products that are
21 on the table? Ted, do you have any feel for

NEAL R. GROSS

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

1 that?

2 MR. KATZ: No, no, I guess what we
3 normally like to do with the Board is to have
4 a list of procedures that are candidates for
5 review so that the Board can consider which are
6 the highest priority to it.

7 So we don't have that right now, but
8 I think that's something that John Stiver can
9 put together -B

10 MEMBER ZIEMER: Well do that, yes.

11 MR. KATZ: -- for the next B

12 MEMBER ZIEMER: Well, I wasn't sure
13 -- we're not prioritizing this at the moment
14 then, right?

15 MR. KATZ: Right, exactly.

16 MEMBER ZIEMER: Okay, then I'm
17 okay.

18 MR. STIVER: So this is something
19 that we'd want to do at the April 29th meeting
20 then.

21 MR. KATZ: Yes, I think that's too

NEAL R. GROSS

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

1 soon, the April 29th meeting for B

2 MR. STIVER: It's coming up quick.

3 MR. KATZ: It's coming up pretty
4 quick. But certainly, you know, put that
5 together whenever you get it together and share
6 that with the Subcommittee and me and we can
7 look at that too and see whether if that's
8 something that the Board can handle at the
9 upcoming meeting.

10 MR. STIVER: Okay, will do.

11 MR. KATZ: Thank you.

12 CHAIR MUNN: That's good, we'll see
13 something from John before we actually make any
14 decision one way or the other and, Ted; you'll
15 be coordinating the list as it comes in, right?

16 MR. KATZ: Sure, sure, I'll
17 distribute that to everyone. And like I said,
18 if it seems like something with enough
19 information that the Board can just go ahead and
20 consider it together, it can come up during the
21 work period in the upcoming meeting.

NEAL R. GROSS

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

1 CHAIR MUNN: That's fine; we'll
2 look forward to seeing something from you.

3 Any other further business that we
4 need to address before we adjourn?

5 If not, I appreciate you all for
6 your work and for your help today. Thank you
7 for being with us and we will see you, hear you
8 by phone, I suppose, at the Board meeting coming
9 up very soon and again on June the 25th at our
10 next meeting.

11 Hearing no further business placed
12 before us, we are adjourned. Thanks so much
13 everyone.

14 (Wherefore, the foregoing matter
15 went off the record at 3:13 p.m.)

16

17