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

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

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SUBCOMMITTEE ON PROCEDURES REVIEW

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TUESDAY
JANUARY 10, 2017

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

PRESENT:

WANDA I. MUNN, Chair
JOSIE BEACH, Member
JOHN W. POSTON, SR., Member
PAUL L. ZIEMER, Member

ALSO PRESENT:

TED KATZ, Designated Federal Official
DAVE ALLEN, DCAS
ROBERT ANIGSTEIN, SC&A
BOB BARTON, SC&A
HANS BEHLING, SC&A
KATHY BEHLING, SC&A
RON BUCHANAN, SC&A
ZAIDA BURGOS, NIOSH
ROSE GOGLIOTTI, SC&A
STU HINNEFELD, DCAS
PATRICIA JESKE
JENNY LIN, HHS
LORI MARION-MOSS, DCAS
JOHN MAURO, SC&A
DAN MCKEEL
JIM NETON, DCAS
JOHN RAMSPOTT
MUTTY SHARFI, ORAU Team
SCOTT SIEBERT, ORAU Team
MATT SMITH, ORAU Team
JOHN STIVER, SC&A
ELYSE THOMAS, ORAU Team

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

11:03 a.m.

Welcome and Roll Call

MR. KATZ: Welcome, everyone. This is the Advisory Board on Radiation Worker Health. It's the Procedures Review Subcommittee. And we have three Members present. Wanda Munn is Chair, and Paul Ziemer, and Josie Beach.

Let me cover their conflicts, and they're the only ones we have to address conflicts for, for this Subcommittee meeting. But Josie, Josie Beach and Wanda Munn both have a conflict with respect to discussing Hanford matters. I don't believe there are any Hanford matters today. And Dr. Ziemer, his limited restrictions regard X-10. I'm not sure if there's any X-10 matter today, and also after 2000, LANL, Los Alamos, but only after the year 2000. So I'm not sure that comes up.

So let's go along then with roll call. Let's start with the ORAU team. Oh, and let me mention also while I'm here, because it may be

harder to get to it later, at 2:30 we're going to be discussing Program Evaluation Report reviews by SC&A, and the first one, which we hope to start pretty much at 2:30, is on GSI. It's PER 0057. And for that call, Dr. Poston, who is also on the Board, will join us. And Dr. Poston has a variety of conflicts, but no conflict with respect to GSI. So that will happen this afternoon.

And the agenda for today's meeting is posted on the NIOSH website under scheduled meetings, today's date, and so you can see that agenda. And that has a presentation for GSI, which was Privacy Act reviewed-cleared by Jenny -- thank you, Jenny -- to the two folks on the line, that will be on line, at least this afternoon, who have interest in that, the public members like Dr. McKeel and Mr. John Ramspott. So they have that presentation, and they can follow along with that.

So let's now go to roll call.

(Roll call.)

MR. KATZ: And with that, with no further ado, Wanda, it's your meeting.

CHAIR MUNN: Thank you much, Ted. Let's take a look at the agenda before we get underway here. Most of it will run pretty much as expected. As Ted has already mentioned, we'll try to keep the 2:30 PER 57 schedule to the extent that we can.

There's one small piece of addition that needs to go down at the bottom. We have a block of Subtask Four reports that did not get to the agenda that we should have. We will have the Subtask Four reports that cover PER 55, 060 that's Blockson, I think, and 064, DuPont Deepwater, and 066, Huntington, I believe. So we will add those, if time permits, at the tail end.

Review BRS Status

CHAIR MUNN: Other than that, let's talk for a little bit about the BRS status. I have not personally checked all of the closures that we made last meeting, which were going to be

added for us. There was a commitment for OTIB-0060 that we closed last time, internal dosimetry TIB, that Stu Hinnefeld was going to provide words for us for closing item three on that particular OTIB and was going to sign off on that. That's been done. So to the best of my knowledge, OTIB-60 is now completely off of our agenda, which is a good thing.

With respect to the others, I've only spot-checked a couple of the closures. Lori and I assume Kathy, who did most of those wrap-ups after the fact, will give us a quick rundown whether there's anything outstanding, to the best of your knowledge, of whether we have covered and now have properly recorded all of the closure status that we completed last time.

Lori? Are you on mute? Not hearing you. So Kathy?

MS. K. BEHLING: Yes, I'm here. I have updated the BRS with all of the PERs that we have completed, and you just mentioned some of them. And I think, as we go through here, I was

hoping to actually bring up the BRS while we're talking about these various outstanding findings and OTIBs and PERs. However, I'm not sure how to do that.

CHAIR MUNN: I had trouble doing it, too, because I have less than three screens. Well, let me very quickly run down a few that I have noted. I had OTIB-13, which had been superceded. And OTIB-29, we had three on there that we closed. OTIB-32 --

MEMBER BEACH: Wanda, could you speak up just a hair?

CHAIR MUNN: Okay.

MR. KATZ: I'm sorry. Let me interrupt a second. Zaida, are you still on the line?

MS. BURGOS: Yes, I will call.

MR. KATZ: Okay, yes, thank you.

MS. MARION-MOSS: Wanda, this is Lori. I'm back.

CHAIR MUNN: Oh, good. Glad to hear it. Kathy and I were just starting through the

ones that I believe Kathy has probably closed. She was trying to pull the BRS up on her screen and was having the same problem I usually have trying to get two things up at the same time on the same screen. I was just saying that those that I had noted that were outstanding to be closed offline were OTIB-13, 29, 33, TIB-14, ORAUT-OTIB-39, and TIB-50. And I've already mentioned OTIB-50. So those were the ones I had on my list, but there may be others.

Kathy, are you giving up?

MS. K. BEHLING: No. And as I said, I was going to try to pull some of these up as we talk about them on Skype. If somebody can give me a show-and-tell perhaps or tell me how I go about doing that. Ted or Zaida?

MS. BURGOS: Kathy, I think at the bottom of the conversation screen you pulled up, there's a little picture of a computer monitor.

MS. K. BEHLING: Okay. As a guest, can I do that?

MS. BURGOS: You can try. I don't

know. I'm new to Skype, too.

MS. K. BEHLING: I'm not doing very well here.

MS. BURGOS: You're presenting now. I have a picture of your desktop.

MS. K. BEHLING: Okay. I don't see that.

MS. BURGOS: Well, I think that you're sharing your screen with us now, and so you're not going to see. We'll just see what you're doing.

MS. K. BEHLING: Okay.

MS. BURGOS: Like now we see your email.

MS. K. BEHLING: Al

Alright. Let's see if I can -- okay. That's not going to do it. Hold on one second.

MR. KATZ: While Kathy is struggling through this, let me just note again for everybody we just had to cut another line because someone put us on hold and we were hearing their audio, you know, the background music or in this

case it was a beep. But, please, no one on this line should be putting the call on hold at any point. Hang up and dial back in if you need to go for a piece. Thanks.

MS. K. BEHLING: Okay. Are you seeing the PERs?

MS. BURGOS: Yes.

MS. K. BEHLING: Okay. And, Wanda, other than the PERs that were submitted and the PER subtasks four reports that were submitted, I don't have anything else to add. And I think you did mention those earlier that we're prepared to talk about PER -- let's see, where's my list here? PER 55, which is OTIB-6000 -- TBD-6000. PER 60, which is Blockson. PER 64, DuPont Deepwater, and PER 66, Huntington, that were not included on your agenda. So as we work through the agenda, I can try and pull up the various findings and ensure that the BRS has been updated, if that's what you'd like to do. Are you hearing me?

MR. KATZ: Yes, Kathy, we're hearing you. I mean, that's good. I don't think you

need to show us the BRS just to prove you've updated it but --

MS. K. BEHLING: No, the only thing I was thinking is that the agenda maybe lists an item and says finding number two, and if I could bring up on --

MR. KATZ: Oh, yes, for sure. If we're discussing one, for sure.

MS. K. BEHLING: Yes, that's why I brought it up because there's obviously not a lot of detail in the agenda, which is the appropriate thing to do.

MR. KATZ: Right. Thanks, Kathy. So, Wanda, are you back? It seems like we've lost Wanda again. This is --

MS. K. BEHLING: Because I think the first item on the agenda, obviously, she has down here is the OTIB-29. However, I believe she also wanted to give Lori an opportunity to chime in or add to anything that she's included on the BRS.

MR. KATZ: Right.

MEMBER ZIEMER: Is it safe to say that

BRS is up to date because of the action with -- (telephonic interference)

MR. KATZ: And Kathy's saying that -- right, Kathy? You guys have updated everything that you have on your plate, right?

MS. K. BEHLING: Yes.

MR. KATZ: Yes.

MEMBER ZIEMER: Okay. So those items that we closed out last time had been reflected on the BRS?

MS. K. BEHLING: That's correct.

MR. KATZ: Okay. Good, thanks. Well, Wanda said she was having trouble with her phone system. I'm sure she realizes that she's offline.

CHAIR MUNN: This is Wanda. Can you hear me?

MR. KATZ: Yes, you're back.

CHAIR MUNN: Oh, yes. I was unaware of the fact that I had been cut off, I guess.

MR. KATZ: Well, it was your -- we did cut a line because they had put the call on hold

and we were getting their hold sign. I don't think that should have been you, but.

CHAIR MUNN: No, it wasn't. I was hearing that, and I continued to hear everything that was being said but suddenly Kathy was asking whether I was there and I was saying, yes, I'm here, I'm here.

MR. KATZ: Oh, so it sounds like you were muted but not offline.

CHAIR MUNN: Yes, I wasn't muted. I was completely offline. But in any case, we're back and has anything transpired in my notable absence?

MR. KATZ: Oh, Kathy said that everything is updated, as far as what was on SC&A's plate, as to updated closings from the last meeting.

CHAIR MUNN: Yes, that's good. Thank you, Kathy. I appreciate that. And I was trying to call for Lori to verify that there was nothing outstanding in her basket, but, whatever we're doing, I think we can move on from BRS. I believe

that we've double-checked enough of the things that we needed to take a look at.

We have -- and one other thing before we leave. My apologies for a couple of notes on the agenda. I have uploaded a great deal of material that says things have transpired offline since I first put together the agenda, and a number of those items are actually SC&A items because NIOSH has fulfilled their obligation to provide whatever they were going to provide and SC&A has since provided reports on the activity status in the interim. So you will see that occur several times, especially this afternoon.

Y-12 - OTIB 0029, Finding 4

CHAIR MUNN: But for the time being, we're talking about Y-12 -- OTIB-29, Finding Number 4. There was one outstanding item there, and it is, I believe, the NIOSH action. Stu?

MR. HINNEFELD: Yes, I'm here finally. Jim, are you on?

DR. NETON: Yes, I'm on. Is Lori on? She's seems to be dropping in and out.

CHAIR MUNN: She was on earlier, but I was --

DR. NETON: Lori, are you on the phone?

MS. MARION-MOSS: I'm back.

DR. NETON: Alright. Well, I think this one I have the lead on anyway, so I'll respond. There were five findings. This was originally on OTIB-29, which is the Y-12 internal dose coworker model. Finding 4 is the only one that's listed as, I think it's in progress.

CHAIR MUNN: Yes, I think so.

DR. NETON: I thought when we discussed this the last time that this one had been closed or we had responded to it. I went back and evaluated the record pretty thoroughly, and we did provide a response. There was some communication between Joyce Lipsztein and Dave Allen. This is regarding these Monday morning samples.

CHAIR MUNN: Exactly, yes.

DR. NETON: The Site Profile --

actually, TIB-29 has since been canceled, but the relevant issue has been transferred into the Y-12 TBD, Section 5 of the Y-12 TBD, the internal dose section. So the finding still remains.

I thought that we had addressed it. There was some communication between Dave Allen and Joyce Lipszstein regarding this issue about how maybe if they only took Monday morning samples the coworker model would underestimate intakes. Dave Allen went back and analyzed the data and determined that a large percentage, I think something like 30 to 40 percent, were actually not taken on Monday. They were taken during the regular work week, which would tend to mitigate the effect of only taking samples on Monday.

Dave had proposed a path forward to analyze this in light of using a coworker model, and, honestly, I cannot find where that issue was addressed. We think it happened, but none of us can find it, so we need to go back and either, if we can't find it, we'll have to re-do that

analysis. So that's where we stand right now. This is going to remain open until we can complete the loop on this.

CHAIR MUNN: Yes, thank you, Jim. That, essentially, is the understanding that I had. We had multiple discussions about this earlier in past meetings, and it was my feeling that, philosophically, it had been taken care of, and we all remember, I think, that Dave did a significant amount of work tracking it down. But I could not find any closure on it and certainly at the last meeting we didn't have closure in terms of verifying that any document changes that were necessary were being made or had been made.

So I'll continue to carry that over until we can track down what's been done. It may be easy to close it, but I don't have any record of the document that I'm aware of.

DR. NETON: We'll try to have this buttoned up by the next, the next meeting.

OTIB-32 - Status Report on Protocol Review

CHAIR MUNN: Good. Appreciate that.

Thanks. Next item that we have is OTIB-32, and I think that, I think SC&A understands that we don't expect any long or in-depth discussion about this. But at our last meeting, when we talked about this external coworker document, there was a question left as to how SC&A intended to address the change in their protocol because their current protocol review instructions still have them expecting to follow a path that we no longer follow. Is that a reasonable summation, Kathy?

MS. K. BEHLING: Yes, it is. In fact, we did close the finding, and it's strange that this falls under the Savannah River Site external coworker. But what happened during the process of talking about this finding, we went into the fact that we used to use or, initially, our protocol called for the identified review objective. There were seven review objectives, and we actually developed a table so that all of our reviewers would ask the same type of questions for each of the documents we were

reviewing. However, that initial protocol was established back in 2004, so we've obviously changed things and changed the approach that we're using to a more narrative approach that looks at all of the aspects of whatever document we're reviewing.

I wasn't quite sure, I didn't have it in my notes that we were being tasked to rewrite that, but it is no longer being used and we can certainly make modifications to that protocol or that procedure if that is what you'd like us to do.

CHAIR MUNN: My personal feeling is that a simple note in your procedure saying that there's this particular aspect of protocol is no longer necessary and no longer an active requirement. I think just a simple statement to that effect would satisfy any concerns that anyone might have.

Is there any objection to that suggestion to SC&A?

MEMBER BEACH: No, none here, Wanda.

CHAIR MUNN: Okay. Paul?

MEMBER ZIEMER: Yes, I have none. I think we agreed last time that this is no longer -- it had been a finding --

CHAIR MUNN: Yes, that's correct. We did agree. We just did not take any suggested action. If you can take that under advisement, Kathy, I think that will relieve our concerns with respect to OTIB-32, and we can just move forward, not just the OTIB but with respect -- you're right. It's odd that a protocol review issue falls under Savannah River but --

MS. K. BEHLING: Okay, that's fine and not a problem. If I could interject something else here with regard to making changes to our protocols or our procedures. One of the other things that still is in the back of my mind is our PER procedure, review procedure, has these five subtasks, and we always follow subtask one through four with four being, you know, the review of selected cases. But five states that we're going to write reports, yes, complete

report, which we don't do. We really do an initial report that covers pretty much subtasks one through three, and we suggest how many cases we may want to review under subtask four, and then we write a report on that PER and then we write a second report for the subtask four, if we are tasked to do that. And that would just require a very minor change to that procedure, but I think -- would you like us to make that change, also?

CHAIR MUNN: My knee-jerk reaction is yes. I think it's, certainly in my mind and perhaps in the minds of others, as well, subtask five was taken care of by the report that you give us on subtask four. But if that's not, if that's not the view that others have, we probably should have that brief discussion right now.

MS. K. BEHLING: Okay. And it would be a very simple change. I just thought about it as we're talking about this, but go ahead. I'm sorry.

CHAIR MUNN: Yes, that's fine.

MEMBER ZIEMER: It would basically be two reports instead of one overall report. You're accomplishing an objective --- (telephonic interference)

MS. K. BEHLING: Correct.

CHAIR MUNN: Yes, I think that kind of status is quite accurate. Josie?

MEMBER BEACH: I agree with that, also.

CHAIR MUNN: I think it's certainly within our purview to state that, from this Subcommittee's purview in any case, your report on subtask four that you give to us should be adequate for purposes of meeting your requirement for subtask five.

MS. K. BEHLING: Okay, very good. I didn't want to have any confusion there.

CHAIR MUNN: Yes, I believe that's the case. You can say that we've discussed it and reached consensus here, in the Subcommittee in any case.

MS. K. BEHLING: Okay, very good.

ORAU OTIB-0014 - Correct Canceled List Status

CHAIR MUNN: Thank you. OTIB-14. We were going to make some, there was a confusion, as I recall, between documents, reference documents, with respect to the status of 14. It's been canceled, and most everybody knows it's been canceled, but it did not appear on the canceled list, as I recall. And we also had one outstanding finding, number 3, in vivo counts. NIOSH?

MS. MARION-MOSS: Wanda, this is Lori. As I recall, there was some question about TIB-14 appearing on the NIOSH website, appearing as if it was still an active document. And one of our actions was to go out and correct that on the NIOSH website. So that has been corrected, and it shows up, TIB-14 shows up as being a canceled document.

CHAIR MUNN: Okay, that's fine. My memory was that it was already listed on the canceled list but was not taken off the web. Is that a correct --

MS. MARION-MOSS: That's correct.

CHAIR MUNN: Yes. But now it's been taken off the web, and it remains on the canceled list, so there can be no confusion as to its status, correct?

MS. MARION-MOSS: Correct.

ORAU OTIB-0014 - Finding 3 In Vivo Count Issues

CHAIR MUNN: Good. What about Finding 3?

MS. MARION-MOSS: Finding 3, that's in regards to the Rocky Flats TBD, I believe. And as it's stated here --

CHAIR MUNN: That was internal coworker at Rocky Flats.

MS. K. BEHLING: Yes, this is Kathy Behling. Are you able to see the screen that I'm hopefully displaying that shows OTIB-14 Finding 3?

CHAIR MUNN: Yes, we are.

MS. K. BEHLING: Okay. Because it does show there we were questioning why the TBD didn't explain why there was no americium

coworker model. I think that's the outstanding finding.

MS. MARION-MOSS: Yes, it is. And NIOSH has taken a look at this and realized that that is something that was not updated in the revision, so that has been slated to be included in the TBD during the next revision.

MEMBER ZIEMER: Is that part of --

MS. K. BEHLING: Pardon me?

CHAIR MUNN: What did you say, Paul?

MEMBER ZIEMER: Sorry. I went back on mute. Is that part of TBD-115 now?

MS. K. BEHLING: The Rocky Flats TBD?

MEMBER ZIEMER: I'm not sure. I had it in my notes that it's a finding that would be handled through TBD-115.

DR. NETON: I think that's TBD-11-Section 5.

MEMBER ZIEMER: I had 115.

DR. NETON: Yes, sorry. It's TBKS-011-5. That's the internal dose kit for Rocky Flats. Excuse me, TBD.

MEMBER ZIEMER: Yes, thank you.

CHAIR MUNN: So this goes into abeyance then. We can take it off our active list, and you get to add it to your abeyance list. That's good. It's now yours. Thank you.

Let's move on to OTIB-39 if we're happy with the status of Finding 3 and TIB-14.

MR. KATZ: Could I just ask, Wanda, for a clarification about this?

CHAIR MUNN: Yes.

MR. KATZ: With these in abeyance, is this, I imagine they don't have to tell us, but is this, the americium bottle, is this something that SC&A has already seen and reviewed and will end up in the Site Profile, or is it something that needs to be added and, hence, after that will be reviewed by SC&A?

MS. K. BEHLING: This is Kathy Behling. I believe it's something that's going to have to be added and then reviewed.

MR. KATZ: Okay. So it really is not an abeyance because we don't have agreement about

its content even. We just have agreement that it needs to be added, so we don't have agreement about how that -- right? Is that correct?

MS. K. BEHLING: Correct.

CHAIR MUNN: Oh, thank you. I did not recognize that fine point. So the question then becomes are we continuing to carry that here, or do we carry it as a TBD item?

MR. KATZ: Well, yes. I mean, typically, the Work Groups handle Site Profile reviews.

CHAIR MUNN: Right.

MR. KATZ: I'm not sure why this one, how this one wound its way into -- maybe because of its original source.

CHAIR MUNN: Yes, I think the original source was out of the coworker internal.

MR. KATZ: So I think what we want to do is keep this in progress here, and SC&A can send a little memo to the Rocky Flats Work Group just saying to put this on, basically, so to put Dr. Kotelchuck on notice that we have the Site

Profile element that will need to be reviewed when it's completed by NIOSH.

CHAIR MUNN: Okay.

MR. KATZ: Is that okay, Wanda?

CHAIR MUNN: Yes, right. And then it goes --

MR. KATZ: And then we can close this out after that's been done, which is sort of, it still sits under our --

CHAIR MUNN: Right, okay. That's fine. Thank you. I do appreciate that. I did not recognize that fine point, frankly. And it was just dropped out of active notice, so thanks.

MS. MARION-MOSS: Wanda, this is Lori. Based on that conversation, do we want to update the BRS to reflect what Ted has just said?

CHAIR MUNN: Absolutely, yes.

MR. KATZ: Yes, please, Lori.

CHAIR MUNN: Yes, that's crucial. That's our link that takes us over to the Work Group and then to the document itself. But somebody else has to do it, so that's good. Will

you take care of that for us, Lori?

MS. MARION-MOSS: Yes.

CHAIR MUNN: Put the right words in. Thanks.

MS. MARION-MOSS: Okay.

MEMBER ZIEMER: Are we talking about Finding 3 in OTIB-139?

CHAIR MUNN: No, we're talking about Finding 3 in OTIB-14.

MEMBER ZIEMER: Okay.

CHAIR MUNN: I mean, not OTIB, in TIB-14, yes.

MS. K. BEHLING: I was too quick to go on the new screen. Sorry.

CHAIR MUNN: That's okay. That's quite alright. That's appreciated. We'll take care of the wording on that and get it appropriately handled, and SC&A will see to it that Dave Kotelchuck, Dr. Kotelchuck and his Rocky Flats Work Group understand that they have that item.

MR. KATZ: Yes. And John Stiver just

consider this tasked since this is really just an extension of --

MR. STIVER: Okay. Will do.

MR. KATZ: -- consideration. Thanks.

ORAUT-OTIB-0039 - Finding 3 Abeyance Status

CHAIR MUNN: Thanks, John. Onto OTIB-39 Finding 3. I don't know. Lori, you may already have this in your list, if we ever get to that list, in our administrative detail with respect to abeyance statuses. I put a couple of them in our active list just because they were items that I didn't want to put back up. How are we standing with OTIB-39 Finding 3?

MS. MARION-MOSS: We're still working on that, Wanda, so we don't have anything to add today.

CHAIR MUNN: Alright. So I'm going to take it off my active list with the assurance that it is on your abeyance list.

MS. MARION-MOSS: Yes, ma'am.

CHAIR MUNN: Alright. Again, we will not look at that next time. We'll just assume

that it's being tracked appropriately under the abeyance statuses.

ORAUT-OTIB-0060 - Finding 2 Abeyance Statues

CHAIR MUNN: The next item we have on our agenda OTIB-60 Finding 2. That's like the one we just looked at, Lori. This is another one from your abeyance status list.

MS. MARION-MOSS: Here, too, we're still working on that particular document, and we don't have anything to report today.

CHAIR MUNN: Alright. That's very good. It also is going to drop off our active list now under the assurance that it's on yours. PROC 42 and OTIB-64. Here's a tangled web we can attack. NIOSH had the action.

MS. K. BEHLING: And, Wanda, actually, I don't know if NIOSH has anything to add, but I do know that this is where Ron Buchanan had put together a memo that discussed we did a focused review of OTIB-64, and I think Ron is prepared to discuss that.

CHAIR MUNN: Oh, I hope so. Have we

gotten, do we have you on track, Ron, or have I gotten ahead of the agenda adequately to confuse everybody?

ORAU PROC-0042 - OTIB-64 Status

DR. BUCHANAN: No, it's fine. If you see this as kind of a tangled web, OTIB-13 has been for many years, Y-12, this is Y-12 external dose reconstruction, OTIB-13. And connected to that was Procedure 42, and these used the scaling factor, and these were both replaced recently by OTIB-44 and OTIB-64, and one being the scaling factor sort of redone and then coworker data, OTIB-64, for Y-12 external dose.

In May, I think it was, we discussed OTIB-13 findings and closed them all. Wanda closed those out at the meeting, and so that's really not applicable to this discussion. Now, Procedure 42, we were charged with going through that and determining if the findings there had been answered or not applicable to OTIB because of the replacement, OTIB-44 and OTIB-64, and so that's what we did. And I believe there's about

six findings on the previous Procedure 42, and what we did is I went through that and I took that and looked at the findings we had, the six findings we had. I went and did 44 and OTIB-64 to see if they were answered or no longer applicable, and what we find is that, in most of the cases, NIOSH uses a different approach. They use different statistics and if they used the scaling factors to find differently than it was in OTIB-13 in Procedure 42.

And so what I found with these findings under Procedure 42 are no longer applicable. A couple of them were about the 147 workers being stated that that was data used from them, and OTIB-44 and OTIB-64 does address that and lets the reader know that they did use that data.

And so I don't know if you want to go through each finding or the fact that we feel that they are no longer or have been addressed for all six finding recommend the Work Group closure, and so however you want to handle that

at this point.

CHAIR MUNN: Well, Ron, I know we've been through this before, but I lose track of where I am every time I start to follow through on the actions. I personally would prefer that you go through these one at a time with a very brief explanation of where we are and whether we need to be concerned about this in some other slot in our activities than where we have them now. As many of these as we can close out and as accurately as we can characterize the outstanding actions, any one finding to be taken off of our consideration would be really helpful.

So yes from my perspective. If other people would prefer that we just rely on what Ron has written here and try to follow through with it ourselves on our own. I only scanned the report because I had hoped that we'd get a little bit more as we go through, but I'll leave it to my colleagues to make --

MEMBER BEACH: Wanda, I was going to recommend the same thing, so I'm in agreement

with that, going through each finding briefly.

CHAIR MUNN: Good, alright.

MEMBER ZIEMER: That's fine.

CHAIR MUNN: Good. So not to belabor it, Ron, but we certainly, I think it behooves us to try to get these condensed to their essence and get them on the appropriate concern list. So if you'll follow through with the good work you've already done one at a time, it will be most helpful. Thanks.

DR. BUCHANAN: Okay, thank you. So we have on the screen now, we have finding number one of Procedure 42, and there was some errors, some text errors in some references that were somewhat confusing and I had to re-read it several times to clarify them. And we find the resolution to that is that OTIB-64 is a complete rewrite of the procedure, and so, therefore, it did not contain the same text errors and the clarification issues identified previously did not appear in the new OTIB. And also the scope of the coworker data was outlined in Section 2,

page seven, of OTIB-54. So we feel that these did not, this finding did not any longer apply to the OTIB that replaced it, and we recommend closure.

CHAIR MUNN: That is a wonderful recommendation, from my perspective. Do I have any objection from Paul or Josie?

MEMBER ZIEMER: I agree with closing.

MEMBER BEACH: I agree also to close it. Thank you.

CHAIR MUNN: Please make the notation that Finding 1 has been discussed by the Subcommittee, and we are following the contractor's recommendation for closure.

DR. BUCHANAN: Okay. I'll move on to Finding 2, and this was problems with the reference to some of the programs that were used telling the dose constructor in the original Procedure 42 to use the programs that we thought that were referenced well and that we wanted to make sure that the dose constructor would be consistent.

And if you want to scroll on down there, Kathy, to the answer. Okay. Again, this is a complete rewrite, and it does not use the same scaling factor methodology which we identified in Procedure 42. Therefore, the finding didn't apply to the new OTIBs, and we recommend closure.

CHAIR MUNN: I believe that we can use the identical wording for that item, unless I hear objection from Paul or from Josie.

MEMBER ZIEMER: I agree.

MEMBER BEACH: No objection here.

CHAIR MUNN: Very good. We are now closing Finding 2.

DR. BUCHANAN: And this brings us to Finding 3, and this was what I was referring to on it wasn't identified that actually that some of the data was being used was from 1947 and 1956, 147 batched workers for the period 1956 to 1965. And there was no Procedure 42. That was not clear. Again, we see that OTIB-64, the coworker model now, replaces that, and it does identify on

page 34 and 35 where this data comes from that is being used. And so we find it is no longer applicable in this case because it has been answered, and we recommend closure.

CHAIR MUNN: I'm thinking about this a little bit because of the time differential. I believe it's reasonable to use the same wording for closure of Finding Number 3, as well. Do I hear agreement?

MEMBER ZIEMER: I agree with the recommendation.

MEMBER BEACH: I also agree with it.

CHAIR MUNN: Again, duplicate the wording for Finding 3. That seems appropriate, despite the confusion and despite the original concern. Thanks, Ron. We can take up Finding 4, I believe.

DR. BUCHANAN: Okay. Finding 4, if we can move up the page here. Okay. This is concerning assumptions and limitations on the original Procedure 42. And, again, these have been completely replaced in OTIB-64, and the

assumptions and limitations are spelled out on page 7, 8, 14, and 15 of the new OTIB-64 for the coworker data. And so we felt that they had been adequately explained and presented to the reader, and so, therefore, we find that this has been resolved and recommend closure.

CHAIR MUNN: It is so good to have these tracked down. Thank you very much. I recommend the use of the same language for Finding 4, unless I hear to the contrary. Do we agree, Paul?

MEMBER ZIEMER: Yes, I agree with that.

CHAIR MUNN: Josie?

MEMBER BEACH: I agree, also. Thanks, Wanda.

CHAIR MUNN: Very good. We have closed Finding 4, and we can move on.

DR. BUCHANAN: Okay. The next one is Finding 5, and this is, there was a technical error in the way the exponents were created in the scaling factor of the Procedure 42. And just

as a sideline, the scaling factor was to help the coworker model compensate for the 50's when there was very little data. There was more data in the 60's, so the scaling factor looked at workers' records from '61 to '65 and said, okay, we will upscale their doses in 47 to 1960 because they were probably exposed to more, even though they weren't monitored. And so the scaling factor got pretty complicated, so it was easy to get a problem with it in how they carried it through and we identified one of those problems in Procedure 42. However, again, OTIB-64 is a rewrite. It doesn't contain the same methodology, and so we find that that has been resolved and recommend closure on that finding.

CHAIR MUNN: Thank you, Ron. Because I am too lazy to go refresh my memory about OTIB-64, how did you get around the scaling factor?

DR. BUCHANAN: They do use a scaling factor, but, as I get to Finding 6, I'll expand on that a little more. They do use a scaling factor, but they don't use the same methodology

as they used in Procedure 42. And so while I recommend we evaluate the new one, this finding doesn't apply to the new one.

CHAIR MUNN: Alright. Very good. Then we will consider the new one as an entirely separate article, and we can, again, duplicate the wording from Finding 1, that the Subcommittee recommends that it be closed. Paul, do you agree?

MEMBER ZIEMER: Yes, I agree with the recommendation.

CHAIR MUNN: Josie?

MEMBER BEACH: Yes, I do, too.

CHAIR MUNN: Alright. Very good. Now let's see what they did use. Finding 6.

DR. BUCHANAN: Okay. So now we'll go to Finding 6, and now this is still applicable to Procedure 42, and then I'll summarize at the end. Okay. We talked about scaling factor in Finding 5. Finding 6 is how the scaling factor was applied, and this has to do with an exponent and when it was greater than one and less than one or

one. And so this Finding 6 was a suggestion in wording so that would be applied uniformly and correctly.

And so, again, if we look at the resolution on that, we find that this error doesn't occur in OTIB-64 and it is a different scaling factor method. And so we recommend the finding for Procedure 42 be closed. And you'll want to go down a little further, Kathy. Under summary and conclusion, if we can get that up.

Okay. So, essentially, what we find, what this paragraph says, that we find that OTIB-13 and Procedure 42 has been replaced with OTIB-44 and 64 and we find that the previous findings in those two documents were not applicable to the new document and/or have been resolved.

Now, we were tasked only with using the two new documents to see if the old findings had been resolved, and we've found that they have. However, SC&A did not perform a technical evaluation of the replacement documents OTIB-64 and OTIB-44, and their application or

appropriateness for dose reconstruction, as this would require tasking by the Procedure Review Committee, and the new methods use a different methodology in driving the adjustment factor, the scaling factor, and they use quite a few different statistics than they did in the old documents. And, therefore, we recommend that a full technical review of OTIB-44 and OTIB-64 be performed, especially in evaluation of the statistic methodology and the results obtained.

MR. KATZ: So this is then, I mean, for the Procedures Subcommittee to recommend to the Board a tasking on this because it's a new procedure review?

CHAIR MUNN: Yes. And Ron's recommendation sounds quite reasonable to me. It would seem logical, especially given the importance of these doses. It would seem reasonable that we would want the current OTIBs to be scrutinized.

MEMBER ZIEMER: We need to close that last item, though, first, right? To prior this

recommendation?

CHAIR MUNN: Yes. And item one for Finding 6, for this finding, needs to be closed with the same wording as we had used for the others, unless I hear something to the contrary. We could perhaps add comments here that, if we do intend to recommend tasks to review OTIB-64 and 44, we can incorporate that in our closure statements. I would suggest that we do that. It makes sense to me.

ORAU-RPRT-0044 - Crosswalk 4 Open Items to 0053

CHAIR MUNN: So let's put this on the table for just a few seconds while I add whether it is the will of my colleagues that we do proceed to a task that requests tasking for SC&A to review OTIB-64 and 44.

MEMBER BEACH: Yes, Wanda, I do agree with that. That's a good path forward.

CHAIR MUNN: And Paul?

MEMBER ZIEMER: Yes, I agree with that. This would be a review of 64?

CHAIR MUNN: And 44, both OTIBs.

MEMBER ZIEMER: Right.

CHAIR MUNN: Alright.

MR. KATZ: And this is Ted. Then for this and any other items that come up today, please send me just a brief summary that I can share with the rest of the Board that summarizes the procedure that the Procedure Subcommittee recommending be reviewed to summarize the procedure, you know, and its status and it hasn't been reviewed for X, Y, Z, whatever the limit is in the review in this case. We've talked about it already. So if you could just put that in a brief note to me for each of these procedures that we may be asking for a tasking, that would be helpful and then I could share that with the rest of the Board.

CHAIR MUNN: Ron, could you put together such a memo and run it by me before we send it out?

DR. BUCHANAN: Yes, I can do that.

CHAIR MUNN: I would appreciate that very much. And I'll let Ted know.

MR. KATZ: Yes. Well, send it to me, too, please, Ron, because I have some other items already for tasking for -- the teleconference is coming up pretty soon.

CHAIR MUNN: Yes, it is, and this is a good time for us to try to get all of these requests for work that we have internally decided on that hadn't been recommended yet to the Board. I'll look forward to a memo from you, Ron. And, Lori, I'm assuming you're going to be -- Lori or Kathy, who's going to be doing the BRS insertion on these?

MS. K. BEHLING: SC&A can update the BRS for these.

CHAIR MUNN: Alright. If you would, incorporating the sentence with respect to closure --

MS. K. BEHLING: Will do.

CHAIR MUNN: -- that we're recommending to the full Board that OTIB-64 and 44 assigned to SC&A for review. Thank you. Report 44. Oh, before we go on, is there

anything further with this item on Proc 42 and OTIB-64/44 that we need to address? That completes your review, Ron?

DR. BUCHANAN: Yes, that completes my review. Thank you.

CHAIR MUNN: Any comments, any questions, any concerns? If not, then we will move on to Report 44. NIOSH was going to take a look at 53 and 44 and see if the open items, how the open items related to each and to get it squared it away once and for all, we hope. Do we have that report from NIOSH?

DR. NETON: Yes, this is Jim. That was my task at the last Work Group -- or Procedures Subcommittee meeting. So I took a look at Report 44, which was a report that dealt with how to handle distributions of bioassay samples that had a significant fraction of values less than the MDA that essentially had a lot of sensor data. And SC&A's review of that report was pretty favorable from a statistical analysis sense, but the four findings largely related to

the fact that they felt that there should be some indication of how you would deal with stratification of distributions. In other words, how do you know all the data came from the same sample population allowing for different exposures and different locations in work assignments? Our response was, basically, that we dealt with those issues in Report 53, which was a report specifically dealing with stratification of coworker models.

That said, I went back and looked at Report 53 to review, and it is true that we deal with stratification in that report, but there were eight findings, all of which are still open because of various criticisms of the statistical processes and concepts that were outlined in there. And in response to that, you might recall that we also issued Imp Guide 4, which was how to deal with coworker models, and it was a somewhat more qualitative discussion, as opposed to the detailed statistical analyses.

So that said, these findings on the

stratification issue still remain open, so I could not really see any way to address and close out the findings that were levied against Procedure 44 for stratification. I don't know how we could actually close them in light of that. So that's where I ended up on this one.

CHAIR MUNN: Well, that creates a question in --- well.

DR. NETON: Well, you could say that they were addressed, the stratification is addressed in Report 53, but the models that are provided in 53 are under review yet. So you really can't say that we addressed them. We attempted to address them but --

CHAIR MUNN: Well, the question that comes to my mind is why am I not carrying Report 53 or --

DR. NETON: Well, remember 53 was sort of taken over by the Special Issues Work Group.

MEMBER BEACH: That's what I remember, too, Jim.

DR. NETON: Right. That's correct.

And until such time as that issue is resolved, in light of the review of draft Implementation Guide 4, those issues are sort of held out there for discussion until that's resolved.

MR. KATZ: Right. And just to add a little bit, so that Work Group was awaiting a group of example coworker models to review, and many of those, I think, have now been produced.

DR. NETON: Yes. The Savannah River coworker models have been provided to both the Work Group and the Savannah River Work Group, as well as the Special Issues Work Group.

MR. KATZ: Right. And so those are, I believe, under review at SC&A, and there will be a meeting down the road once those reviews are ready to discuss then these example coworker models. So that's how this -- so this, as Jim was, more or less, saying, this can't get wrapped up until all that work is -- I mean, you know, it's been a big piece of work.

CHAIR MUNN: Alright. It sounds to me as though we should be maintaining this in our

records as open items from Report 53 about which we can do nothing until the Work Groups have completed their activities. Am I looking at this correctly, Ted?

MR. KATZ: Right. It's in progress. I think that's what it should be stated as, in progress.

CHAIR MUNN: And I'd like us to clarify in our comments that we await the decisions of two Work Groups in order to proceed. So this really and truly, I would like a recommendation with respect to whether we carry this in our records as Report 44 or whether we recognize that the action has all been directed from the replacement report. Should we not be carrying this as Report 53 in process through two Work Groups?

MEMBER ZIEMER: It seems to me you still have to track this under 044.

MR. KATZ: Unless 044 is obsolete, then we still need to close this out. We just can't close it out until the bigger issue --

MEMBER ZIEMER: Yes. Is this really obsolete or --

DR. NETON: No, Report 44 is not obsolete. Our original response to the finding, and it still is valid, is that Report 43 was a methodology to analyze a statistical distribution of bioassay samples, in no way intended to address the stratification issue. And all four findings, I just looked at them again, are related to that issue.

So in some sense, the findings can be transferred to Report 53, acknowledging, though, that the stratification issue is still under discussion in Report 53 because none of the findings against Report 44 have to do with the statistical methodology that was offered as to be acceptable. And our response said that, that that's all we intended it to be.

MEMBER ZIEMER: But we know they have a recommendation from the contractor or response that sort of says, okay, we'll recommend closing that issue.

DR. NETON: Actually, I'm looking at one of the findings. Finding 2 actually says that SC&A recommends closure.

MEMBER ZIEMER: Well, do we have that? I don't --

DR. NETON: I don't know if we have them for all the findings.

CHAIR MUNN: For at least one. That's true. Well, I guess we can continue to carry it as in progress but still in the hands of two Work Groups to resolve.

MEMBER ZIEMER: What do they recommend on the others?

DR. NETON: Well, I'm looking at Finding Number 4, and it says SC&A recommends review of 44, taking into consideration a new methodology to deal with coworker data sets as described in Report 53. It basically says review 44 in light of those two additional documents, but I don't know -- I think what it's saying is that those documents really cover the issues that they raised.

MR. KATZ: So I think the simplest thing to do is just to put this aside as in progress. We don't need to have it carried on each agenda, and wait until that other ball of wax is wrapped up, and then we can come back and put these bed. That seems like the simplest thing to do.

CHAIR MUNN: Well, my question is what sort of trigger do we have from the Work Groups and otherwise for us to address Report 44 when the issues with 053 have been addressed?

MR. KATZ: Well, this is sitting in the BRS as in progress and, when we run through what's left in progress, we'll see that, right, that this one hasn't been addressed. You can put a little note there as a reminder for us that it's waiting.

CHAIR MUNN: Okay. We just don't, we don't have an established process now whereby we go back and, at a regular interval, take a look at what's in progress. We take a look at abeyance items, but we have --

MR. KATZ: I thought SC&A looks at what's -- SC&A and NIOSH should be looking at what's in progress and putting these things behind us. I think that should be a routine process. I don't --

CHAIR MUNN: I think that's --

MR. KATZ: -- just look at abeyance items.

PER 011 - #3 Abeyance Status; Case Selection Status

CHAIR MUNN: Well, we regularly do so in our procedures review but don't regularly look at -- on occasion, we do, but in Subcommittee we have not done that routinely for in process. But if that's being done by both NIOSH and by SC&A, then I won't worry my pretty little head about it. Otherwise, when we either consider establishing the routine the way we have for abeyance or if we feel comfortable with the process as it is, then I'm fine with that. I just don't, I'm unaware of any routine that we, as a Subcommittee, go through to check those --

MR. KATZ: I think the Subcommittee

will check regularly in the BRS. Again, our whole procedure was everything should be taken in progress and assigned either to NIOSH or SC&A. In this case, it's assigned to a Work Group that --

CHAIR MUNN: Yes.

MR. KATZ: There shouldn't be anything in our slate of procedures that are under review that isn't assigned one way or the other.

CHAIR MUNN: Yes, but that doesn't come to our attention. I'm just being, I guess, nitpicky about how I personally know that's what happens but --

MEMBER ZIEMER: The other in progress ones we get regular feedback from NIOSH and SC&A. If it's a finding of another Work Group, we probably lose track of whether they looked at it or not. I'm wondering if there's a way where ones that are in progress in this kind of a category, just to keep them on the agenda, if it's an in progress that somebody other than SC&A

and NIOSH has the lead on it.

CHAIR MUNN: Alright. It's something that just simply goes away for us for an undetermined amount of time. Depending on how active the Work Group is, it can stretch itself out for a long, long time.

MS. K. BEHLING: This is Kathy. Would it be worthwhile to send a note to the Work Groups just to keep you informed as to their progress?

MR. KATZ: No. The Work Groups will never be able to keep track of that they're supposed to inform another Work Group at some point. That will never happen. So I think really, SC&A, if you can keep this in the tracking, keep this tracked, that would work.

CHAIR MUNN: Alright. It would if we would request that one of the routine tasks for SC&A would be to take a look at in-progress items to see when they have been in the hands of a Work Group or Work Groups just to keep us aware of that from time to time, not perhaps every

meeting, depending on how frequently we meet. But certainly on a fairly routine basis, just be looking at that. I don't think that's been done in the past. I'm not aware of it. I've not seen --

MR. STIVER: Wanda, this is John. Actually, we do that for each of the Board meetings for that Board coordination document.

MR. KATZ: Right, you do. But those are for ones that are on your plate or NIOSH's plate. So I guess we just need to make sure that included in that listing is -- I don't think there's that many, but however many are assigned or really in the purview of another Work Group.

MR. STIVER: Okay. We can add the subsection.

CHAIR MUNN: Yes, that would be a logical subset, I think, of --

MR. STIVER: And also put a note in the BRS to the effect that, you know, this is basically remaining in progress until such time as the other Work Groups resolve the common

issues.

CHAIR MUNN: Yes, that will be helpful. Thanks. Resolved. Alright, good. That's great. We'll rely on SC&A for the kind of information we need to move forward on this task. Thanks.

Anything else to say then about these concerns we have with Report 44 and 53? Those four open items are out of our hands for the moment, but they're going to be tracked. Thank you very much.

Alright. Let's move forward. We are not going to take up the next item. That's the one that we have given a 2:30 time certain for discussing. But is Rose with us? Are you online, Rose? Hello?

MS. GOGLIOTTI: Yes, I'm here, Wanda.

CHAIR MUNN: Oh, great. Are you ready for us to take up K-25, PER 11?

MS. GOGLIOTTI: Sure.

CHAIR MUNN: Okay, good. Let's do that. Number 3 abeyance status and whether we've

done case selections. I haven't checked to see whether that has moved forward. I was looking elsewhere of whether we can go ahead with your full report. Thanks, Rose. I appreciate it.

MS. GOGLIOTTI: No problem. Just for a refresher, at the last meeting we were tasked to review four cases from PER 11, and PER 11 is very similar to PER 14. There were a series of modifications to the K-25 coworker model, including vetted by OTIB-52, which is construction trade worker. And we have findings from our initial tasking 1 through 3, and we have, for the most part, addressed those. As a result of that, though, we did have one issue that's I believe an abeyance --

CHAIR MUNN: Number 3, right?

MS. GOGLIOTTI: -- we identified that NIOSH was improperly implementing OTIB-52. They were excluding construction trade workers that worked for the prime contractor from construction trade worker dose, and that was not, in fact, the intent of the procedure. And so they've

committed to a PER to address that issue, but the Subcommittee decided to go ahead anyway and task us with four case reviews, which we did here.

I've got a lot of stuff going on at once here --

CHAIR MUNN: Yes. That's okay. I've lost my screen anyhow, so I'm not going to be disturbed.

MS. GOGLIOTTI: Alright. Well, there were two criteria that we requested cases be selected from. We requested two claims that were originally completed before May 31st, 2005, and that was slightly modified by one of our previous findings. And also two claims that were construction trade worker claims that were processed between May 21st, 2005 and August 31st, 2006. And the reason for those dates has to do with different revisions that impacted coworker modeling for K-25.

And, initially, there were 432 claims that were submitted or kicked backed to NIOSH, and only 69 of those were reversed. And we did

have our four cases assigned in June of 2016, and we initially had a little snafu where the words "construction trade worker" were left off one of our requests, so we did have to go back and request two new cases to make sure we were adequately capturing the population of cases that we wanted to.

So our first claim --

MR. KATZ: Rose, I don't know if you can do anything about this, like perhaps move your mic closer to your mouth or something, because your voice, I can understand you, we can understand you, I think, but it does --

MS. LIN: And just a reminder, this is Jenny with OGC, just be careful with the information that you're sharing on the public meeting, okay?

MS. GOGLIOTTI: I'm aware.

MS. LIN: Thank you. It's just a lot of information that's been shared on the screen, and we're working from an unredacted version of the documents, so, you know, just be cautioned

about the information you share. Thank you.

MS. GOGLIOTTI: I'm aware that these tend to have a lot of PA information in them. But our first case that Kathy has up on the screen would definitely qualify as a construction trade worker, as you can see by their employment history here. And the first claim was done in 2005, and the PoC was less than one percent. And it was reworked under this PER in 2009. However, there were several other changes added, so when you look at the table you'll see it wasn't just coworker dose that was impacted, including a cancer was added to the dose reconstruction. So the PoC did change a lot, but it wasn't exclusively because of coworker modeling. And it did go up to under 15 percent but still far below the 50 percent threshold.

The original case assigned the dose for three years, but in the reworks case NIOSH only assigned dose for one year. However, in this dose reconstruction, there was no construction trade worker dose assigned. There

was no modifications for construction trade worker. They did follow the updated guidance. They just didn't adjust for construction trade worker.

So we do have that as a finding here that we do acknowledge that NIOSH was improperly implementing OTIB-52 until early 2014, and this rework was done in 2009, so that was before that. So it's possible this case will be captured under the new PER. And here I did confirm that the EE did work for the prime contractor during the period in question. So at this point, I don't think we can address that, and I would recommend that we just hold that until the new PER is issued.

CHAIR MUNN: You're recommending that we continue to hold Finding 3 in abeyance until --

MS. GOGLIOTTI: Well, this would be Finding 6 now. We continued the finding numbering from where we left off in the first three taskings.

CHAIR MUNN: Okay. That's good. I'm having trouble because I'm struggling with my electronic devices and have completely lost my ability to even close my screen. So I'm having to follow with my ear, which is not always great. Okay, very good.

So we're recommending, essentially, that this entire PER be held in abeyance until the new PER is issued, correct?

MS. GOGLIOTTI: Not the entire PER. We did go through and we did review four cases. One of the four cases did include the construction trade worker adjustment, so they are doing it in some cases. But I think we were just hitting the threshold here because how many of these cases were done when they were implementing OTIB-52 incorrectly.

CHAIR MUNN: Alright.

MS. GOGLIOTTI: And a large part of this PER has to do with the implementation of that procedure.

CHAIR MUNN: So, essentially, it's

Finding Number 6?

MS. GOGLIOTTI: This is Finding Number 6, correct.

CHAIR MUNN: That we're focusing on, and we are going to place number six in abeyance pending the issuance of the new PER. Am I correct?

MS. GOGLIOTTI: Yes.

CHAIR MUNN: Alright. And that's what we're going to put on our Board Reporting System for this item. We will continue to --

MEMBER ZIEMER: Before you do that, let me ask do we have NIOSH responses to the findings?

MS. GOGLIOTTI: No.

CHAIR MUNN: Not that I'm aware of.

MS. MARION-MOSS: No, Paul. We're still looking at these cases. This is Lori.

MEMBER ZIEMER: So the reason I ask that, I'm not sure this is an abeyance issue at this point if we don't know what NIOSH's position is on it.

CHAIR MUNN: Yes. We need, I think --

MS. GOGLIOTTI: Well, we can certainly ask them do you believe that coworker dose should have been assigned or the construction trade worker dose should have been assigned, given these parameters.

MR. HINNEFELD: This is Stu Hinnefeld. I think I'll offer to this is that, you know, we talked at other meetings about this confusion that went on about whether prime contractor employees should be considered construction trade workers or not because, when we compiled the construction trade worker data set, we included prime contractor construction workers in with construction workers. But there was some confusion on some people's part about when you do a dose reconstruction and we look at construction trade workers does that only apply to subcontractors? And so some of these cases I think were done with the belief that a prime contractor should not get the construction trade

worker adjustment, and we've since clarified that in our guidance and I believe we will be doing a PER to address that change, the fact that we have to look at cases where, you know, prime contractor construction workers were not given the construction trade worker adjustment.

So I believe some of these cases fall into that pool of cases that were construction trade workers but, since they were working for the prime contractor, the dose reconstructor did not give them the CTW adjustment. So I believe we're going to catch these things up on a future PER. But we'll have some official response, and we'll put it in the BRS.

MR. KATZ: Alright. So, Wanda, I think what you guys need is you need for NIOSH to respond and confirm this is one of those cases, and then you can close this finding.

CHAIR MUNN: We do need that, yes. So I will carry it on the next meeting agenda as a NIOSH action, as I have carried it indirectly on this one. Sorry. But we'll have that item

to get us back on track next time, if that's amenable with all concerned.

MS. K. BEHLING: Excuse me, Wanda. Should this finding then remain open?

MR. KATZ: Yes, in progress.

CHAIR MUNN: As in progress, yes --

MS. K. BEHLING: Okay.

CHAIR MUNN: -- pending a response from NIOSH.

MS. K. BEHLING: Okay.

CHAIR MUNN: Alright. Do we have anything else on PER 11?

MS. GOGLIOTTI: Yes, that was just the first of four cases.

CHAIR MUNN: Okay. Now it's your ball game.

MS. GOGLIOTTI: Okay. The next case, we found that the dose was assigned correctly in the reworked, but we do have one observation with this case. We're not really sure if construction trade worker dose should be applied in this instance. It's an unusual case. Here, the DOE

files indicate the EE had a certain profession that wouldn't necessarily qualify as a construction trade worker but then in NOCTS a different set of careers are listed, and those would qualify as construction trade workers.

And so in this case, we're not sure if it would be appropriate to follow NOCTS' guidance or the guidance that we've included in the CATI report in the DOE files. I don't know where the NOCTS specific employment classification comes from, if that's part of a DOL confirmation, but I couldn't find anything that justified what was in NOCTS.

CHAIR MUNN: It sounds --

MS. GOGLIOTTI: They would have always included construction trade worker. I'm not sure in this instance.

CHAIR MUNN: It sounds reasonable to me that this also falls in the category of the previous, of its predecessor. I think it sounds to me as though a response from NIOSH is in order. Any objection to that suggestion?

MEMBER BEACH: None here, Wanda.

CHAIR MUNN: Well, let's make a note in the BRS that we are requesting NIOSH feedback and response. Alright.

MS. GOGLIOTTI: We'll go to the next case then. This case was originally completed in February 2006 and was reworked in 2010. It was initially an overestimate and became a best estimate and was actually compensated as a result. However, this case also, we believe, would qualify as a construction trade worker, and there was no construction trade worker estimate, so very similar to the last finding. It's unclear if, under the new PER, this would have been included because of OTIB-52 confusion. So I would recommend that we group this also with Finding 6.

CHAIR MUNN: Any problem with that recommendation?

MEMBER BEACH: None here.

MEMBER ZIEMER: No.

CHAIR MUNN: If not, then let's follow

up accordingly.

MS. GOGLIOTTI: And we do also have one observation with this case. Here, the cancer was a skin cancer on the extremity. Can I talk about this? I don't want to reveal any information, but it indicates where the cancer is.

CHAIR MUNN: Yes. We're okay, are we not, Jenny?

MR. KATZ: No, let's not. Let's just not go there with details, but thanks.

MS. GOGLIOTTI: Well, because of where the PPE was, there isn't necessarily guidance for it. The guidance that NIOSH used involved a paper liner and one lab coat and two pairs of coveralls, which is an electron attenuation factor of 0.855. However, we don't agree that that might be claimant-favorable in this instance. The employment that NIOSH references in the dose reconstruction report acknowledges that this might not be applicable but it was the best that they could do. Sorry.

It's hard to talk about this without --

CHAIR MUNN: Yes, it is hard to talk about it. I'm not quite sure how we do that appropriately and get any information to those of us who are out here --

MS. GOGLIOTTI: Well, Kathy does have it up on the screen, but I --

CHAIR MUNN: But I don't have a screen so . . .

MS. GOGLIOTTI: I tracked down the references for this, and it does talk about give different adjustment factors for different PPEs when it's known. And those all have a lowered beta dose attenuation factor. And given that the specific PPE isn't clear in this instance, we think it might have been more appropriate to just assume no PPE for the beta coworkers dose attenuation, and that reduces dose by about 1.22 rems. I'm sorry, 0.122 rems.

CHAIR MUNN: That clearly, in my view, requires a response from NIOSH.

MEMBER ZIEMER: On observations, do

we actually try to close those but --

CHAIR MUNN: We try to, but I certainly don't have an answer to the observation that was made. And I don't know how we can proceed, other than requesting a little more information, if it's available, from NIOSH. And if it's not, then if the answer is we've done the best we can, given the constraints that we work under, then that's the better answer than I personally have right now. But any other suggestions as to how to proceed with the observation?

MEMBER ZIEMER: I was just really asking how do we track observations anyway?

CHAIR MUNN: Well, usually, we don't because the observation under ordinary circumstances is not something on which we, as a Subcommittee, have needed additional information, actually, or that we felt needed a response. I just personally don't have any additional information that would resolve the dilemma in my own mind. If there is one out

there, I don't know what it is. It just occurs from my own piece of mind, I suppose, I'd like to see if NIOSH has additional information that we don't have with regard to this because I don't have any feel at all for what the depth of information that's available to them and don't really and truly understand the constraints under which they must operate to make the decisions that they make.

But if there's nothing that can be added, then I'd guess I'd like to know that. But it's not anything that's going to affect the outcome one way or the other.

MS. K. BEHLING: And this is Kathy Behling. We have been adding the observations to the BRS, so they exist there.

CHAIR MUNN: Yes, we decided to do that quite some time ago.

MS. K. BEHLING: Yes. I thought that was Paul's --

MEMBER ZIEMER: No, I understand they're there. I couldn't recall that we were

trying to close them in a certain sense.

CHAIR MUNN: Well, we've never really and truly encountered one that we thought we needed to be closed. It's usually just an observation, as this one is.

MS. GOGLIOTTI: This one we made as an observation, too, because it's not the direct implementation of the PER, but it was applied to the coworker modeling in this instance. And I will point out also that observation two and Finding 7 don't really have an impact of the overall case because this case was compensated.

CHAIR MUNN: Right. It's not going to change anything regardless, but it's a matter of information, in my view, more than anything else. Thank you, Rose.

MS. GOGLIOTTI: Okay. And we've got one final case here, but it did not have any findings. I'll just go through it quickly. It was originally done in 2006 and was revised in 2010. The PoC was 22 percent. When it was reworked, it did go up but, so far, we'll well

below the 50-percent threshold. The original case actually applied only Y-12 coworker dose because the EE did work at all three Oak Ridge facilities when the dose was revised.

NIOSH did kind of an interesting thing that I've seen in dose reconstructions before where they essentially calculated coworker dose at each of the three Oak Ridge facilities at the 50-percent threshold and then considered the three doses and assigned the highest dose from each coworker modeling. I'm not aware of any procedures that recommend doing that. However, it seems claimant-favorable and a reasonable approach to assigning dose. So we have no problem with the way that they did that, and the coworker dose did increase. And this one, we had no findings, and so it shows that PER 11 will be implemented correctly for this particular case.

CHAIR MUNN: That's always good information to have. Thank you, Rose.

MS. GOGLIOTTI: So in conclusion, we had our four cases that we reviewed. We did have

two findings and two observations. Both findings had to do with using a CTW correction, and we believe that that will be covered under the new PER and for OTIB-52, but we can let NIOSH respond to that.

CHAIR MUNN: Alright. I think we've identified what we expect in this case, so we are going to be in progress and waiting some responses from NIOSH. And we'll carry that over to next time.

My clock tells me that it is now essentially 12:40 for most of you, and that's our anticipated lunch hour. Unless there's any objection, I'd like for us to pause our proceedings at this point and see you back here at 1:40. Is that amenable with all?

MR. KATZ: Sounds good, Wanda.

MEMBER BEACH: Sounds great.

MEMBER ZIEMER: Yes.

CHAIR MUNN: I'll struggle with my screen and see if I can get back to you by 1:40. Alright. Thank you all. We'll see you very

shortly.

(Whereupon, the foregoing matter went off the record at 12:40 p.m. and went back on the record at 1:42 p.m.)

MR. KATZ: Okay, great. So we have our Subcommittee members on, and, Wanda, back to you.

CHAIR MUNN: Alright. Since we're still early for our time certain slot, let's begin by taking up PER 29.

MR. KATZ: Oh, yes, right, because we need John Poston. Right, thanks.

CHAIR MUNN: Yes, I had understood that we were definitely going to save GSI until 2:30, which it's hard to tell where I am but where you are I don't think it is that yet. PER 29.

MS. K. BEHLING: Excuse me, Wanda. This is Kathy. Before we leave PER 11, I believe there is Finding Number 3 that is in abeyance that we're waiting on NIOSH response. Am I correct on that?

CHAIR MUNN: I thought that was

correct but --

MS. K. BEHLING: And I'm not sure we gave him an opportunity to --

CHAIR MUNN: No, we didn't. We abruptly went to lunch. Thank you, Kathy. Stu, are you prepared to give us any information at all about Finding Number 3?

MR. HINNEFELD: Lori, do you have anything on that?

MS. MARION-MOSS: Yes. We're still working on that PER for that in-abeyance finding.

CHAIR MUNN: Okay. So I'll need to carry it yet again. Okay, very good. We'll do that, and we'll expect number 3 activity, as well as a response to the additional findings that Rose has just given us with regard to the cases. Good. PER 29 then.

MS. K. BEHLING: And, again, this is Kathy. I'm sorry to interrupt. Is what is showing on my screen being displayed or not?

CHAIR MUNN: I can't tell you because I have --

MR. KATZ: No, there's nothing showing right now.

MS. K. BEHLING: Okay. Hold one second here. How do I get back over there? Okay, just one second. Let me get back in here. I was in, but somebody has to allow me to join, I believe.

CHAIR MUNN: And my apologies from the Chair. I have no idea what's happening with my digital functions here, but it certainly is not allowing me to be where I need to be.

MS. K. BEHLING: Are you seeing my screen now.

MR. KATZ: No, I'm not seeing your screen still.

MS. K. BEHLING: Okay. I'm selecting present desktop, and it's not doing anything.

MR. KATZ: Maybe Rose can bring it up. I know she's listed as a presenter.

MS. GOGLIOTTI: I'll try.

MR. KATZ: So that's working.

MS. GOGLIOTTI: Okay. So you have my

desktop?

MR. KATZ: Yes, yes.

MS. GOGLIOTTI: I wasn't planning on presenting . . .

MR. KATZ: I think someone can give Kathy permission to present, but it has to be given. Not sure how that --

MS. K. BEHLING: Yes, because my screen is currently saying that I'm in the lobby. Okay. Here we go. I can maybe try one more time, if you'd like.

MR. KATZ: Well, then, Rose, you'd have to give control. See that little give control button?

MS. GOGLIOTTI: Yes.

MR. KATZ: See if you can do that for Kathy. Yes. And, Kathy, so now it should work for you.

MS. K. BEHLING: Okay.

CHAIR MUNN: There does seem to be a time delay this morning for some reason.

MR. KATZ: It's showing, Kathy, that

you have the right to display, so it should work for you.

MS. K. BEHLING: Okay. Are you seeing the BRS?

MR. KATZ: Well, right now I'm just seeing a desktop and a cursor moving around, and I don't know if that's your cursor or . . .

MS. K. BEHLING: Okay. Mine says presentable content, desktop Rose now showing.

MR. KATZ: Okay. Yes, well, it's showing Rose, but I thought she had given you control. You should be in control. So you have to go down and select your desktop and --

MS. K. BEHLING: Okay. Are you seeing the BRS?

MS. GOGLIOTTI: No.

MS. K. BEHLING: Not quite sure because when I select, and maybe I'm selecting the wrong thing, when I go to the screen that's supposed to be the presentation screen, the only thing I see is managed presentable content.

MR. KATZ: Well, don't you have a

little symbol of a desktop on yours?

MS. K. BEHLING: Yes.

MR. KATZ: Can you click on it?

MS. K. BEHLING: And when I select that, it doesn't allow me to go to present desktop as it did before. Now it's just manage presentable content.

MR. KATZ: Right. So something has changed. Maybe now try it.

MS. K. BEHLING: Okay.

MS. GOGLIOTTI: Is it possible that, because you signed in under the attendee instead of a presenter --

MR. KATZ: But I thought she did before, too.

MS. K. BEHLING: Yes, I did.

MR. KATZ: So it's the same as it was before, and it was saying that she has control. Maybe, for time's sake, we should just have Rose --

MS. K. BEHLING: Yes.

MR. KATZ: Rose, if you can handle it.

MS. GOGLIOTTI: Sure.

MS. K. BEHLING: Yes, I apologize. I don't know --

MR. KATZ: No, no worries. It's a new system so . . .

CHAIR MUNN: We're all in the same boat, Kathy.

MS. K. BEHLING: Yes, everything seemed fine the first time around.

MR. KATZ: Yes, it went fine.

CHAIR MUNN: Yes, we had no problems with it at all last week.

MR. KATZ: You may need to wrest control back from Kathy, Rose. Okay. So Rose is back in control.

MS. GOGLIOTTI: Okay. Can everybody see my screen here?

MR. KATZ: Yes, yes.

MS. GOGLIOTTI: And the next one we were going to do was PER 29; is that correct?

CHAIR MUNN: That's correct, yes. That's what we were looking at.

MS. K. BEHLING: Actually, I was just going to go to the BRS and show findings.

MS. GOGLIOTTI: Okay.

MR. KATZ: There it is.

PER 029 - Finding 11, 1212 Status

MS. GOGLIOTTI: Okay. And Finding 11. Alright. It's up on the screen.

MR. KATZ: Yes, fine. Thank you, Rose. Kathy, are you there?

MS. K. BEHLING: Yes, I'm here. This is a NIOSH response we're waiting for.

MS. MARION-MOSS: This is Lori. PER 29 is a Hanford PER, and this particular finding here states that the Subcommittee is awaiting a new PER for Hanford. We agreed to the finding. If I can recap, the finding is associated with the plutonium alpha impurities that the PER did not address. So we have agreed to that finding, and we are currently awaiting the various issues associated with the Hanford TBD to be resolved prior to issuing a new PER.

MR. KATZ: So this is still, this is

in abeyance.

MS. MARION-MOSS: Well, currently, it's in progress now.

MR. KATZ: I thought, I thought what you had said was that you agreed to the changes and were just waiting for other matters to get addressed before you update the TBD. Isn't that what you said?

MS. MARION-MOSS: Correct.

MR. KATZ: Lori?

MS. MARION-MOSS: Yes, that's correct, Ted. But what I was referring to was that, currently, in the BRS, the status is in progress.

MR. KATZ: Oh, no, I understand, but so if you're agreeing to the findings then we can put them in abeyance is what I was saying.

MS. MARION-MOSS: Okay.

MR. KATZ: Yes. I mean, that's for the Subcommittee to do.

CHAIR MUNN: Paul, can you take the helm on this?

MEMBER ZIEMER: Yes, neither you, nor Josie, can comment on this one, I guess.

CHAIR MUNN: That's correct. This is your decision today.

MEMBER ZIEMER: I'll discuss this with myself.

CHAIR MUNN: Yes.

MEMBER ZIEMER: This is fairly straightforward. The final adjudication of this one has been agreed to, but it hadn't appeared yet. So I think in abeyance is where it needs to go, as I understand the issue.

MR. KATZ: Right.

MEMBER ZIEMER: And I'm the only one that gets to vote on this, so I'm voting that we take them in abeyance.

MR. KATZ: Right. I think that works fine. There's no controversy here since NIOSH agrees with the finding.

MS. K. BEHLING: Will NIOSH be putting that in abeyance or do you want SC&A to --

MR. KATZ: You can go ahead and do

that, Kathy. That's fine.

MS. K. BEHLING: Okay. Thank you.

MR. KATZ: Thanks.

CHAIR MUNN: Are there any other comments from anyone with respect to PER 29? If not, then let's go to PER 31, report review. This is a carryover from a couple of meetings before.

MS. K. BEHLING: There is one more finding, 12, for the PER 29.

CHAIR MUNN: Oh, yes, Paul? I'm trying to walk away from one of the --

MEMBER ZIEMER: Yes, okay. Lori, do you have it?

MS. MARION-MOSS: Oh, yes, this is Lori. The same holds true for Finding Number 12.

MEMBER ZIEMER: Okay. Same final outcome here, so I'll be clear that this will go in abeyance.

MR. KATZ: Thanks, Paul.

CHAIR MUNN: And, again, we're back to PER 31. That's a carryover. Do you have

anything, NIOSH?

MS. MARION-MOSS: Stu, this is the PER for Y-12 for the --

MR. HINNEFELD: This is the thorium one, right? The thorium --

MS. MARION-MOSS: Correct, correct.

MR. HINNEFELD: Yes. It's still being worked on, still working on a way to, we're still deciding if we can do thorium doses for Y-12.

PER 0031 - Report Review Carryover

CHAIR MUNN: So we're continuing the carryover.

MR. KATZ: Right. So this should show as in progress.

PER 0047 - Abeyance 3, 4

CHAIR MUNN: PER 47, one that's in abeyance. We have Findings 3 and 4. Again, a carryover from NIOSH. Any report? It should have been a part of the abeyance items.

MR. HINNEFELD: I believe we have a

new item in there on 4.

MS. MARION-MOSS: No, that would be 3, Stu.

MR. HINNEFELD: Three? Three is what we entered in this?

MS. MARION-MOSS: Yes.

MR. HINNEFELD: Okay. To talk about this briefly, the original response that our side put in, we put in is not really relevant to the comment. This is a dose reconstruction that's done from a template, so we don't have enough claims from the site to run a Site Profile. Then we write a dose reconstruction. The entire analysis was supposed to be on the dose reconstruction report, and, to make sure those were consistent, we have these templates that we work from to prepare these dose reconstruction reports.

In this case, the dose -- and when you use a template there are pieces of the template that are applicable and you insert and there are pieces that are not applicable and you don't

include in the dose reconstruction. In this case, the dose reconstructor did not include a table that was relevant to this dose reconstruction. And so this number appeared without any basis, but it does, in fact, have a basis, have the correct information from the template being copied.

So I think, you know, we can probably provide an example, provide the templates so that people, you know, could see that the information is there, or we can proceed elsewhere. But this is just a matter of a piece of information that should have been in the dose reconstruction report being inadvertently admitted.

MR. KATZ: And for the record, this is a Grand Junction case.

CHAIR MUNN: Yes.

MEMBER BEACH: This is Josie. Can that be attached just right here, in addition to your reply?

MR. HINNEFELD: I'm sorry. What did you say?

MEMBER BEACH: Can that just be attached right at number three here?

MR. HINNEFELD: So we could provide the template to --

CHAIR MUNN: Yes, is there any reason why the template itself can't be attached.

MR. HINNEFELD: No, no.

CHAIR MUNN: If not, then perhaps that would be the simplest way to dispose of this particular finding, just attach it.

MEMBER ZIEMER: I mean, if we have a confirmation that it was done, I don't see any need to actually put it here.

MEMBER BEACH: As long as SC&A has looked at it and agrees.

MEMBER ZIEMER: I mean, SC&A was only raising the issue of why the template wasn't compared, right?

MR. HINNEFELD: They raised the issue about -- well, if we can go up and look at the finding. There's a description of the data available that is not presented and there's no

tabulation of it in the dose reconstruction report. There is a tabulation of it in the template, which is supposed to be copied on the dose reconstruction report. So that's, you know, that's the nature of the finding.

CHAIR MUNN: So I understand correctly, this is essentially a QA issue, right?

MR. HINNEFELD: I would guess that's true, yes.

CHAIR MUNN: Okay. I would think so because this template exists. It just simply was not used appropriately, right?

MEMBER ZIEMER: Well, I gather it was used. It doesn't show up in the report is --

CHAIR MUNN: Yes, it doesn't show.

MEMBER ZIEMER: Is that correct?

MR. HINNEFELD: Yes, we used the data that was in the template in preparation of the dose reconstruction report in order to get the number, the dose number. What we didn't include was the tabulation of those, we say there are 569 air sample measurements, but then there's no

attenuation of the dose reconstructor that shows what those indicate. So that was what was left out, though we used the dose number from the template. We just didn't include the table. I believe that's the case.

MEMBER ZIEMER: SC&A, do you need to see that to confirm it?

MS. K. BEHLING: Yes. This is Kathy. Yes, he was questioning, it appeared in the template that the dose reconstructors were being told that you can go back to look at these 569 - -

MR. HINNEFELD: Yes, right. That's the way the dose reconstruction appears, yes.

MS. K. BEHLING: Yes. And we wanted to be sure that it was tabulated somewhere, but I'm not sure that we saw that. And I do think that we should see, we should see that, yes.

MR. KATZ: Sorry. We can't hear, Hans.

MS. K. BEHLING: Go ahead, go ahead. He was on mute.

CHAIR MUNN: Now we're not hearing you at all.

MR. KATZ: No, he was just far from his mike. He wasn't on mute. But now we can't hear him.

CHAIR MUNN: Still not hearing anything.

MS. K. BEHLING: What he's suggesting is that we didn't want, obviously, the dose reconstructors to have to go back through 500 and something and we wanted to be sure that this data was in some tabulated format. But we saw bottom-line dose numbers, but I think we still need to look at the supporting data that was used to develop those doses.

MR. KATZ: So that's fine. I mean, we can just continue this as in progress, and it's in SC&A's hands.

CHAIR MUNN: Right.

MR. HINNEFELD: Well, we'll send a template.

MR. KATZ: Yes, yes.

MEMBER ZIEMER: Now, Ted, all we need is a report back from SC&A that they've confirmed it. We don't need the template in order to --

MR. KATZ: Right, right.

CHAIR MUNN: And that will take care of item number three, Finding Number 3. But we still need something from NIOSH, I believe, for Finding 4, correct?

MS. MARION-MOSS: Yes, Wanda, this is Lori. I believe Finding 4 was that we would revise the template in regards to the radium-226 and thorium-230 equilibrium ratio, and we're still working on that and we should have that by the next meeting.

CHAIR MUNN: So it's being corrected, is it? The template?

MS. MARION-MOSS: Yes. We need to make a correction.

CHAIR MUNN: Okay. Very good. So we have an action from NIOSH on both of them, but next time we'll hear back from SC&A. Okay.

MR. KATZ: But I think a

clarification. Lori, have you already agreed with the finding before it was in abeyance awaiting you to actually make a change to the template, or are you just agreeing with the finding now and saying you're going to make such a change, or something else?

MS. MARION-MOSS: No, back in April --

MR. KATZ: Okay, okay. So it already was in effect, should have been in abeyance.

MS. MARION-MOSS: Right. So it's in abeyance now.

MR. KATZ: Okay, good, alright.

CHAIR MUNN: Yes, that's where we have it, I believe.

MR. KATZ: Okay, thanks.

CHAIR MUNN: Alright. I will untangle that in my own mind offline. Anything else on PER 47?

MS. K. BEHLING: Wanda, one question. Should Finding 3 state in abeyance, or did I hear someone say we should now put this in progress?

MR. KATZ: Well, I'm not sure why it was in abeyance if you had an answer in the first place already with respect to the template, right? We just learned --

MS. K. BEHLING: I guess we were waiting to see the template.

MS. GOGLIOTTI: We can change it to in progress in the BRS.

MR. KATZ: Yes, okay.

MS. K. BEHLING: Alright. I just wanted to verify.

PER 0053 - Case Selection Status

CHAIR MUNN: That's good. All clear on PER 47? Then we'll move on to, we have a chemical PER, 53. We have Hans' report on that because NIOSH has already fulfilled its obligation and provided the cases, and the selection was made and Hans has a report for us. Are you there, Hans?

DR. H. BEHLING: Okay. I'm sorry.

CHAIR MUNN: That's quite alright.

DR. H. BEHLING: I had problems with

my headset here. It's been acting up.

MR. KATZ: Hans, before you get started, just please be very careful not to really discuss Chapter 6 of individual cases.

DR. H. BEHLING: I have been warned by my wife, and she's sitting right here ready to hit me if I say something I'm not supposed to.

MR. KATZ: Okay. Thanks, Hans.

CHAIR MUNN: She has her hand on the mute button.

DR. H. BEHLING: Okay. Anyway, I just wanted to briefly review the one case that was reworked and evaluated on behalf of the Allied Chemical Corporation with regard to PER 53. Anyway, I wanted to briefly just give a little bit of a background so that everyone is on par with the issues here.

The PER 53 was issued as a result of significant issues to the Site Profile for Allied Chemical, and I can just briefly review what some of these issues were. Number one, there was new guidance in Section 4.1 of the TBD for the

assignment of external doses for periods when monitoring records were incomplete and missing, and the revised version recommends an approach for filling the gaps in dosimetry by means of uses adjacent time periods with available dose data.

The second issue that was incorporated into the revision was additions to revised isotopic ratios for non-uranium radionuclide intakes in a residual period, and there was some increase in mode of unmonitored neutron dose from 1969 to 1976. And there was also not just in addition to revisions to the TBD but there was also they coincided in time, the revision coincided in time with changes to OTIB-70, the dose reconstruction, during residual periods at the time referenced for the facility. And that particular revision changed the source term, the patient factor, from 0.01 per day to 0.067, which is an increase in the potential exposures and dose during the residual period.

The revisions that were incorporated

into Revision 2 involves all job types at the facility. Also, it incorporated dose time frames during the operational period, as well as the residual period. And on behalf of the PER 63, NIOSH had identified 93 claims that mandated the recalculation of the dose, and, of the 93 revised dose reconstructions performed by NIOSH under PER 63, the resulting Probability of Causation values were all below 45, so none of them exceeded the threshold for being compensable.

On behalf of the commitment under subtask 4, SC&A recommended that at least one dose reconstruction should be evaluated, but that was conditional that it was an individual that was employed during the operational period, as well as the residual period. And when I look at the data here in the teleconference call on May 16th, 2016, the procedure review Subcommittee tasked SC&A to review one case that was provided to us by NIOSH that met that criteria. This individual was employed during the operational and during the residual period.

And at this point, I think, Kathy, can you pull up -- okay. I just want to briefly go over the actual changes that occurred that appear in Table 3-1 which compares the dose estimates identified in the previous and reworked PERs, and there were really a total of five changes that were identified in bold print. And you'll see that in the first one there were two cancers, by the way, for this individual, which you can see. And then, therefore, you have four columns: the first cancer, the previous dose, the revised dose for the first cancer. And same thing for the second cancer: the previous dose and the revised dose.

For the first change that you see for external dose, the cancer was revised from 2.075 rem to 2.684 rem, and that was based on an increase in dose that reflects the increase of the non-penetrating dose component from 9.36. But, in essence, this change would take the interpretation guidance in ORAUT-OTIB-0017, the interpretation of dosimetry data for assignment

of shallow dose, incorporated into the revision of the Site Profile.

The second one is the unmonitored neutron doses to cancers that is now in the SEC of external unmonitored neutron dose, which is the third row of the table. And the change value of 0.094 rem to 0.104 rem is a modest site increase and reflects the change in the neutron dose rate between Revision 1 and Revision 2 of the Site Profile that was changed under Revision 2. And that's the third issue that was changed, the internal dose that increased on behalf of the first cancer from 4.912 to 5.033 rem, while the internal dose to the other cancer decreased from 3.703 to 3.351 rem. This increases the rates of internal dose to these two cancers respectively with respect to the combined impact of the changes in Revision 2 to the Site Profile involving non-uranium radionuclides in the depletion rate of separating in the residual period as defined by the revised OTIB-70.

All of the numbers were only modestly

changed, and we identified, SC&A identified the fact that all of the revisions that had been introduced had been adequately reflected in the revision of this particular dose reconstruction and there were no findings. As a result, SC&A recommends closure of PER 53.

CHAIR MUNN: Thank you, Hans. Any comments or suggestions?

MEMBER ZIEMER: Well, I recommend that we accept the recommendation.

CHAIR MUNN: I certainly would confer. Josie?

MEMBER BEACH: Yes, I don't have any comments, and I agree with accepting the conclusion.

PER 0054 - Status

CHAIR MUNN: The entry needs to be that the Subcommittee has considered this item and accepts the recommendation that it be closed. And we can move on to -- thank you, Hans -- move on to PER 54. I'm uncertain on this one as to who has the action. At the time of our last

meeting, we were expecting NIOSH to have this action, but I don't know what's transpired since then.

MS. K. BEHLING: Yes, this is Kathy. Has Bob Anigstein joined?

DR. ANIGSTEIN: I'm here.

CHAIR MUNN: Oh, good.

MS. K. BEHLING: Good. This had to do with whether, during the session where I present to the Subcommittee the new PERs and new OTIBs that are out there, you know, for your consideration as to whether you want us to review them, one of them was the carborundum PER 54, and there was discussion that perhaps we do not need to look at this PER because there's an SEC in progress and until the SEC is finalized or whatever. And at the time, I don't think Bob was on the phone, and I wanted to be sure that he was in agreement with that. And I think there was some email or something sent out by Bob that indicated he did look this over and discuss this with NIOSH and he's in agreement that we can wait.

Am I correct on that, Bob?

MR. HINNEFELD: This is Stu Hinnefeld. Can everybody hear me?

CHAIR MUNN: Yes, we can.

MR. HINNEFELD: Is anybody saying anything?

CHAIR MUNN: I'm saying something, but I don't know anyone else is.

DR. ANIGSTEIN: Can everybody hear me?

CHAIR MUNN: Yes, I can hear Bob Anigstein.

MR. HINNEFELD: Yes, I can hear you now, Bob.

DR. ANIGSTEIN: Kathy, are we talking about the Carborundum PER?

CHAIR MUNN: Yes.

MS. K. BEHLING: Yes.

DR. ANIGSTEIN: Yes, that was -- okay. The thing with the Carborundum PER, in my opinion, this was a very minor thing --

CHAIR MUNN: I can barely hear you,

Bob.

DR. ANIGSTEIN: Okay, one second.

CHAIR MUNN: I can barely hear you.

DR. ANIGSTEIN: Okay. Better?

CHAIR MUNN: Much, much better.

DR. ANIGSTEIN: Okay. Yes, my problem is I hear two phones. One I hear on better, and the other one people hear me better. So I'm going to sometimes have to say say again being on this phone. What happened with Carborundum was they originally did it purely based on TBD-6000, and then there was a revision to TBD-6000 somewhere in 2011, so they redid the Carborundum based on new values in TBD-6000. They're really minor changes.

However, since then there was an SEC and there was a major change in the approach to doing the characterization of the site. Much more research was done by NIOSH on the site, and the SEC report essentially is like a Site Profile. So it seemed that, eventually, there's going to be, once the SEC, which is still in

progress, once the SEC has voted on by the Board, which I believe is scheduled to be at the next March Board meeting, there will be much more extensive changes. So it doesn't seem very worthwhile to review these relatively minor changes that are under -- what is it? Sixty-four.

CHAIR MUNN: So these are essentially in abeyance until the SEC report is complete?

DR. ANIGSTEIN: I would agree with that, yes.

CHAIR MUNN: Alright.

DR. ANIGSTEIN: In other words, the Board considered the SEC at the last Board meeting and went back to NIOSH and requested NIOSH for more information.

CHAIR MUNN: But in any case, we're holding it in abeyance until we have the report on the SEC, right?

MS. K. BEHLING: Correct, yes.

CHAIR MUNN: I think so, yes. I think that's correct. So let's make a notation to that

effect.

MR. KATZ: Right. And we may never even do this PER because --

MS. K. BEHLING: That's right.

MR. KATZ: -- because it's kind of a moot point.

CHAIR MUNN: It goes on our abeyance list.

MS. MARION-MOSS: Wanda, this is Lori. What are we putting in abeyance?

CHAIR MUNN: The entire effort to look at PER 54.

MS. MARION-MOSS: Okay, thank you.

CHAIR MUNN: As was just commented, we may not even do this one. It depends on the outcome of the SEC report, which is pending. Then it is getting very near to the 2:30 time that we anticipated doing something else, but I don't know whether we have all the people aboard that we have committed to.

MR. KATZ: Well, I mean, I think the person that's missing is John Poston. John, are

you on the line? Look, I'll try to call John Poston, but he wasn't expecting to join until 2:30 so . . .

CHAIR MUNN: Alright. Then let's go ahead and move on to PER 59. And I think there were actually three other PERs that were being looked at in terms of criteria that we were expecting from SEC, I believe, from SC&A.

MS. K. BEHLING: This is Kathy. This PER 59, along with PER -- and PER 59 is Norton Company -- along with PER 61, which is Bridgeport Brass; PER 63 is Alcoa Pennsylvania; and PER 65 is Anaconda. During the last meeting, the Subcommittee agreed that there should be a full review of those four PERs. However, Ted indicated that, because it's a full review, it had to be presented to the full Board and that they had to concur with that.

Now, I believe, Ted, just a few days ago I had sent out a memo that had a table in it with these PERs in it, and I believe, have you fully briefed that to the full Board now, Ted?

MR. KATZ: No, not yet because I need all the materials for the full Board, not this just. And so anything coming out of this meeting I'm going to provide to the Board, too.

MS. K. BEHLING: Okay. So you are going to take care of making sure that the entire Board gets to look at this and make a decision?

MR. KATZ: Yes.

CHAIR MUNN: Hopefully, yes. Hopefully, that will be on the agenda by the end of this month, right, Ted?

MR. KATZ: Yes, it's for the Board meeting at the end of this month. And because I think three or all of those are ones where SC&A hasn't reviewed, in effect, the Site Profile, whatever it is, because these don't necessarily have Site Profiles, per se. I think this is going to be a case where we recommend to the Board, the Board is going to want to have the whole Site Profile reviewed in effect.

CHAIR MUNN: A full review.

MR. KATZ: Yes, not just the PER

changes because I don't think it's reviewed in the first place.

CHAIR MUNN: And, Ted, do you need anything more from me to present to the Board?

MR. KATZ: So what I have is the table with the various discussions.

CHAIR MUNN: Okay.

MR. KATZ: If there's more detail as background for each of those, that will be handy. But, otherwise, I think the Board can deal with minimal information.

MS. K. BEHLING: Okay, yes. Because in that table, I put together just a summary and how the doses were effected and number of cases involved and our recommendations.

MR. KATZ: Right. And I'm just talking about really your recommendation column, which is where you, I think, address the fact that SC&A hasn't reviewed those sites.

CHAIR MUNN: Correct.

MR. KATZ: Yes.

DR. MAURO: This is John Mauro. Just

a question for clarity. The name of each of those are very familiar, and it sounds like they may very well have been cases that were reviewed. And in the process of reviewing those cases, to varying degrees, these sites may or may not have had a Site Profile at the time, and this could go back a ways. And, of course, if the case was reviewed, either the DR itself contains the information necessary to review the case or there was, it made reference to, for example, TBD-6000 or it had a Site Profile, at least at that time.

I just want a little clarification. It sounds like there are, there are Site Profiles for these that were not previously reviewed, and I'm presuming they were not reviewed, at least in part, in support of the cases that were reviewed. The names you just named sound awful familiar.

CHAIR MUNN: I think you're correct, John. I think we have, we had looked at them not in this same context as some of our other reviews, I think. But you're right. These are not strangers to us.

DR. MAURO: Okay.

CHAIR MUNN: We've all had, we've all had at least some cases from these sites before us.

MR. KATZ: So, John, anyway, I think, I'm not sure that's what you're getting at. But in any event, whether you have already, in effect, reviewed them through a DR review or some other means, that will be, obviously, if you see, once you get started on one of these taskings, assuming the Board makes these taskings, that you've already done some work and that's already water under the bridge, that just makes it easier.

DR. MAURO: Good. No, that helps clarify.

MR. KATZ: Okay.

CHAIR MUNN: Alright. Then we will continue to keep these on our radar until we see what the Board does and what time frame we're likely to have after that. That's good to hear.

Anyone else, any comments about those

four that we just were discussing?

MEMBER ZIEMER: The numbers, it's, in addition to O-59, I think O-49 and O-73. Then was there a fourth one?

CHAIR MUNN: No.

MR. KATZ: Yes, there's a fourth one.

CHAIR MUNN: We have 59, 61, 63, and 65 in that grouping, correct.

MEMBER ZIEMER: O-59, O-63 --

CHAIR MUNN: No, O-61 and O-63, O-65.

MR. KATZ: Right. And, Paul, you'll receive, along with the rest of the Board, a memo from me with these items anyway.

MEMBER ZIEMER: Okay, thank you.

MR. KATZ: You're welcome.

CHAIR MUNN: Do we have a report back with respect to Dr. Poston yet?

MR. KATZ: Let's check on the phone. Dr. Poston, have you joined us? I sent him, in the interim, an email reminder, but we're still two minutes early. I don't know what his course schedule is and whether this was adjusting time.

I know he intended to join us.

CHAIR MUNN: Well, I hesitate to undertake the next item that I have, which is penciled in, which is the subtask 4 reports on four PERs, and I'd like us --

MR. KATZ: Okay. If you'll just hold for a minute, let me try to call him.

CHAIR MUNN: That's fine.

MR. KATZ: Okay.

CHAIR MUNN: And we can take a ten-minute break, if we'd like.

MR. KATZ: Okay. John, there he is.

MEMBER POSTON: Yes, I'm here.

MR. KATZ: Okay, super. So that's what we were asking about, whether you joined yet.

MEMBER POSTON: I was just waiting for an opportune time to say hello.

MR. KATZ: Well, thank you, John. I'm glad you could join us.

CHAIR MUNN: This is an opportune time, and howdy. Was someone trying to get my

attention just before --

MS. K. BEHLING: This is Kathy. I was just going to suggest that perhaps we wanted to give control of the screen over to Bob. I know that this is his, I believe it's his first time using the software.

MR. KATZ: Scary prospect.

CHAIR MUNN: Yes, I think that's true. And he does have --

DR. ANIGSTEIN: Can I start presenting?

CHAIR MUNN: I think you may persist --

MR. KATZ: So, Bob, why don't you see if you can get a hold of the screen from your invite.

DR. ANIGSTEIN: Okay. Let me see if --

MR. KATZ: If you can't, someone else can change the slides for you.

DR. ANIGSTEIN: I should start now, right?

MR. KATZ: Yes. I mean, first, you have to put something up on the screen.

DR. ANIGSTEIN: Yes, exactly.

MR. KATZ: Yes. So there's a little desktop symbol, Bob.

DR. ANIGSTEIN: I know how to do it. It's just that my computer is slow.

MR. KATZ: Okay, good.

MS. JESKE: This is Patricia Jeske just joining the meeting.

MR. KATZ: Oh, welcome, Patricia.

DR. ANIGSTEIN: Here we go. And, everyone --

MR. KATZ: And for the court reporter, that's another member of the public, Patricia Jeske.

DR. ANIGSTEIN: Can everyone see me?

CHAIR MUNN: We can. How wonderful. Thank you, Bob.

MR. KATZ: Yes, you're a star, Bob.

CHAIR MUNN: You are. And even I have a screen to watch you on. That's good.

DR. ANIGSTEIN: Yes, just a full screen. Should I start?

CHAIR MUNN: Please do.

DR. ANIGSTEIN: Okay.

MR. KATZ: One thing I should just note, I just want to make sure I have Jim Neton and Dave Allen on the line.

DR. ANIGSTEIN: Very good. Okay.

MR. KATZ: No, wait. I mean, I don't know that. Do we have Jim and Dave Allen on the line?

MR. ALLEN: This is Dave Allen. I'm on the line.

MR. KATZ: Okay, great. Jim, are you on the line, too?

DR. NETON: I'm sorry, yes.

MR. KATZ: Okay, great. Thanks.

DR. ANIGSTEIN: Okay.

MR. KATZ: Okay. Sorry, Bob.

PER 0057 - Case Selection Status

DR. ANIGSTEIN: Okay. So we were asked to do, under Subtask 4 we were given, NIOSH

had selected five cases from PER 57, which is the Appendix BB Revision 1. There also has since been an Appendix BB Revision 2, but we're not addressing that at this time.

We had three findings, three things that we call findings at this point, let's put it that way. The first finding and probably the most significant is that there is an administrative category under Appendix BB, both Rev 1 and Rev 2, which, and I'm quoting from the appendix, the administrative category consists of people that spent most of their time in their office environment and did not routinely access the operating areas of the plant.

Now, we did a complete review of the PER cases, in addition to the ones, just for this purpose, in addition to the ones that were assigned to us, and when I say complete review I mean a very cursory review, and identified which ones were put in the administrative category. And one of the cases that we were assigned, plus one other one, we found that, even though the job

title sounded like an administrative job, like supervisor, manager, something along that line, the description in the CATI actually puts them in the plant. Their office location was in the plant, and they frequently had to leave their office to inspect the steel, to inspect the casting, to inspect plant operations. So that does not fit the category of administrative, which is a very occasional, I believe is what was discussed here in the Work Group meeting was somebody, a secretary, working in a separate building. I mean, GSI did have a separate administrative building on the site but at some distance from the steel plant, and the hypothesis was supposedly a manager sends his secretary into the plant and says, you know, Joe, the boss wants to talk to you, would you come with me? So this would be very occasional.

These workers were not in that, did not fit that description. They were routinely in the plant, even though they were not steelworkers, per se, and therefore should not be

in the administrative category.

Finding 2. This gets a little complicated. NIOSH prepared a set of, a fairly complex set of workbooks to calculate doses from intakes of uranium. Instead of doing a separate calculation for each worker running IMBA, they had a workbook so that, for a certain given intake during the given year, this would be the dose during that year and subsequent years. And we confirmed with a completely independent calculation and got very close to NIOSH numbers. And that worked very fine when it's a uniform exposure for the entire year.

However, if the exposure is not for an entire year, what NIOSH did was they simply used the same procedure but prorated the daily intakes. Instead of reducing the time period, they kept the time period as one year but reduced the intakes in proportion, as I'll show in a moment, whereas a more exact dose assessment, which we did in a couple of cases, was to use the actual daily intakes as specified in Appendix BB

and used the actual dates.

And an example, which applies to all workers that would have been there in 1952, so this is not any individual worker, the period of operations began October 1st, '52, so this gave 92 days in 1952 where the worker could have been exposed.

The inhaled intake in 1952 was specified as 114 dpm per calendar day. So the NIOSH method was to take the 114 and multiply it by 92 days and divide it by 365 days for the year, and then they have a derived amount of 28.79 dpm per calendar day, and the exposure is assumed to take place starting January 1st to December 31st, 1952. And the lung dose calculated by any worker that would be in this category, the lung dose would be 0.33 rem in 1952. It would be more just during, the liver dose, during that year.

However, if you do the more exact method and still assuming 114 dpm per calendar day, but now the exposure doesn't start until October 1st, which is when, in fact, it did start

and go through December 31st, the lung dose for 1952, the doses from this intake to the lungs in 1952 is 0.2 rem. So the NIOSH dose is 63 percent higher. The explanation is because the uranium starts to accumulate in January and, therefore, has a longer time to reside in the lungs than the liver dose.

Conversely, if there was a case where a worker left the employment, say early in the year, his dose for that year from the intake would be understated because it will be assumed by the NIOSH method that he continue receiving the dose, the intake, during the entire year at a much lower daily rate, whereas, in fact, he would have gotten it all early in the year and that uranium would sit in his lungs and deliver dose later.

So in both cases that could make a difference. And when you're talking about some cases where the PoC, and this has actually happened very, very close to 50 percent, this could make a difference one way or the other.

And then Finding 3 was simply an error

in the calculation where the worker's file described when he left the employment or when the cancer occurred when the dose calculation should have stopped and the actual calculation file showed that he stopped a year later, so there was an extra year which was simply an error in the calculation. And in this particular instance, it probably made very little difference, but it points to a QA issue that such an error had taken place.

Okay. The rest we call observations in the sense that we're not certain whether they are major effects or not in the individual cases, but the overarching issues that apply to all cases and, in some cases, they may make more of a difference than in other cases.

So the first one is the uncertainty distribution of photon and neutron DCF, dose conversation factors. And NIOSH, in all cases from the ones we examined, where the external exposure was specified as fixed numbers in a given time period, they also used fixed values of

the DCF to convert a dose to a given organ. However, this is inconsistent with the discussion in Chapter 5, I think it is, of OCAS-IG-001, which states that a triangular distribution around a DCF would be appropriate, and the one recommended is, the mode of distribution should be the effective DCF for the most likely geometry, which is, in fact, what is used as the fixed value. However, the minimum should be the geometry that gives the lower DCF and the maximum geometry gives the highest DCF, and this was not done in this instance.

The top table here is taken straight out of, it's simply cut and paste, OCAS-IG-001, and it shows the various values of the DCF for converting exposure and roentgen to one dose for photons in the 30 to 250 keV range, energy range. So the table below lists three alternatives. It starts out with the fixed value, which is what NIOSH used, and three alternative distributions that should be considered. One of them would be considering the effective dose -- not effective

dose. Cancel that. The effective DCF and using the triangular distribution for the geometry that gives the minimum DCF, which is the isotropic exposure coming from all directions; the mode being the AP, anteroposterior; and the max being the posterior-anterior, PA. And in such a case, you get, probably the most significant value is the 95th percentile of that distribution because IREP takes the 99th percentile, but it's combined of different distributions. Probably the 95th percentile is close to effective example. And here, instead of 0.986, you get 1.032, so it was five-percent higher.

The next one, which is the most, which seems to be the most practical because it takes in the entire range, it goes from the minimum DCF to the maximum DCF of all the numbers in this table, and so that goes from a minimum of 0.128 to a maximum of 1.26, and you get a 95th percentile of 1.135, which is about 15-percent higher than the fixed value.

And then, finally, there's the one

that NIOSH uses, and that's staying with the, contrary to the recommendation in Chapter 5 of OCAS-IG-001, it uses a range not of different geometries but a different energy range within that geometry, within the AP geometry. And based on that, this range, we end up with a 95th percentile of 1.078, which is about nine-percent higher.

So our recommendation is that there should be a distribution of DCF whenever external exposures are assigned fixed values. And a triangular distribution, the one on the second line here in the maximum range, is the most claimant-favorable.

Next, in the first ten years of the operation of the covered period, it was agreed on during the Work Group meetings that the external exposure would be modeled as a triangular distribution. And the graph here, the red triangle, represents that distribution. It goes from 6 point-something per year to 15 per year, which would be the stipulated regulatory limit

during that period of time.

So here NIOSH employed, shown by the black triangle, the dose conversion factors to the lung over using the energy, the energy distribution here. And the way they combined it is it simply took the minimum of this triangular distribution and multiplied it by the minimum of this triangular distribution to get the blue, the minimum of the blue triangle. And they did the same thing with the mode, multiplied by this mode to get a mode close to one, so it looks almost the same. And then the maximum, again, times the max, and we get this.

So they ended up with another triangular distribution. Implicit in this assumption is that there is a perfect correlation between the uncertainty in the DCF and the uncertainty in the external exposure. But it's simply not scientifically correct. There's no reason why the two would be correlated. Therefore, the blue triangle, which is the distribution that they do use, we don't agree

with.

Instead, what we did was we did a Monte Carlo sampling. We simply sampled from this distribution. We took one value from this distribution and one value from this distribution, randomly sampled, multiplied the two together, and repeated this procedure one million times.

That sounds scary, but that's only two minutes of computer time once we get set up. And we ended up with a distribution on the right which looks very similar to a normal distribution. There is a cutoff here, which is an artifact of the plotting program. In reality, it goes on, the maximum value would be about the same as this maximum value.

And it's slightly asymmetric, and there's a little more detail on the right. But for practical purposes, given that IREP, you know, limits how many distributions you can put in, a normal distribution would be a very good approximation, and the same Monte Carlo programs,

a program called Crystal Ball, which is an add-on to Excel, would tell you what the median is, what the standard deviation is, and that simply defines a normal distribution.

So we would recommend that NIOSH looks into doing something like this. It has to be done for each organ, but only has to be done once, so it would be a very modest effort. And then this could be put into the worksheets.

The next observation we have is one of the IREP inputs is to specify whether the exposure rate is acute or chronic. So in the case of external exposures, we observed, looking at at least five cases, that it appears that NIOSH seems to have a blanket policy that all photon and electron external dose rates are designated acute and all neutron external dose rates are designated chronic.

In reality, some exposure scenarios produce doses that are inherently chronic. For instance, during the residual period, the worker's in contact with this vacuum cleaner for

3,250 hours a year. Well, that's a chronic exposure. It's getting the same exposure minute-by-minute, hour-by-hour, every single workday.

Similarly, a worker in contact -- the layout man is in contact with irradiated steel for 3,250 hours per year. Again, that's a chronic exposure. You have a piece of steel in front of you, you're marking it up, working with it. And that would be much more like a chronic exposure rate.

On the other hand, the neutron exposure rate, which is listed as chronic, should be more -- would seem to be more likely to be acute, because the neutrons come from the betatron itself. And we assume that the worker is just outside the betatron building and he's getting some sort of radiation from the betatron. Well, the betatron is pulsed 180 times a second, and each injection pulse is 4 microseconds. So there was about 5.5 milliseconds between pulses, and the pulse is 4 microseconds, so it's less than 1/1000th of that time. And then you add to

that the fact that the betatron duty cycle is only 41 percent.

So the worker is really exposed for, I'm just guesstimating, like a few seconds during a day, or less than a minute. I think I came up with eight and a half minutes or eight and a half seconds during the year. This is vague memory. But it's clear that it's an intense intermittent exposure, and therefore -- and then, furthermore, since the photons from that same source, in the NIOSH model dose reconstruction, are characterized as being acute, it doesn't make sense, from the same betatron, from the same betatron target, that the neutrons would be chronic and the photons would be acute. So we recommend that the neutrons should be acute in this instance.

Finally, there was a question of assigning medical X-rays. All GSI workers were assigned doses from medical X-rays. However, in reviewing the CATI reports, NIOSH seemed to ignore the worker's statement when he answered,

no, medical X-rays were not required, at least in this instance. So it doesn't seem logical that he should be assigned medical X-rays when he said he didn't have any. I thought the CATI report should be paid attention to.

And then, finally, was the place of employment. Now, the majority of the cases selected by NIOSH for SC&A review were employed Granite City Steel, not at GSI. Granite City, so we reviewed them anyway, but they used the methodology for Granite City Steel, so we reviewed them as if they had been at GSI. But in fact, they weren't. And Granite City Steel was not a covered facility until 1974 when they acquired the GSI site. This was already during the residual period. GSI had shut down operations and simply sold them the grounds, which they then, because they were south of the Granite City facility, they're referred to as the South Plant, as opposed to the old one that was the North Plant.

So the only Granite City Steel

employees that would be covered for exposure would be the residual contamination, only if they worked in the South Plant between 1974 and 1993. And there was a DOL circular to that effect. So this is something that should be noted in future cases, that the CATI report, in which case gives the work location -- and this is something that, even if NIOSH comes across a case, it seems that they should review it and notify DOL as to whether or not that worker, in fact, was working at the covered facility.

Okay. I'm done but happy to answer questions.

CHAIR MUNN: Thank you very much, Bob. That's a thorough review.

DR. ANIGSTEIN: Excuse me, Wanda. I'm having a little trouble hearing you.

CHAIR MUNN: I was just thanking you for a very thorough report.

DR. ANIGSTEIN: Oh, thank you.

CHAIR MUNN: It's much appreciated.

Questions, comments?

MEMBER ZIEMER: This is Ziemer. I have a question, Bob, on the acute versus chronic definitions. I get what you're saying about the pulsed radiation that looks acute in the sense that the pulse time is very short. However, you have the issue of individuals being exposed, even though at a short, on a daily, for example, basis. So although there are bursts of radiation given, it's not like all their exposure for the year occurred in one day. It's still chronic in the sense of it being stretched out over the year.

My understanding of the way these biological sets are evaluated is that the chronic really applies to the case where you have repeated doses over an extended period of time. I'm not sure -- I may not be aware because I haven't dealt with accelerated radiation that much in terms of the pulsed stuff, and maybe John Poston can fill me in on that a little bit, but is that acute just because it's pulsed? And maybe, Jim Neton, you can help me on that.

MEMBER POSTON: I sort of have the

same concern. I was trying to listen carefully to what Bob was saying, but I don't think that's the way I would have looked at it. But I'll have to think about it a little bit more before I jump in.

DR. MAURO: This is John Mauro. I have a thought on this. I think the acute versus chronic issue goes to IREP and the way in which they calculate the Probability of Causation and the distinction that's made between when that particular dose is called acute and when it's called chronic. And there's a quantitative effect that comes out of that when you're doing IREP.

I don't have the answer, but I think the answer --

DR. NETON: John, you're right. Go ahead.

DR. MAURO: Okay. All I was going to say is I think the answer to this question lies there, that distinction --

DR. NETON: Well, it is, and it has

to do with the dose and dose rate effectiveness factor that's applied. And we typically pick the one that gives the higher Probability of Causation given in a certain exposure mode. And in the case of photons, it's better to be one way. In there case of neutrons, it's better to be the other way. And that gives you a higher PoC value. That's why it's done that way.

MEMBER ZIEMER: It really has to do with the calculation itself.

DR. NETON: Exactly.

MEMBER ZIEMER: Thanks for clarifying that.

DR. ANIGSTEIN: My thought would be that, first of all, with the neutrons, whatever it is, the neutron and the photon from the same source should be the same type of exposure. And my impression, and I would be pleased to be corrected, is that the acute usually gives you the higher PoC. It has greater effects. That's --

DR. NETON: That depends on whether

it's neutrons or photons.

DR. ANIGSTEIN: There's a difference with neutrons and photons?

DR. NETON: Yes, it is. It's the opposite.

DR. ANIGSTEIN: I see. Okay. That's why I said observation and not a finding because it's just a topic for discussion. We don't have a strong position on this.

CHAIR MUNN: Well, it's certainly a curiosity, and I appreciate the comments that have been made with respect to clearing that up. Common sense would follow Bob's rationale, but I can certainly see what you're saying, Jim.

MEMBER POSTON: It also goes back to what's happening to the observer, that is, the person being exposed. I mean, the badge that the person's wearing can't tell, you know, that they've been pulsed or a constant, because it looks like a constant if you're sitting out there with any kind of radiation detector. Unless it's very sensitive, you probably won't even see it

move in terms of when the beam is on and when the beam is off, so to speak.

CHAIR MUNN: Well, they're very rapid pulses, also.

MEMBER POSTON: Yeah.

CHAIR MUNN: So are we happy with -- can we accept then that the NIOSH approach in that regard is accurate, given the constraints under which those decisions must be made? It seems so to me.

MEMBER ZIEMER: Yeah, that seems fine. I had a question on the medical, also. I understand Bob's concern about checking the CATI, and I'll ask Jim Neton this question: don't we establish for a facility either, yes, they do annual X-rays or they don't? And if they do, you assign it for everybody regardless of what the CATI says, you give them a medical exposure?

DR. NETON: In general, yes. If it's decided that it's a medical X-ray that was administered, that will trump an individual case.

DR. ANIGSTEIN: Again, that's what we

made it an observation. We don't have a strong -- we're not coming down firmly.

MEMBER ZIEMER: Yeah, it's only if it's an individual does it apply to the medical X-ray. If it's decided that at GSI we would assign it, everybody gets that exposure assigned whether or not they remember having it, right?

CHAIR MUNN: Right, I believe.

MR. ALLEN: Hi, Paul, this is Dave Allen. I just wanted to say that, for what you're talking about, you're absolutely right. We do look at the CATI, but we look at the CATI, there's an overall for the site, because the policy of taking x rays as a condition of employment is generally not going to be a case-by-case decision that a site is going to make. They're going to make it for all the employees.

And it's not unusual for the CATI, for one person to say they were not taken and another person saying they were and many people to say they don't know. So we kind of look at them overall and see if there's a clear answer or if

we just don't know. And if we don't know, we assign them. So we wouldn't assign or not assign based on a single CATI, but we might use the CATIs overall as a decision point for the site.

DR. ANIGSTEIN: Okay, that's reasonable.

CHAIR MUNN: So this brings us to the big question with respect to the findings themselves. We have been given three specific findings. And, in my view, it's now appropriate for NIOSH to have an opportunity to respond to those in the appropriate fashion and the one to which we're accustomed, unless we can resolve any one of those three in discussion today.

What's your feeling, NIOSH? Can any one of these be resolved here in discussion, or do you need opportunity to report finally on all three?

MR. ALLEN: I think it might be worth discussing. I don't know if we can resolve them or not, but I think it's worth discussing today briefly.

CHAIR MUNN: Then let's do that.

MR. ALLEN: Okay.

CHAIR MUNN: It's your mic.

MR. ALLEN: Okay, Wanda. This is Dave Allen. Starting from the beginning there, Finding Number 1 was a finding that we had someone we assigned in the administrative category and Bob disagreed that it should have been administrative category and felt it should be radiography category.

I went back, I looked at that particular case, and, I mean, the job title was something like office manager for that, and I expect it got assigned based on job title. If you dig into the CATI like Bob did, you find out the office was actually within the production area. And from discussions we've held in the past, that should have been probably assigned as a radiographer.

And the question is, what do you do about that at this point? And, normally, it would be an error in an individual dose

reconstruction and then we'd decide how we're going to correct that error. In this particular case, that is, one of these people, it looks like they were not actually employed at that site. So I don't think, for the particular case, there's much we can do as far as correcting anything.

I don't know if anybody has any feelings on that or not.

CHAIR MUNN: Do we have a single case there?

MEMBER ZIEMER: As a matter of principle, you would agree that if the CATI did show that, then you have to take it into consideration and you have to go back and adjust the dose reconstruction, correct?

MR. ALLEN: Yeah. We always have the possibility of an error one way or another somewhere. In this particular one, as long as we're going to say that somebody working in the office, and the office was within the production area, and that should be radiographer dose, then, yeah, that would be an error in the case.

DR. ANIGSTEIN: Dave, I can't cite this on the phone, but if you look at the full report, towards the back, I believe, there was another case that we found, not one of the five cases that were assigned to us, where it was a GSI worker.

MR. ALLEN: Yeah, I did see that in your report, and I haven't had a chance to actually open up that particular one yet. But if that is the same situation, then the corrective action would be, you know, if someone has pointed out an error we've made, we would go back and contact Department of Labor and try to get that case back.

DR. ANIGSTEIN: Okay, Dave, you and I can communicate offline on that, if you wish.

DR. MAURO: This is John Mauro. This raises an interesting point, just a policy issue. When we're doing a case, as Bob has just described, and it turned out in this particular case it's a moot point because he didn't work there, do we find ourselves in a situation where

we should be looking at other -- this is a very nice example where we say it looks like this a place, appropriately, where there's discretion on the part of the dose reconstructor on where do we assign a person. There's many such situations where this had the discretion that needs to be made, and in this particular case we did not agree with the discretion and we gave our reasons.

When we're in a similar situation in other cases, for other PERs, should we be doing that? That is, does it add value where we would go say it looks like they made a judgment error here and let's go take a look at how widespread this error might be or if this is just one of a kind. I guess a little direction, if you hadn't already resolved this, I'd like to hear, you know, your position regarding this matter.

MR. ALLEN: I think that's a question for the Work Group, right, John?

DR. MAURO: Yes, I think it's for the Work Group and maybe the Board. You know, it's sort of like the scope of our PER role, that we

sort of go outside and say, listen, you know, we're going to look around a little further to see if this is a problem that may have implications to other cases at this facility. I guess this goes towards the Work Group.

MR. KATZ: John, I can weigh in on this. I mean, it's really hard to imagine -- I mean, it all depends, I think, on whether there's some reason to suspect that there may be a widespread problem, because we're not trying to -- we're not getting a statistical sample of cases for any of these PERs, and that's not even the point.

So I think were SC&A to be concerned that there may be a widespread problem, for whatever reason, I think the thing to do at that point is to state, to send a memo saying, "we've been reviewing this, you know, PER and we've come across this case and it has X problem with it, and we're concerned that this problem may be widespread and this is the reasons why we're concerned, and does NIOSH want to look at a

broader sample to see if this is a widespread problem," because it's not even necessarily SC&A that would go look and see if this is a widespread problem.

DR. ANIGSTEIN: This is Bob. We looked at all the PER, all the cases under the PER, and only found one other case where this problem occurred.

MR. KATZ: Okay. So in this case, but I'm trying to answer, I guess, John's -- thanks, Bob, that's helpful. So here it does sound like it wasn't a widespread problem. But were you to have concerns, I think the thing to do anyway is to state your concerns, send them in a memo, and then the Work Group or the Subcommittee or the Board can consider. So I think that's what to do.

DR. MAURO: Very good. And I appreciate that. Thank you.

CHAIR MUNN: And I think Ted is absolutely correct. In response to your earlier question, John, that question has been pondered

and has been discussed in at least two or three venues that I can think of in recent years, and in distant years as well. And my personal observation in that regard is, if you asked eight people that same question you'll get about ten different answers, and most of them having to do with the degree to which that individual is comfortable with the basic concept of professional judgment being exercised.

And as I said, it's been discussed widely, and I don't know of any resolution that has been proposed anywhere, except to try to make sure that every dose reconstructor does the same thing with every dose every time. And I have yet to be convinced, personally, that that is reasonable and acceptable.

But Ted's response with respect to if you think there's a problem we need to know about it is absolutely correct, from my perspective.

DR. MCKEEL: Chairman Munn, this is Dan McKeel. May I please make -- I know it's irregular, I know it's unusual, but I need to

correct a major mistake that's gotten on the record in the last few minutes.

CHAIR MUNN: If you would, go right ahead. Very briefly, Dan, please.

DR. MCKEEL: Very briefly. At the May meeting of this Subcommittee, I submitted a paper that contains letters from the Department of Labor, Rachel Leiton and John Vance, showing unequivocally that for PER-50 and PER-57 GSI, there were 15 cases that DOL acknowledges had the wrong employment. So that's 15 on the shortlist of 100 cases that were probably compensable. Now, that's not the same as just one case. And this is from the Department of Labor.

I also have to say that I'm shocked that nobody has brought up the fact that these cases, five cases, were selected by NIOSH. And three of the people didn't even work at GSI. And so a dose reconstruction done for them is inappropriate and it shouldn't be weighed in the kind of analysis you all are making.

How could it possibly be accurate --

for example, Granite City Steel didn't have any of the source terms, the same ones that they had at GSI. I think those three cases have to be thrown out and three more appropriate cases where people who worked at GSI have to be substituted.

That's all I need to say. Thank you.

CHAIR MUNN: Thank you.

MEMBER BEACH: Wanda, this is Josie. I have a question for NIOSH on part of what Dan said, that DOL identified 15 cases. Does DOL have some kind of a way that they say to NIOSH that there's an issue in that regard? If they're seeing something, is there any process in place, I guess is what I'm asking.

MR. HINNEFELD: This is Stu. You're asking is there a process in place if they see something about maybe they sent us a claim that shouldn't have had verified employment?

MEMBER BEACH: Or 15 that were listed as incorrect employment listed.

MR. HINNEFELD: My experience has been that if, once Labor sends us a claim, that

there's little -- I don't think we have a mechanism to kind of go back and check to make sure that they sent it to us correctly. What generally happens if they send us a claim that was incorrectly verified, employment was incorrectly verified, we'll work the dose reconstruction and send it back. And then, at times, when it goes to their final adjudication branch, they may find out at that time that the employment was incorrectly verified and they'll not proceed with the case at that time. At times, that might happen. That doesn't always happen.

MEMBER BEACH: Well, will that come back to NIOSH or --

MR. HINNEFELD: Well, no, if there's no verified employment, it won't come back. You mean will we hear?

MEMBER BEACH: Okay. So I'm not talking about non-verified employment. I'm talking about if a person is incorrectly labeled as an office worker when they should have been

labeled as something else. I think that's what Dan was referring to.

MR. HINNEFELD: I don't think Labor has a way to verify that.

DR. MCKEEL: No, Josie --

MR. KATZ: Josie, what Dan is referring to is people that didn't work at GSI but worked at the other facility.

MEMBER BEACH: Oh, okay.

DR. MCKEEL: Never worked at GSI.

(Simultaneous speaking.)

MEMBER BEACH: Okay, thanks.

CHAIR MUNN: Alright. Can we move on, then? Dave, we were speaking to findings.

MR. ALLEN: Okay. Moving on to Finding 2. Finding 2 we were using a tool we had that used some look-up tables, and, as such, it can only do full-year chronic intakes. And because of that, we were prorating partial years, essentially prorating the intake rate for partial years.

Bob mentioned that for that first

year, the 1952, he did some calculations and showed that our dose for the lung some 63-percent too high that first year. And that is true, but what I'd like to point out is the second year then, the doses, when you do this technique, the second year tends to be lower, second and subsequent. The total dose ends up being reasonably close pretty quickly.

In fact, after the second year, it's within about six percent of what you would get with the correct dates used. After five years, you're within about two percent, the total dose, with the two techniques.

And so the only way you're going to get that kind of 63 percent error that's associated really with the PoC is if somebody was diagnosed within a year of that initial exposure, and then the latency is going to be such an issue it's not really going to add anything to the PoC.

So I agree with Bob that, for cases that are very close to 50 percent, we probably should not have been using that little efficiency

method. And normally we wouldn't. I'm not sure how this one really did.

But I did go back to this particular case and ran it in the way you would normally run it. This particular case came out 50.88 percent. And when I re-ran it in IMBA, because it was prorated on the front end and the back end, it varied for some statistics. When I re-ran it and put the doses in the IREP, I ended up with a 50.66 instead of 50.88. It's not a huge difference there. And, like I said, the total doses tend to round that off to where it's an efficiency measure that has a little bit of inaccuracy, but it's not huge.

CHAIR MUNN: So how do we address that finding, then? And can you accept that, Bob, as being a reasonable explanation?

MR. ALLEN: Well, one more bit of information on that was -- no, I take that back. Never mind.

CHAIR MUNN: Oh, okay. Bob?

DR. ANIGSTEIN: We did look at the

entire run, looked at it both ways. Am I audible?

CHAIR MUNN: Barely.

MR. KATZ: Your other phone is better, Bob.

DR. ANIGSTEIN: Will do.

CHAIR MUNN: Much better.

DR. ANIGSTEIN: Okay. Yes, we did look at that, but always the question is there will be some close cases, so it may be two-tenths of a percent sometimes, you know. I heard anecdotally that somebody came out at 49.75 or something like that percent. So it does strike me as, that when it's close, when it's within one or two percent of the 50 percent, then it should be re-run. That's not too much of a burden, because most of them are either well above 50 or well below 50.

And, incidentally, when they are nowhere near 50, NIOSH does even more, doesn't even bother with the prorating. They just give it the full year's worth because they say it won't

make any difference, which is okay, as long as those are cases that are clearly very high or clearly very low.

So, we can't dictate NIOSH policy, but I would say to go the extra step for those very close cases because there could be cases where maybe when the diagnosis is early in the year I've notice they also give the full year's worth. I guess that just my personal inclination would be to do the more accurate method, particularly since it only needs to be employed in the minority of the cases, not all of them.

MR. ALLEN: This is Dave. I had to double-check before I spoke up again. As I mentioned, this was a tool that we had been using that could only do full-year intakes. And, for a number of reasons, it's much easier to run with this tool than with IMBA, which is why they tend to like to do that.

The piece of information you probably should know then is that the tool was updated not too long ago to where now we don't have to do

full-year intakes. We can do partial-year up to the date to where I think the problem itself, or the whole efficiency idea just went away with this, with the change to the tool.

DR. ANIGSTEIN: Yes. We ran IMBA -- Kathy Behling sort of helped me out with that -- and I was able to do -- according to the IMBA format, you can do ten different time periods. Somehow it didn't work, but she was able to do nine time periods in one run. So it doesn't seem like it should be --

MR. ALLEN: Yeah, you just have to stick each one individually and go through the whole thing, whereas with this other tool you just set the time period. It's quite a bit simpler.

DR. ANIGSTEIN: No, no, there's no question that this is simpler. I'm just recommending that, again, in those few cases it appears it comes very close to 50, like within a percentage point or so, NIOSH would consider, you know, re-doing the IMBA.

MR. ALLEN: And like I said, the reason for the efficiency was this tool wouldn't do that, and now, as of a few months ago, it does do that. So I think the whole -- I agree with your recommendation, but I think it's kind of moot now. We can actually do it for every case pretty easy now.

MR. KATZ: So it looks like, Wanda, this is one the Subcommittee can consider closing.

CHAIR MUNN: Yes, it is. That was to be my question. Are we satisfied that we understand what the issues are and they are, at this point, probably moot for future cases and this one can be closed or not? What's your feeling, Bob?

DR. ANIGSTEIN: Again, I would argue for -- I'm not quite sure I understood what Dave said. Is the methodology going to be different than in the cases we reviewed? Has the tool been changed?

MR. KATZ: Yes, Bob. What Dave said

is that the tool has been changed so it uses the procedure that it should have used but for the want for efficiency. So it's a moot issue.

DR. ANIGSTEIN: Oh, then it's closed.

MR. KATZ: Right.

CHAIR MUNN: That's good. Can we please make a note to that effect on the BRS?

MEMBER ZIEMER: I'd be willing to close this issue. I think we would like something in writing, since NIOSH, the official response somewhere in the system.

MR. ALLEN: You're talking about into the BRS?

MEMBER ZIEMER: However we want to do it.

DR. ANIGSTEIN: It would be easier if there was a memo --

MR. KATZ: Yeah, this is Ted. It would be better to have a piece of paper so that the Board can close out this review, too.

CHAIR MUNN: And so that it can, in effect -- if the paper itself could be used as

the closer attachment for this finding that would be helpful.

MR. ALLEN: Okay. And that's for all findings or just the --

CHAIR MUNN: No, we were only discussing Finding 2. We haven't actually gone through this specific exercise with Finding 1 and we haven't discussed Finding 3 yet. But we will, we will address those very shortly. This is for Finding 2 specifically, Dave.

MR. ALLEN: Okay.

MR. KATZ: Well, actually, but we do ultimately want paper on them all.

CHAIR MUNN: Yes, yes, we do, with the possible exception of Finding 3. That might not be necessary, given the fact that it is, effectively, a QA issue and doesn't impact this case. It seems to me we ought to be able to close that here if there's no objection.

Bob, is there any objection to closing Finding 3?

DR. ANIGSTEIN: I agree that it

doesn't even have to be re-run so long as NIOSH makes a note of the fact.

CHAIR MUNN: Good. If we could then, in fact, close Finding 3, which leaves us with Finding 1. The fact that the business of assigning job categories is problematic, and has been from the very outset, I don't know how much more we can say about that.

There is one thing that I might request. I would ask our NIOSH colleagues, for the sake of our public listening and concerns with these cases, could you please clarify the way we do case selection for our PERs and the focus that we place?

Dave, would you, or Jim, please, just very briefly go through the process that we exercise in order to select cases for SC&A to look at when we're reviewing a PER?

MR. HINNEFELD: Well, this is Stu. I guess I can take a shot at that.

CHAIR MUNN: If you would, please.

MR. HINNEFELD: Well, SC&A, when they

do the task 1, 2 and 3 review of the PER, generally, at that time they determine characteristics of cases that would be affected by the PER, and, therefore, it would be beneficial to see if those cases, you know, to take selection of one or two from the categories that are affected and review those cases.

And so the selection depends on what change the PER is supposed to cover. The characteristics may be a characteristic of a time period or a type of dose, like internal or neutron or something like that. And so based on whatever the characteristic is of the change that gave rise to the PER, that causes SC&A to decide, well, we should look at these categories of cases.

And so once they tell us the category, then, typically, well, they have to be described in criteria that we can search our database on, at least to a certain extent. And then sometimes it requires an actual eyes-on look at the case to see if it fits the criteria. We'll select the number that are asked for from each category and

provide them the claim numbers. And then, once they have the claim numbers, they have access to all the files and can do the reviews.

CHAIR MUNN: And they do the selection, correct?

MR. HINNEFELD: I think, in many cases, we select the cases.

CHAIR MUNN: You select the ones that are available.

MR. HINNEFELD: Well, they give us criteria.

CHAIR MUNN: Yes.

MR. HINNEFELD: And from those criteria --

CHAIR MUNN: They give you the criteria and tell you how many they want from --

MR. HINNEFELD: Yes, and I think we select them.

CHAIR MUNN: Right. And then provide them with the case numbers.

MR. HINNEFELD: Yes.

CHAIR MUNN: And they proceed from

there.

MR. HINNEFELD: Yes.

CHAIR MUNN: Now, with respect to PER 57, with Finding 1, there is a concern with respect to the selection of categories of workplace titles. We have not heard any discussion, that I'm aware of, that would resolve this concern once and for all, either here or in any other site of which I'm aware.

Is there anything else that anyone wants to say with regard to this dilemma that we face and whether or not we can pursue Finding 1 further than Bob has taken it?

DR. NETON: Wanda, this is Jim. I think this is a unique situation. We envisioned, when we created this administrative category, that there would be very few cases. And, in fact, there were very few cases. I don't know the exact number, but I want to say it's less than a handful.

CHAIR MUNN: Yeah, I don't remember more than three or four.

DR. ANIGSTEIN: This is Bob. There were exactly three cases.

DR. NETON: And so only three people out of the entire GSI site were assigned this administrative dose and all three have been looked at.

CHAIR MUNN: Yes.

DR. NETON: So I don't know that there's any more to do on this, other than --

(Simultaneous speaking.)

DR. NETON: Right. I don't know if there's anything more to do other than review the three cases again against SC&A comments and correct the one or so that may require to be modified based on a new interpretation. We've looked at the entire universe of cases.

CHAIR MUNN: I personally can see no profitable way to pursue this. I don't see that we can any further resolution of the question than we have now. I'm just asking, am I overlooking something? Is there some other avenue of resolution that we can pursue that we

have not considered?

MEMBER ZIEMER: Well, I think we have the resolution, and that is NIOSH is reviewing the case that brought up the issue, and the other two cases. If that's being done, I'm willing to close the finding.

MR. KATZ: In my notes, you actually did close it already.

MEMBER ZIEMER: Well, okay.

CHAIR MUNN: Well, we had left that impression, but nobody said the words, that I was aware of.

MR. KATZ: Okay. Because I normally don't write it down until you do, but okay.

CHAIR MUNN: Okay. Josie, do you see any further action that needs to be taken?

MEMBER BEACH: No, I don't at this time.

CHAIR MUNN: Does anyone else have any comment with regard to Finding 1? If not, then we will recommend that we close this finding, that it's been pursued to the best of our ability,

and it's now closed. Do I have three votes yes?

MEMBER ZIEMER: Yes.

MEMBER POSTON: Yes.

MEMBER BEACH: Yes.

CHAIR MUNN: Very good. Then let's make one final question, whether there is anything further that we can say or should say with respect to GSI and this particular PER.

MEMBER ZIEMER: Well, let me ask a question for clarity. It's related to the issue that Dr. McKeel raised. How many of the reviewed cases, Bob, that you had were not actually ones that were at GSI in either the normal period or in the residual period?

CHAIR MUNN: I'm sorry. How many what, Paul?

MEMBER ZIEMER: How many cases that were reviewed by SC&A were actually not employed at GSI?

DR. ANIGSTEIN: Three out of the five cases were not at GSI.

MEMBER ZIEMER: So they were people

who we did a dose reconstruction on that actually were never exposed, correct?

DR. ANIGSTEIN: Yes, there were three cases, out of five cases that were selected by NIOSH for SC&A review, three were not GSI employees and they did not fall under EEOICPA.

MEMBER ZIEMER: But Labor still considers them to be GSI employees or not?

DR. ANIGSTEIN: Well, I think what happened was that they were -- I traced that. When the initial dose reconstruction was done on those cases back in summer of 2007, and, at that point, that's when we first got acquainted with GSI and I think John Mauro, either he met, I think, Dr. McKeel or John Ramspott, and, at that time, there was a belief and understanding that Granite City Steel and GSI were synonymous.

And then in November of 2007, DOL issued a circular outlining that, no, these are two different facilities. And the problem was that, by the time they were doing the dose reconstruction, the GSI site had been purchased

by Granite City Steel, which then became acquired by, I think, National Steel and a whole sequence of things. So it was understandable that that mistake would have been made initially.

MEMBER ZIEMER: Those individuals who weren't really GSI employees still remained in the system, though, for dose reconstruction, and have been carried along all this time?

MR. ALLEN: Paul, this is Dave Allen. Can I say something on that?

MEMBER ZIEMER: You bet.

MR. ALLEN: You've got to remember this is PER. It's kind of a different mode than normal here. And these primarily were cases that were sent to us as GSI employment, we did dose reconstructions, sent them back to DOL, and they finalized the case long before all this happened.

So it's a completed case in the past. And then we do a PER and we're looking at all completed cases from the past. When DOL changes their mind on that employment and it's not an active case here at NIOSH, they don't necessarily

update us. In fact, they usually don't update us. So we don't really have any way of knowing that they decided to change their mind on a particular case. When we did the PER, we did it for all previously completed cases, sent it off to them and --

MEMBER ZIEMER: Got you. And maybe just to follow up on Dr. McKeel's request, but should we, in fact -- we really only have two cases that were valid cases to do when we originally thought there should be five. Is that correct?

CHAIR MUNN: That's my understanding.

MR. KATZ: Well, I mean, Paul, if you recall, the discussion when this came up initially is, I think the point was that the characteristics really doesn't matter. You're not using personnel dosimetry in the first place.

MEMBER ZIEMER: Okay. Just checking the methodology.

MR. KATZ: You're checking the methodology, and whether they actually were there

or not doesn't actually impact checking the methodology.

MEMBER ZIEMER: Got you, okay.

MR. RAMSPOTT: Wanda, this is John Ramspott. Could I make a quick comment?

CHAIR MUNN: Very quickly, John.

MR. RAMSPOTT: Very brief.

CHAIR MUNN: Yes.

MR. RAMSPOTT: This exact point that Ted's making, if you think about it, three people that didn't work at GSI had dose reconstructions. They were going to do five. That means three valid GSI workers were essentially shorted or left out of due process under this program, and the Work Group was shorted valid information that they can make judgment on because if the three people who worked at GSI really worked at GSI, let's say three other workers, if their information was used, you may have found something else that was flawed. That opportunity was taken away by doing Granite City workers instead of General Steel. So, essentially

everybody got shorted by this. And I'm not blaming NIOSH because I have worked with DOL and helped them correct some of this recently.

MR. KATZ: Okay. John, this is Ted. I'm not sure what you mean by shorted but --

MR. RAMSPOTT: GSI workers did not get an opportunity to have their claims reviewed for accuracy.

MR. KATZ: John, that's not what this is. This is not an opportunity for GSI workers to have their individual claims reviewed. This is not a QA process of a management system, you know, internal, that would do something like that.

The point of this is to test to see if the approaches used, the new methods used, are implemented correctly. And it's not to sort of reverse an individual case that occurred or what have you. That's not why we do these. So it's not a shortcoming for a GSI worker who didn't have his case reviewed, or her, because that's not really the point of this in the first place.

I mean, really, this is not a public comment session. We did have Dan comment, and now you've commented. But we don't have a public comment session for this Subcommittee, and it's really not right in terms of proper process to institute one on the fly like this. So we've let this go for now, but I'll leave it at that.

MR. RAMSPOTT: I appreciate the opportunity, and thank you.

CHAIR MUNN: Thank you, John. But I do want to underscore before we leave, again, there appears to be a misunderstanding with regard to the purpose of what we're doing. Ted just said so, but I'd like to underscore it again.

The purpose of these PER reviews is not to re-review any individual dose reconstruction. That's not the point. We're looking at systematic program processes here. And that's why these cases, even though they are not the group of employees that you have primary concern with, are not being shorted in any way. Nobody is being denied anything here because we

are not looking at individual cases. We are not re-doing individual dose constructions for the purpose of addressing that dose reconstruction. We're looking at process. And that requirement has been satisfied by the process that we've just gone through here now.

So, thank you both for your interest and your concern. It's appreciated.

That being said, is there any other concern with regard to our closing Finding Number 1? If not, then we will do so, with the caveat that we get appropriate statements in that regard from NIOSH. Finding 1 and Finding 2.

Is there any other comment with regard to Bob's presentation or to this PER?

DR. MAURO: This is John Mauro. I do have one. One of the observations, unless I missed it, had to do with this correlation between the dose distribution and the dose conversion factor distribution, and the product of the two being correlated or uncorrelated. Was that discussed to the point where it's been

resolved? Because I see that as a technical issue, and that applies not only here but across the Board. And the fact that they're stochastically independent, and, therefore, should be randomly sampled and not correlated, I think that might be important.

MR. ALLEN: John, this is Dave Allen. I think I can answer that one pretty quick.

DR. MAURO: Thanks.

MR. ALLEN: We looked at that one. It was done on the photon. It wasn't done on the other doses. And it's in a tool that we put together to try to take all these different things and put them all together for individual cases. And that was just flat-out a mistake, is what it amounts to. It should not have been done that way, and we're correcting the tool. And because of the Work Group findings, et cetera, were in the process of revising the appendix. And so we'll correct the tool and then we'll be PER'ing things again for the next revision, and that will be a piece of that.

DR. MAURO: Thank you.

CHAIR MUNN: Thank you, all. Is there any other item that we need to address before we go quickly to the subtask reports on the four remaining PERs? If not, then let's do that. Kathy, are you up?

MS. K. BEHLING: Yes. I'm going to ask, is Ron Buchanan still on the line?

DR. BUCHANAN: Yes, I'm still here.

PER 0055

MS. K. BEHLING: Do you want to do PER 55?

DR. BUCHANAN: Yes. If you can bring up the paper on it, I'll start in that.

MS. K. BEHLING: Should I try again?

DR. BUCHANAN: Or Rose can, whoever has got control there. I don't have control.

MR. KATZ: Rose, can you do that?

MS. GOGLIOTTI: Yes, I'll pull it up right here.

MR. KATZ: Thank you so much.

DR. ANIGSTEIN: Hello?

CHAIR MUNN: Hello?

DR. ANIGSTEIN: Hello?

MR. KATZ: Bob, that's you. That's Bob speaking.

DR. ANIGSTEIN: Oh, my phone, my phone just rang.

MR. KATZ: No, I understand.

DR. ANIGSTEIN: Okay. I'm going to sign off, unless there's on GSI.

MR. KATZ: Yes, that's fine. Thanks. Thanks, Bob.

DR. ANIGSTEIN: Thank you.

DR. BUCHANAN: Okay. While she's pulling that up, I can just give you a little bit of background. PER-55 was for TBD-6000 changes, and there were some changes in both the internal and external doses there. And so they were reworked, and we selected two cases. Unfortunately, there wasn't a whole lot of cases that fit the requirements that we put forth. NIOSH came back with two cases. The last one was fairly simple, and the first one was more

complex, in that this one was, the first case was reworked, and that was less than 50 percent in the old DR back in about '07. And then when it was reworked under PER-55, the PoC was greater than 50 percent.

However, there was some confusing things that occurred on this. And I remember what they are, so while she's pulling it up, I'll say that. There wasn't any entry into the system after about 2008, 2009. This case was reworked under PER-55, and the PoC changed. And so we, you know, couldn't find a new DR on essentially what has happened on this.

And so we looked at the information that was given to us by NIOSH with the case. And if you'd go down to that first case there, Rose, it will show that this worker, that the case we did work on worked at, I think, Huntington Aluminum, or something like that, an AWE facility, in the late '50s, early '60s. Okay. Keep on going down there. Okay, go on down some more.

MS. GOGLIOTTI: Sorry. There's a little bit of a delay here.

DR. BUCHANAN: Okay. So the worker worked there at the Hunter Douglas in California. Okay, stop right there. And in the '50s and '60s, the initial DR was in 2007, and it was less than 50 percent. And then due to the revisions in TBD-6000, PER-55 reworked it. And we see Table 2-1 there is just exactly what we want to look at this time, and we can see that the original dose was around in the high 30s total rems, and the PoC was in the high 20s.

We see that it was reworked. And in the file, like I said, there wasn't a final DR in the files, and so there was some papers with it, some in the file that we were forwarded. And we see it was reworked under PER-55 using clerical values, or it could've been environmental values. And, again, just like we talked previously, it could have been either way, either as the clerical, like in management office or something, or just an environmental dose. So they worked

it both ways, which was good.

However, you see in that table, because some of the values went up, some of the values went down in the tables, we see that the external dose decreased. However, that's not really true. The original dose was misprinted. It should have been in rems, and that's actually millirems. And so that's divided by a factor of a thousand. So the dose went up a little bit in the clerical value.

Environmental value was very small, less than one millirem. And we see that the external dose went down a little bit in both cases, and the internal dose went down a little bit in both cases.

MR. KATZ: I'm sorry to interrupt, but someone is, I think, typing close to their mic or doing something making this knocking sound that's making it hard to follow Ron. So I guess everyone else, if you would mute your mics, maybe that will take care of the problem. It's stopped now, which makes me think it's true.

So mute your mics, please, everyone, but for Ron. And it's a star 6 to mute your mic, if you don't have a mute button. Thanks.

DR. BUCHANAN: Okay. So we're at the point that when we compare the last two lines in Table 2-1, we see that the high 30 rems produced a PoC in the high 20s, but then on the rework for clerical we see that a lesser dose, low 30s, produced a PoC over 50 percent. And then if you look at the environmental, which you'd suspect to be low 30s, we see that the PoC is almost 60 percent.

So this did not add up, and so we looked at this case. First of all, it wasn't re-done right, and, secondly, what we see here. And we can go down to the next page, I think, Rose. And, yeah, keep going there.

And so we used the clerical values in TBD-6000. We duplicated NIOSH's effort, and we came up with similar doses. And so we can keep on going down there, and we can go down to the next page. And then we also used an

environmental values. And you can keep on going there. Okay, so let's stop there at 2.2.4.

So we investigated why the PoC increased as the dose decreased. And so what we found out was, number one, it looks like that perhaps, we can't verify this, but it looks like maybe the clerical and environmental PoCs were switched on the file that we received, because it didn't make any sense that the PoC had increased with decreased dose.

And so I think that might have been what happened there, and NIOSH can look into this in a minute. And then explained why the PoC increased so much when the dose decreased when it's reworked under PER-55. And what we found out was that the distribution for the internal dose was changed from a constant to a lognormal distribution.

And so, before, when you had a higher dose you put in as a constant, the PoC came out in the low 50 percent. When you put a lower dose with a log-normal distribution, it comes out

greater than 50 percent. So I went back and reworked it even using the old doses with a log-normal distribution, and it came out over 50 percent.

So, that's the difference. So this person's decision was changed from less than 50 percent to more than 50 percent mainly on the distribution rather than the doses that were assigned. However, we found that, you know, it was done correctly and that they followed the PER-55 okay and we had no issues with that. It's just that the paperwork, paper trail, and why there wasn't a DR we could refer to, was the issue on this.

So you'll want to go down a page.

MR. KATZ: And while you're doing that, Ron, can I ask, did you check with NIOSH and ask why they did not send you the final DR if you never received it?

DR. BUCHANAN: Well, it wasn't even in the NOCTS files.

MR. KATZ: No, I understand. But, I

mean, did you call someone at NIOSH to find out why this was missing?

DR. BUCHANAN: No, I didn't.

MR. KATZ: Oh, okay. I mean, in the future, that would be the thing to do.

DR. BUCHANAN: Okay.

MR. KATZ: Thanks.

DR. BUCHANAN: Okay. So I'll go ahead and do the second case and then a summary, and then if NIOSH wants to respond they can.

The second case was a worker that worked at B&T Metals in the '40s and '50s. And in this case, there was two cancers, and these were reworked. And we can go down a page to Table 3-1 there. Back up a little bit. Okay. Table 3-1 there, we see that reworking caused the external dose to go down a little bit. And the medical dose wasn't applicable at this site. And internal dose stayed the same.

So this gave us a total dose of 0.028 and 0.024. In the reworked case it went from 0.2 percent to less than 0.2 percent. So while they

did it correctly, it wasn't too informative to test the application of PER-55. However, there wasn't many cases that was available to meet these criteria that we need to test, and so we ended up with two cases, one that we couldn't find the DR on and one that worked out okay but didn't really test the PER-55 very well.

So we want to go down to the summary there. Okay. So we see, since that's what I said, that we have one case that changed the PoC above 50 percent, mainly because of the distribution, and the other one there wasn't much change in it. And so we agree with the way they reworked it. We just couldn't find the paperwork on the first case.

So that concludes my presentation. And I don't know if NIOSH wants to respond to any of that or not.

CHAIR MUNN: I certainly hope so. There's a great deal there.

DR. BUCHANAN: Yeah, we don't know which one, whether the clerical or the

environmental, were used in the final dose reconstruction on the first case. Either way, the results come out the same, but we don't know which one was used.

MS. K. BEHLING: This is Kathy Behling. One of the things -- David Allen, if you're still on the line, please just interrupt me. But one of the things that NIOSH, they don't always go back and do a formal dose reconstruction rework. They will go in and do back of the -- not even back of the envelope. They go in, they look at what the critical aspects were, recalculate the PoC. And if there's no need to rework it, although in this case it, obviously, you know, was compensated, so they would have to rework it.

But I guess the other question that I do have is, why was the initial DR done with a constant, as opposed to a log-normal? And are there other cases out there that might be impacted by that distribution?

CHAIR MUNN: Especially with a

difference of that magnitude.

MS. K. BEHLING: Exactly.

CHAIR MUNN: The difference of the calculations is what was startling to me, not that there was a change. But that there was a change of that magnitude is staggering.

DR. MAURO: This is John. I'd like to add to that, also. You know, as I recall, the main reason why we went through this process is OTIB-0070 dealing with the residual period was the major change that triggered the PER. There may have been others, but that ended up being the driver. And in the process of doing this, we tripped over this constant versus lognormal issue.

So I just want to point out that it was almost just happenstance that NIOSH and SC&A saw this change, which, Wanda, your reaction is the same as mine. My goodness, we went from 27 percent to over 50 percent just because we went from a constant to a lognormal. And I think that's important, even though it has nothing to

do with the PER.

CHAIR MUNN: Well, no, but it's astonishing, nevertheless.

DR. MAURO: Yes.

CHAIR MUNN: I don't recall having seen such an extreme difference.

DR. MAURO: Me too.

CHAIR MUNN: So I'm wondering what happened, essentially. It had to be more involved than just, it seems to me -- but I don't know what that is. I haven't heard anything that would be.

MR. KATZ: Is Dave Allen on the line?

CHAIR MUNN: It doesn't sound like it.

MR. HINNEFELD: Hey, Jim, are you there?

DR. NETON: Yeah, I'm here. I can't explain why it was used as a constant in the first pass. If this was a TBD-6000 case, the reason it went over 50 is because the GSD on all those TBD-6000 numbers is five. So that would clearly explain the difference, but I don't know why it

was done as a constant on the first pass, whether it was just a flat-out mistake or what. I can't answer. We'd have to research it. But this was a TBD-6000 case, is it not?

CHAIR MUNN: Yes, it was.

DR. NETON: Yes, yes. So, clearly, the GSD of five applies to almost all the values in those tables. So I can't explain that, other than an error. But we need to research that and find out more.

CHAIR MUNN: Yeah, we'll look forward to a response.

Anyone else have any questions or comments that we've not already addressed? I hear a voice in the background. I'm not getting -- that must be background --

MR. KATZ: It's not addressed to us, Wanda. Someone has their phone off mute.

CHAIR MUNN: Alright, very good. Then we'll expect a response from NIOSH.

At this juncture, I'll have to inquire, is there anyone who has to leave us,

other than Dave? It sounds like we already lost Dave.

MEMBER BEACH: Wanda, it's Josie. I'm going to leave soon. They're closing down Hanford and where I'm working. I don't want to get locked in.

CHAIR MUNN: Well, gosh, there's just a little snow out there, Josie.

MEMBER BEACH: They're shutting the whole site down.

CHAIR MUNN: Yeah, I know. We've got schools and everything else closed here. Do we have a few minutes to devote to administrative detail before we go?

MEMBER BEACH: Yes.

CHAIR MUNN: And let us suggest that the other three Subtask 4 reports, which we have had an opportunity to peruse briefly on the O: drive but haven't yet heard, will be carried over for our next meeting.

Administrative Detail - Routine Note of Abeyance Items Ready for Closing

CHAIR MUNN: Quickly, administrative detail. Lori, do you have any abeyance items that are now ready for closing for us that we should be looking at today?

MS. MARION-MOSS: Briefly, I wanted to bring the Committee's attention to OTIB-PR-3. SC&A had an opportunity to look at it. This is a finding that they updated the BRS and recommended closure of this pretty old finding.

CHAIR MUNN: Do we have anything new on it than just look at it now and agree to close it?

MS. MARION-MOSS: Yes.

CHAIR MUNN: Has SC&A -- this is just NIOSH's response to SC&A findings that it's ready to close.

MS. MARION-MOSS: SC&A hasn't made an entry into the BRS recently as they looked at that older finding.

MR. KATZ: Okay. But that sounds

like that's one we need to take up at the next meeting.

CHAIR MUNN: It does, yeah. Are there others like it, Lori?

MS. MARION-MOSS: That's the only one I have for now.

CHAIR MUNN: Okay. If you would be good enough to send that to the Subcommittee in an email to give us a note telling us what that is, I will put it on the agenda for next time.

MS. MARION-MOSS: I sure will.

CHAIR MUNN: Thank you much.

Administrative Detail - Status of Case Selection and Recommendations

CHAIR MUNN: SC&A, the status of case selections and recommendations, anything that we need to know that you haven't already told us one way or another?

MS. K. BEHLING: This is Kathy. I did send you a memo that lists newly-issued PERs and technical guidance documents, along with our recommendations. There were three new PERs, and

there was an OTIB and a report that have been issued. And I don't know if you have the time to go through those or if you just want to review those separately and make a decision as to whether you agree with our recommendation.

CHAIR MUNN: Well, let me ask our colleagues here. Paul and Josie, have you had an opportunity to take a look at those items that Kathy has sent to us?

MEMBER BEACH: Yes, Wanda, I have.

CHAIR MUNN: I was ready to accept all of their recommendations.

MEMBER BEACH: So was I, actually.

CHAIR MUNN: Paul?

MEMBER ZIEMER: Well, I didn't go through that in detail. I just skimmed through them. It looked reasonable, but I thought maybe we were going to discuss them. Are there any in there that are low priority -- I'm sort of wondering about the tasking level. And, Ted, you can help us, too. Are we in a position to where we can task --

MR. KATZ: Yeah, we're not in a position to task. We're in a position to recommend to the Board. Normally, the way we do this is we have NIOSH respond to the recommendations, because sometimes that's very clarifying as to whether something should be tasked or not at this point, and we haven't done that either.

CHAIR MUNN: It is, and normally we do have an opportunity to go through them item-by-item so that we can discuss any clear additional items that we're not aware of that NIOSH might have additional information on. But we haven't been able to do that.

My question is, how shall we proceed? What would you prefer to do? I would really prefer to have a presentation on each of them.

MR. KATZ: We could do that at the next meeting.

CHAIR MUNN: We've run out of time here. But if that's alright with all concerned, we'll carry those forward and --

MR. HINNEFELD: This is Stu Hinnefeld. Do you want our response or our reaction to the recommendations before then?

CHAIR MUNN: Well, if you have one ready right now, sure, we can --

MR. HINNEFELD: Well, I don't have one ready now but I'm --

MR. KATZ: Yeah, Stu, just at the meeting.

MR. HINNEFELD: You don't want it in advance?

MR. KATZ: Yeah, you don't need to send a paper response, but just be ready to address those at the meeting.

MR. HINNEFELD: Okay. And, Kathy, what date did you send those?

MS. K. BEHLING: The date is the 28th of December.

MR. HINNEFELD: Okay.

MS. K. BEHLING: I can resend, if you'd like.

MR. HINNEFELD: Actually, it would be

helpful probably if you'd resend them to me.

CHAIR MUNN: Okay, very good. Then we'll all be on notice that this will be at next time. Is there anything else for the good of the order?

MEMBER BEACH: Do you want to try to schedule the next meeting?

CHAIR MUNN: We need to have an opportunity to evaluate just a little better what we have, what we have on our plate, and what we don't.

MR. KATZ: And part of that is how quickly NIOSH can be ready with responses for the things we're waiting for.

CHAIR MUNN: Right. So we're going to do a little offline communication with respect to what we are looking for. And then, Ted, can I rely on you to let us know after you've seen it and have a little better listing of what we know we're going to have to see next time?

MR. KATZ: Right. Well, we have the items we didn't get to today and the ones we just

discussed. So if NIOSH will send us a note with their sense of when they'd be ready to respond to the findings that were outstanding today that they've really just received recently on these PERs, then we'll go from there.

CHAIR MUNN: I think that's great. Then Ted can send us a choice of dates, and we'll move forward in that direction.

Adjourn

CHAIR MUNN: Anything else? If not, then try to stay warm, if you can, no matter where you are. And we are adjourned.

(Whereupon, the above-entitled matter went off the record at 4:06 p.m.)

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