U.S. Department of Health and Human Services
Centers for Disease Control
National Institute for Occupational Safety and Health
Advisory Board on Radiation and Worker Health
Subcommittee for Dose Reconstruction Reviews
Wednesday, January 19, 2022

The Work Group convened via Videoconference, at 10:30 a.m. EST, David Kotelchuck, Chair, presiding.

Members Present:

David Kotelchuck, Chair
Josie Beach, Member
Bradley P. Clawson, Member
James E. Lockey, Member
Loretta R. Valerio, Member

Also Present:

Rashaun Roberts, Designated Federal Official
Nancy Adams, NIOSH Contractor
Dave Allen, DCAS
Bob Barton, SC&A
Kathy Behling, SC&A
Finn Black, SC&A
Ron Buchanan, SC&A
Liz Brackett, ORAU Team
Grady Calhoun, DCAS
Rosanna Gogliotti, SC&A
Michael Rafky, HHS
Scott Siebert, ORAU Team
Matt Smith, ORAU Team

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Proceedings

(10:30 a.m.)

Welcome and Roll Call

Dr. Roberts: Okay. I do have 10:30 a.m. Eastern, so I will go ahead and get started, if everyone can hear me okay. So, good morning, everybody. And, first things first, Happy New Year. I'm Rashaun Roberts and I'm the Designated Federal Official for the Advisory Board on Radiation and Worker Health. And this, of course, is a meeting of the Board Subcommittee on Dose Reconstruction Review.

There is an agenda for today. You can find it on the NIOSH website under scheduled meetings for January 2022.

And with that behind us, it's time for roll call. Now, since the Subcommittee will be discussing dose reconstruction cases pertaining to specific sites today, members and others do need to acknowledge -- hello?

Okay. We need for people to put their phone on mute, please. We can hear some conversation in the background.

Okay. So, Members and others do need to acknowledge conflicts of interest, and to recuse themselves from the discussion where that conflict might be present. So as we move through the roll call, please state your conflicts.

(Roll call.)

Dr. Roberts: All right. Let's circle back around to Dave. Have you joined us or able to speak at this point?

Member Valerio: Rashaun, this is Loretta. I can hear Dave in the background. He says he's have trouble with the audio.

Dr. Roberts: Okay. And he's left a note here, so he's going to call the bridge line. Oh, that's a message from Nancy to Dave. So, Loretta, you said you can hear him?

Member Valerio: I can hear him. I can hear him on Skype.

Dr. Roberts: Okay. Yeah, he's going to need to call the bridge line. And we're going to need to wait until he can get on, so we'll take a pause.

(Whereupon, the above-entitled matter went off the record at 10:37 a.m. and resumed at 10:44 a.m.)

Dr. Roberts: And we're actually ready to go ahead and get started with you joining us.

Chair Kotelchuck: Very good. Very good. Thank you.

Dr. Roberts: Great. So let me just remind everybody before you get started, Dave, that to keep things running smoothly today, just make sure that if you're not speaking, you're on mute. And that is if you don't have a mute button, it's *6 to mute. If you need to take yourself off, press *6 again. And, again, the agenda can be found on the NIOSH DCAS website under January 2022. Okay. And with that, I'll turn the meeting over to you, Dave.

Chair Kotelchuck: Okay. Thank you very much, Rashaun. I'm terribly sorry, folks, that I am coming in late. I had some trouble connecting. And to tell the other folks, my computer crashed late Friday afternoon and -- my CDC computer. So I can't look at the data that Rose sent down. With that, however, Rose is going to give me a little extra help today. And

I think thing will work. I hope so.

The first case we're going to talk about is Nevada Test Site, and that is the 564 Observation 1. All right.

Review Cases from Set 29

Ms. Gogliotti: Okay. Great. This is the same PowerPoint that we went over at our September meeting, but we did not get to the type 2 issues during that meeting, so this is the continuation of that discussion.

So we will start with Tab 564 Observation 1 which, as Dave said, is an NTS case. And this is kind of an interesting observation. Here, I think this is the first case that we've seen where a whole body count was done offsite at an uncovered facility during a covered employment period.

And here, the whole body count was negative, but it's unclear to us how to treat this whole body count had it been positive. We know that there's clear guidance for medical x-rays that were done offsite, but unlike a medical x-ray that actually is causing exposure, the whole body count is really only quantifying intake that's already occurred.

So unlike -- or unless this source term was really sufficiently different between the offsite uncovered facility and the covered facility, there's not really a clear way to differentiate where the exposure occurred. So, at least in our opinion, we must assume that 100 percent of the exposure was at a covered facility if you can't differentiate that. But we're really unaware of any guidance that documents that process.

And so we thought it was an important to bring to the subcommittee's attention. And that's why this is an observation, not a finding because there's

procedurally nothing out there that we're aware of, but we thought it was important to bring up.

Chair Kotelchuck: Right. Pardon my --

Ms. Gogliotti: And NIOSH responded saying that at the time this claim was completed, there wasn't sufficient data to evaluate these offsite whole body counts. However, in a recent data capture, they did obtain enough documentation for whole body counts that were done at this particular site, EMSL Las Vegas, which is Environmental Monitoring Systems Lab Las Vegas.

And NIOSH in the process of incorporating that data to develop methods for evaluating these whole body count results both positive and negative. And they go on to say that the use of any internal monitoring that occurs after potential exposure can be used if there's enough information to interpret the results. And they intend to discuss this with future dose reconstructors as well as add guidance to OTIB-60 to address this situation.

Chair Kotelchuck: So that would appear to resolve it.

Ms. Gogliotti: Yes. But we're really curious what additional discussion they're adding to OTIB-60, and we would just appreciate being more aware of what exactly they're adding to OTIB-60.

Chair Kotelchuck: Right. Would this be done through technical -- would this be done through a technical conversation? Or do you think it should come back to the subcommittee? Or do subcommittee members think it should come back to us?

Ms. Gogliotti: Well, I don't know if NIOSH is prepared to comment on this now, or -- I'm sure that they don't have a response developed for OTIB-60 --

Mr. Siebert: Yeah, this --

Ms. Gogliotti: -- at this point in time.

Mr. Siebert: Yeah. This is Scott. I can do that.

Chair Kotelchuck: Good.

Mr. Siebert: Basically because this is an OTIB-60 issue, we're going to be adding guidance, very specific basically to this information saying that if we do have in vivo counts regardless of where the count was performed and we have enough information to interpret it, we will use that data in the dose reconstruction even if it is outside the employment period because it could have limiting effects. I don't know if you want any more specifics than that, but that's, I mean basically adding stuff to say exactly what we've just been discussing.

Chair Kotelchuck: Right, right.

Ms. Gogliotti: Okay.

Member Beach: This is Josie. Dave, is there a timeline for when that is going to be redone, OTIB-60, or when it's up for review?

Mr. Siebert: We're actually in -- yeah, we're in the midst of -- this is Scot again. We're in the midst of updating it right now. It's part of the revision that we're working on right now. So as soon as this revision goes out, it will be in there. Liz is on the call, Liz Brackett, I just want to have her verify that that's the case. But I believe it's already in process.

Ms. Brackett: Yes. Although, you know, it will be incorporating a couple of years' worth of updates. So it's not the only thing that will be included in there. So it's still a little bit of time before it comes out. But I don't have it open in front of me, I can't remember

if I already added words for this. But it will be in there.

And I just wanted to clarify, part of this, this body count, this specific one for NTS, I believe it was done during the employment period at NTS, and it wasn't a matter of a person going to another site and working there. It was a matter of NTS using that body count, they're sending somebody there to do a body count for work at NTS. And that's no different than collecting a urine sample and sending it to an offsite lab. That still counts. So this particular whole body count falls into that category. So that will be clarified in the OTIB also.

Chair Kotelchuck: Right. Right. I'm not quite -- I don't see the need to come back to this by the subcommittee. But do others think differently?

Member Clawson: Dave, can you hear me?

Chair Kotelchuck: Yes, I can, Brad.

Member Clawson: I would just like have an update back on this so if we see this at different sites or whatever else like that. I'd just like know that it's put in to OTIB-60. And it'd just be a refresher for me, is what I would like, Dave. I just would like to know that it's in there, because a lot of these changes happen and stuff with that, and it changes the dose reconstructions a little bit and stuff like that. I would just like to know that it is in there and that we've addressed the issue.

Chair Kotelchuck: Well, could we ask the NIOSH folks to just report back to us, then, when it's done?

Member Beach: Well, Dave, this is Josie. I made a note for the Procedures Subcommittee. And Rose is, of course, on that Subcommittee.

Chair Kotelchuck: Right.

Member Beach: So it will get reviewed by us. Rose, can you answer if the Subcommittee for Dose Reconstruction will review it also, or will it just be reverted and reviewed in the Procedure Subcommittee?

Ms. Gogliotti: I don't think there's a reason for it to come back to our committee, unless you want us to evaluate the specific issue included in the new update.

I would recommend, however -- at the last meeting you asked us to start tracking specifically what documents we're committed to changing, and then following up on that in the future. So I would suggest we tabulate that or mark that down here. And then, also, Josie, you keep track of this and make sure that when this revision is issued, if you're interested in us reviewing it further, that we do get tasked to do that.

Member Beach: Well, it sounds like there might be a lot of changes, so it might be one that we do, you know, just a look at to see what changed. So, okay, I'll track it also.

Chair Kotelchuck: Yeah. Could you do that, Josie? In other words, you'll just give us a look-back when it's done.

Member Beach: Yeah.

Ms. Behling: And this is Kathy Behling. Also, Josie, yeah, this is something that would certainly come to your attention once this OTIB is revised. Definitely would be coming to the subcommittee and we'll make sure that happens.

Chair Kotelchuck: Okay, fine. That's good. All right.

Member Beach: I think --

Chair Kotelchuck: And then I think back to --

Member Beach: Yeah, Dave, this is Josie again.

Chair Kotelchuck: Go ahead.

Member Beach: I think there's another one that we'll talk about later on, OTIB-49, that'll under fall under this same category. So I'll be tracking all of these as much as I can.

Chair Kotelchuck: Okay, great. And that's appreciated because I understand Brad's concern that things happen and we don't know that they happen. Although, we believe that they will or they have been. But it would be nice to find out. So thank you for doing that. And I think that would mean that we would close -- formally speaking, we will close this observation. Correct, folks? Okay, we'll close it here.

Member Beach: Okay.

Chair Kotelchuck: Members, subcommittee members?

Member Clawson: I'm good with it, Dave. This is --

Member Lockey: Dave, this is Jim Lockey, it's fine. It's fine.

Chair Kotelchuck: Okay. Okay. Very good. So we'll close. All right, good. Now let's go on, I think that the ORISE will be the next one. I forget the case number. Or I don't have the case number in front of me.

Ms. Gogliotti: That's okay, I've got it up on the screen. Actually, can everyone see my screen? I want to just reconfirm.

Chair Kotelchuck: Oh, yes. Sure, sure.

Ms. Gogliotti: Okay.

Chair Kotelchuck: 567.1, thank you. I'm busy taking notes.

Ms. Gogliotti: If it stops sharing on the screen, let me know because sometimes it doesn't --

Chair Kotelchuck: Okay.

Ms. Gogliotti: -- relay that information to me.

Chair Kotelchuck: Thank you.

Ms. Gogliotti: All right. So this is 567.1, which is an Oak Ridge Institute for Science Education case, and this particular one was originally an observation, but during the one-on-one conversations, Dave and Josie requested that it be made a finding.

In this particular case, the DR report indicated that there was not monitoring of the external exposures, but when we reviewed the case files, we did find evidence that the EE was at least partially monitored while they were there. This was in the form of an annual dose record. So not through typical dosimetry readings where we have every dosimeter that was issued. Just annual readings. And these were all zeros, but it did show monitoring records for this individual.

And in the CATI report, the EE also reported that they wore a badge every single day. And when we looked at the EE's job title, it made sense that they were wearing a badge. And so we thought that something should have been done about this.

And NIOSH responded and indicated essentially what I said, it was an annual dose reading in the records. It was not a breakdown of shallow and deep dose. So only annual zero dose was provided for several years

of the EE's employment.

Because of this EE's particular job title, I don't want to give away their occupation, but it is on the screen here for you.

Chair Kotelchuck: Sure.

Ms. Gogliotti: But here the EE was working for UT-AEC which is the University of Tennessee had an agreement with AEC to work on this particular animal research work that was occurring. And the EE indicated that they were working in a lab for around a decade, and then had a different occupation at the facility for the rest of their employment.

NIOSH indicated that ORISE employees typically when they're monitored have a different record than what was shown in the EE's files in this case. And because the EE indicated in the interview that they were physically working at UT-AEC facilities during their employment, and the ORISE response indicated that the EE was not monitored, it was assumed that the annual summary information provided in the DOL initial case files was the result of the EE periodically visiting the other Oak Ridge facilities.

They did acknowledge though that it's reasonable to conclude that the monitoring information provided in the files was a result of the claimant that being monitored by the University of Tennessee or some other third-party vendor. So what NIOSH did in this case was compare the onsite ambient doses from the three other Oak Ridge facilities and assign the higher for every year.

And since the EE indicated that they were primarily working in animal research, especially in the early years, the co-exposure doses from the other Oak Ridge facilities would not be suitable for their occupational radiation dose.

And then we responded back that UT-AEC is actually a part of ORISE. They physically were located at ORISE doing this work. They went by a lot of names over the -- even the course of this EE's employment history, but I believe this work is all covered.

I don't have access to the full NOCTS database and SRDB that I normally have access to verify all these things. But everything that I've read seems to indicate that it should be covered, and I'm sure legal could discuss that.

But based on the EE's statements in the CATI report and their job description, I think it supports that they probably did have occupational exposures above and beyond what would be assumed as ambient. And I think, at least while the EE was monitored, these zeros should be -- it would be reasonable to assume the maximum missed dose for that period of time.

In the CATI report, the EE does indicate that they worked around sealed sources, X-ray machines, and analyzing contaminated tissue samples. And I don't think ambient dose from the other Oak Ridge facilities is really appropriate to cover this because ambient background is designed for elevated background exposures, not these particular occupational exposures that the EE was receiving.

Chair Kotelchuck: So what is NIOSH saying? When we talked about this before, and we elevate it from an observation to a finding, is there -- well, what is NIOSH's position on it or ORAU's?

Mr. Siebert: Well, this is --

Chair Kotelchuck: Is that --

Mr. Siebert: -- Scott. Going back to the original response, one of the things we pointed out was when employees at that facility, ORISE, are monitored,

there is annual summary information provided. However, the format is different than what is being seen in this specific case.

It doesn't appear to be the same as when we get summaries from them for people who actually had monitoring response information at ORISE. So it looked different enough that it didn't appear necessarily to be a summary result of what was going on at ORISE. Maybe more of the person was also, you know, dealing with the other Oak Ridge sites in the area. We don't really know. But it doesn't match your normal format that we have.

Now, be that as it may, we went back and we looked, and we would still generally say that it did make sense that it is ambient. There's no indication through the records that the individual was actually exposed. But we did look at it as if we took that assumption and said, well, let's say they were actually exposed to missed dose because what we did was we assigned the largest ambient from all the Oak Ridge sites during that timeframe.

And when we did the comparison and made the assumption, the person was actually monitored and used missed dose for that timeframe, we did a comparison and there actually wasn't a -- there was a reduction in the PoC because the dose actually goes down based on zero monitoring results compared to the maximum ambient at all the different Oak Ridge sites which was assigned. So even if we had assigned it differently, it certainly would not have gone up. It would have gone down.

Ms. Gogliotti: Scott, to clarify, you mean the maximum missed dose possible? Not assuming one zero for each year, correct?

Mr. Siebert: Correct. It was assuming they were

monitored those timeframes.

Ms. Gogliotti: Okay.

Mr. Siebert: Yeah, we took your comment from 9/13 and said, okay, well, if that was the case, let's go ahead and look at it and see what impact there is, and that's what we found.

Chair Kotelchuck: That the PoC went down?

Mr. Siebert: Correct.

Chair Kotelchuck: Right. And it was a non-compensated PoC initially?

Ms. Gogliotti: Correct.

Mr. Siebert: Correct

Chair Kotelchuck: Okay. So it sounds like you folks are in agreement on the dose reconstruction.

Ms. Gogliotti: Well, this isn't a blind. This is a regular review. But if the PoC is going down, then I think that it's reasonable that we can close this.

Chair Kotelchuck: Okay. That sounds okay. Other subcommittee members, are you comfortable with that?

Mr. Calhoun: This is Grady. I'm wondering if it should still be a finding and not an observation.

Chair Kotelchuck: Hmm. Well, we did go through this at the last meeting, and the subcommittee decided that we wished it to be a finding. I --

Ms. Gogliotti: Dave, I want to clarify.

Chair Kotelchuck: Okay.

Ms. Gogliotti: This was discussed at the one-on-one

call. So this was the call that you and Josie had where we discussed this case. This was not in the full board setting.

Chair Kotelchuck: That, thank you for saying. So this is -- well, I think let's consider that. Grady, if you would make -- well, if you would make the argument now about why this should be an observation.

Mr. Calhoun: Well, my argument is that I don't think that there was anything that was done against the current procedures that we have.

Chair Kotelchuck: Well, it was -- but this is a rather unusual setting. I mean this was the person going back and forth between two covered facilities, but two covered facilities that were very different. One was an academic setting as well as the main site at Oak Ridge. What do other members of the subcommittee think?

Member Lockey: This is Jim Lockey. Rose, I'd like to have your opinion, Rose. What do you think?

Ms. Gogliotti: Well, they did follow their procedures, I will say that. However, in the report -- or in the CATI report, the EE clearly states that they were monitored. At least one of their job titles is something where you would expect them to be monitored, which makes me question whether or not they actually received all of the records. Perhaps UT-AEC was collecting them separating and they're being stored at UT-AEC versus ORISE.

I simply don't know, and I don't have access to enough records to see if they simply weren't monitored, if the records no longer exist. So personally, I would have assigned maximum missed dose. You could make an argument that this was a professional judgment. I understand why NIOSH did what they did.

Mr. Barton: Yeah, this is Bob Barton. If I could just weigh in real quick. You know, I think --

Chair Kotelchuck: Sure.

Mr. Barton: -- ultimately, it's clear that dose reconstruction was done correctly. In particular, in light of NIOSH going back after it was originally discussed and saying, okay, if we consider that missed dose based on that DOL record, you know, how does it compare with what we were assigning based on the maximum ambient dose and a claimant-favorable decision was made.

I think with a discussion about whether this is really a finding or not is whether in the original dose reconstruction, that those annual dose summaries contained in the DOL files were considered, or discussed, or evaluated in much the same way that NIOSH went back and did that comparison, which is absolutely correct in the end, the DR was done correct in the end. But the first time it was done, perhaps that annual record should have at least been considered or discussed. And I guess that's the way I kind of see it.

Chair Kotelchuck: Yeah. Yeah.

Mr. Siebert: Yeah. This is Scott.

Member Beach: -- Josie. Dave, this is Josie. I was going to jump in and say that I thought we didn't have the information that Grady just gave us that the doses wouldn't have gone up when we considered this to be a finding. So I don't think that --

Chair Kotelchuck: Right.

Member Beach: -- was part of our original discussion. So I believe Bob is absolutely correct.

Chair Kotelchuck: Yeah, yeah. And it does seem to me -- I mean and Rose said, you know, they carried out the -- they carried out the dose reconstruction correctly according to the rules if you will, the procedures, the accepted procedures.

So it does seem to me that things are suggesting that it may really -- should really be an observation. And it sounds to me as if we're moving towards that conclusion. Again, any other subcommittee or other staff persons want to say something? So --

Member Clawson: This is Brad. We've taken a look at what's gone on with this and the further information we've got, I don't think that it's really a finding myself, personally.

Chair Kotelchuck: Okay. Okay. Well, therefore, you know, several of us are now moving towards the finding. Can we call it -- revert it back to observation? I don't know whether it's Observation 1 or 2. So would folks agree to that? Are there objections to moving it back to an observation?

Member Beach: No objection.

(Simultaneous speaking.)

Chair Kotelchuck: Not hearing -- okay.

Member Lockey: No objection.

Chair Kotelchuck: Very good. So --

Member Valerio: No objection, Dave.

Chair Kotelchuck: Okay. Very good. So let's close it, and as an observation. Okay, very good. Observation 1.

Ms. Gogliotti: Okay.

Chair Kotelchuck: Excellent. And now the next one.

Ms. Gogliotti: The next one is from Tab 568, Observation 1, and this is a Rocky Flats Plant case. Here this observation has to do with RFP DR guidance documents. So, not the TBD, but the informal guidance document that exists somewhat behind the scenes.

And here what happened was I think more of an interpretation of that record that is leading to problems. Here our observations states that there does not appear to be guidance for a best estimate dose reconstruction that is not compensable, and the X-ray does not make a difference in the compensation status.

And I have a copy of these records here on this next slide, and this is a copy and paste directly out of the record just to give you an idea of what we're discussing here. It's medical X-ray dose. So to summarize, it say beginning in February of 2009, the records group goes through the actual films providing a list of all the procedures. And I don't need to read all this for you.

Chair Kotelchuck: Right.

Ms. Gogliotti: But the issue in question is this first bullet, the lower case A. Here NIOSH believes that this is indicating that the guidance did not include X-ray information. So, essentially, they say that if the X-ray isn't present in the record, and the case was processed after February of 2009, then nothing should be done.

This case was processed in 2010, and so if there are no X-ray records present, then no dose should be assigned. We, however, when we looked at this didn't read that essentially, and I think that has to do with the hierarchy of these. If C and D were a separate

hierarchy under B, I don't think there would have been this confusion. And A doesn't explicitly state that these records should be processed in that way.

When we looked at it, it seemed to be that the guidance was absent. So our recommendation would be to update the guidance document to include more precise language to prevent this in the future or simply to update the hierarchy of Parts C and D to be subsections of Part B.

Chair Kotelchuck: All right.

Mr. Siebert: This is Scott. Yeah, I can see the point that's being made. We clearly understand how it's been used for years over here, which is fine. But clarification is never a bad thing. So we've already actually updated the Rocky Flats occupational medical dose TBD back in 2019, and all this information was clarified in that document, so.

Chair Kotelchuck: Okay. So we have agreement on that, so it would sound like something that we should close, right? Again, any concerns by subcommittee members or others? Hearing none, I'll close it.

Ms. Gogliotti: Okay. And I'll just point out --

Chair Kotelchuck: Okay. Good.

Ms. Gogliotti: -- that if this case was originally received later, we would have been using the guidance that was current at the time of the dose reconstruction. So if it's since been updated, we wouldn't have been looking at that guidance. So if they've --

Chair Kotelchuck: Okay.

Ms. Gogliotti: -- already made the change, that's great, and I think we can move on.

Chair Kotelchuck: Good. All right. Okay. So close here. Do we want to go to INL? And by the way, I assume before I came on that Rashaun went over the people who are -- should step aside. And I know at least we have -- INL we have at least one person who is conflicted. So --

Member Clawson: I understand, Dave.

Chair Kotelchuck: Okay, fine. But do hang on and -- while you will not participate, since it's not -- I don't know how long it will take, but instead of having -- and not only for you, but for all others, we don't -- it would be -- rather than having us -- having you hang up and us call back, let's just stay on the line but not participate as you indicated.

Member Clawson: I'll just hang on there. It's fine.

Chair Kotelchuck: Very good, if you would.

Member Clawson: But this does bring the question what Grady was talking about earlier because where these have already been adjudicated, they've already been through everything, it's kind of an interesting -- so that's kind of why I'm interested in what Grady was saying earlier. But I'll just hang on.

Mr. Calhoun: And, Dave. Dave, this is --

Chair Kotelchuck: Yes.

Mr. Calhoun: This is Grady, and I don't know if you heard me, but basically what I brought up before you got on was that a couple meetings ago, we had discussed COI and it was even relevant to the discussions we're having.

And so I didn't say that I don't expect any changes for this meeting, but we are locating the transcripts of that discussion that we had with OGC at that time.

And Jenny's gone as we all know, but the other OGC people covering DCAS are going to take a look at that and give us another opinion on that once they take a look at that. But no changes --

Member Beach: And, Grady --

Mr. Calhoun: -- for today.

Member Beach: -- will you send us an email, or will somebody letting us know --

Mr. Calhoun: Yes.

Member Beach: -- because I was pretty interested in that discussion also?

Mr. Calhoun: Yes. Yes, I definitely will.

Member Beach: Okay, thank you.

Chair Kotelchuck: Okay.

Ms. Gogliotti: I believe that there was -- didn't the Board have a training session with OGC about that, Rashaun? I thought that --

Dr. Roberts: Yes. They did. And there is another person in OGC who advised on this also. So, anyway, I think this is something to be dealt with later. So, you know, if we could just kind of proceed.

Chair Kotelchuck: Okay.

Dr. Roberts: Because there were different, you know, different folks weighing into this, so.

Chair Kotelchuck: Okay. So you're suggesting we move on and we'll come back to this at some future time? Or --

Dr. Roberts: Yes.

Chair Kotelchuck: -- I was not -- yeah. Okay.

Ms. Gogliotti: Maybe we could just have the conversation offline.

Mr. Calhoun: Yeah, it would be sometime -- it would be sometime after this meeting, Dave.

Chair Kotelchuck: Right. Certainly. Right.

Mr. Calhoun: No changes today.

Chair Kotelchuck: Okay.

Dr. Roberts: Exactly because the person advising on what happened the last meeting had a different opinion than Jenny. So, anyway --

Chair Kotelchuck: Got it.

Dr. Roberts: -- we do need to, you know, maybe deal with this later. Thank you.

Chair Kotelchuck: That sounds good. Give me the case, I don't -- somehow -- whoops. Connecting, oh, hold it. I'm having just a little bit of --

Ms. Gogliotti: That's okay. I can't read it to you until you get back online.

Chair Kotelchuck: Yeah. I just wanted the case number just for my notes.

Ms. Gogliotti: 571 Observation 1.

Chair Kotelchuck: Okay.

Ms. Gogliotti: And this particular EE worked at several facilities, INL, NTS, General Atomics, Area 4 of Santa Susana, SRS and Hanford.

Chair Kotelchuck: Okay. All right. Then let's go on now to -- and we'll come back to it at a later meeting,

and --

Ms. Gogliotti: Oh, we can do this finding now. We just don't need -- everyone will just, if they're potentially conflicted, they won't comment. I think that's --

Chair Kotelchuck: Okay.

Ms. Gogliotti: Is that the consensus that everyone took out of that?

Member Beach: Yes.

Chair Kotelchuck: Okay.

Member Clawson: That would be my consensus on that, which I'm the only one that's conflicted, so.

Chair Kotelchuck: All right. Well, -- okay.

Ms. Gogliotti: Okay. Well, this --

Chair Kotelchuck: So let's go on and talk about it.

Ms. Gogliotti: Sure. We questioned the prorated fraction of the year that was applied to this particular case. It was a little unusual. The EE, as confirmed by DOL, was a consultant for a period of time. And at that time, the EE was working an estimated one day a week, and that is in the DOL confirmed employment. But DOL did not specify the date range beyond the years that the EE was doing this consulting work which is somewhat unusual. Normally there's a day associated with it also.

Here, NIOSH assumed that the EE was exposed 10 percent of the years for both the start and stop year. And looking further into it, the SRS workbook, this dose was calculated and indicated that this was one day a week, so 20 percent of employment for half of the year, or 50 percent. So it works out to 10 percent of the year.

But when we reviewed the records, we found evidence suggesting that the EE only worked at the site beginning midway through their first year and ending midway through their last year. And since DOL only verified the year range, we thought it was appropriate to assume a full year of one day a week exposures. And this, of course, would increase the dose only by a few millirem. But we thought it was important to point out anyway.

And here NIOSH responded indicating that NOCTS had two types of date fields. I know that this is a little bit dated at this point because we're not even using NOCTS, but to conclude this record, we'll at least talk about it.

One part was visible, that everyone could see on NOCTS that was formatted as text for the dates. And the other is a hidden field in the database, the actual had numerical values. And in this particular case, the text fields provided year-only values, but the date-formatted fields was through July 1st in both the start and stop year.

And the data source that dose reconstructors use draw from the date-formatted fields which led to kind of this discrepancy. And NIOSH did go ahead and review the DOL files and agreed with us that the July 1st date was not supported by the records, and that ambient dose should have been assigned for the full years of employment.

Chair Kotelchuck: Okay. When --

Ms. Gogliotti: And dose reconstructors should have cross-checked that, but apparently did not in this case. But at least at the time they corrected this to prevent it from happening in the future, but we're obviously not using NOCTS currently, or at least SC&A doesn't have access to NOCTS, so.

Chair Kotelchuck: So folks are in agreement on that on the observation itself?

Ms. Gogliotti: I think that NIOSH acknowledged that this was a problem. Our remaining question would be were other claims impacted by this date range, discrepancy. I don't even know if they have the ability to check on that currently.

Mr. Siebert: Yeah, this is Scott. It was a great question because this is, as we said, it's a NOCTS tool consistency issue. It's not really a dose reconstruction issue. And it's something that NOCTS has been this way since day one. So this has always been something we've looked at, and it's always the dose reconstructor's responsibility to ensure that they do that cross-check.

As was said just a minute ago, we've actually updated our tools to it doesn't make an assumption now, it specifically says, hey, it stops the dose reconstructor in his tracks and says you have to make your decision at that point. So it can't just be using the default like happened in this case and it didn't get cross-checked.

When it comes back to going to older cases, we looked at all the dose reconstructions that this dose reconstructor and the peer reviewer did that had this same issue of those non-matching fields. We didn't find any other incidents of them missing that fact and not correcting it.

To be on the safe side, we also did a wider pool of dose reconstructors looking at -- I believe we looked at from 2015 on any claim that had this mismatch issue, and we didn't run into other claims that had -- that weren't addressed by the dose reconstructor. So they've been doing it correctly, it's just now our tool is very in your face about ensuring they can't go forward until they do it.

Chair Kotelchuck: Okay. So that should bring --

Ms. Gogliotti: Didn't you have to access to --

Mr. Siebert: I'm sorry?

Ms. Gogliotti: Do dose constructors have access to NOCTS again?

Mr. Siebert: Yes.

Mr. Calhoun: We do not though. This is Grady. NIOSH does not have access to NOCTS. I cannot look at NOCTS even a tiny bit. ORAU has a version of NOCTS going and we are not allowed to access that, even me. So --

Chair Kotelchuck: Wow.

Mr. Calhoun: -- right now -- yes. So right now we are working with just the files and folders. So I don't foresee that changing significantly for many, many, many, many, many months.

Ms. Gogliotti: Don't tell me that. I want the cybersecurity stuff to go away.

Mr. Calhoun: Don't tell me that. I wish that -- believe me, it hurts me worse than it hurts you. Yeah, that's where we are.

Chair Kotelchuck: That is where we are. Well, it sounds to me that --

Mr. Calhoun: Chances are there will not -- chances are there will not ever be NOCTS again. That's about a 95 percent chance. There'll be something else. And we're working with our ODIP staff to try to figure out what that is. And as you all know, if you've entered -- if you've played with NOCTS, it's a very complicated system. So we're revising it, starting it over, replacing it.

Chair Kotelchuck: Well, we don't envy you. That's a tough call, a tough task. But in terms of this INL observation, I think we've taken care of it, have we not, folks? Hello?

Member Beach: I would say yes.

Chair Kotelchuck: Yes. So can we close it, folks? Unless I hear an objection, we will close 571 Observation 1. Okay. All right. Fine, so closed. And what is the next one? And Brad, do come back on now. Going to the Y-12 plant. Is anybody conflicted on Y-12, if I may ask?

Ms. Gogliotti: Well, Y-12, K-25, and X-10 is the employment.

Chair Kotelchuck: Right. Okay. Right. Is anybody conflicted for that? Okay. I didn't think so, but I just wanted to check. All right. Let's -- Rose, would you like to start us off?

Ms. Gogliotti: Sure. This was kind of an unusual one. Here the DR report indicated that Y-12 coworker data was used. But when we looked at what was actually used to calculate the dose that was assigned in this case, we found that they were actually using the X-10 coworker data, which is inconsistent with what was reported in the DR report, and didn't really coincide with the EE's work location at the time.

And we ran CAD, you know, chronic annual dose workbook separately and calculated our own internal dose, and it was less than that was assigned in this case. So it was claimant-favorable to assign this coworker dose, but we thought it was questionable to assign doses because the EE wasn't working at that site at the time.

And NIOSH responded saying essentially that they agreed that the DR report did indicate the incorrect

coworker location was used. And X-10 coworker intakes were assigned for all years based on the fact that this EE's internal and external monitoring was done by X-10, and he worked on X-10 experiments while in a Y-12 facility.

During the timeframe that the coworker intakes were assigned according to the Y-12 site information, it indicated that the work location was for the purposes of performing fusion experiments, and therefore, NIOSH concluded that X-10 was the appropriate site to use.

We agree completely that the EE was monitored by X-10, but we disagree that X-10 was the correct location to be using. Coworker intakes in general are assigned where the EE is actually physically working because it is supposed to be describing the exposure potential.

Chair Kotelchuck: And, Scott?

Mr. Siebert: Yeah, we maintain that it is an X-10 -- and this is a difficult situation, and it's also an issue with X-10 having facilities that they did experiments specifically on the Y-12 footprint, but their facilities were actually X-10 facilities. So the work that's actually being done at Y-12 outside of those facilities is extremely different than the work that's going on inside those X-10 laboratories on the Y-12 facility.

So we looked at the data for this individual. The type of monitoring they had, the bioassay, it all lines up with the type of work they would do at X-10. It's just at this point they were doing some of those experiments on the Y-12 facility in very specific areas.

So basically -- and a good point, you know, uranium isn't the focus of X-10 work, which is what you would be assigning most of it at Y-12. They were doing a lot

of other types of work. As was mentioned, it was the fusion research and some other things. So this individual was monitored for plutonium, gross alpha, uranium, strontium. Those are much more indicative of work that is done as an X-10 worker.

And it's one of those -- like I said, it's an unusual issue, but it's basically as if there was a piece of X-10 inside the Y-12 fence because they were doing that type of work. And we assumed that most of their exposure actually comes from the work they're doing, not from the surrounding facility. So that's why we maintain that X-10 still is the appropriate co-exposure.

Mr. Barton: Scott, this is Bob Barton. This might help clear this up a little bit. Do we know when formulating the X-10 and the Y-12 co-exposure models, so for X-10 specifically, were those facilities that were in use at Y-12, but doing X-10 work, were they pulled out and included in the X-10 co-exposure model because that wouldn't make a lot of sense?

But, alternatively, if those facilities that were doing X-10 work at Y-12 were, in fact, included in the Y-12 co-exposure modeling, then really that work would be reflected in the Y-12 co-exposure model. Though, I completely see --

Mr. Siebert: Correct.

Mr. Barton: -- your point was saying, you know, the exposure profile might be more akin to what would have been experienced at X-10 even though the EE was at Y-12. And I'm just wondering how that works when you have essentially satellite locations doing work for X-10 at a different facility like Y-12. I'm not sure if that's --

Mr. Siebert: Yeah.

Mr. Barton: -- legally an obtainable answer.

Mr. Siebert: No, actually it's a great question. And, yes, when we put together the co-exposure information, it's based on the monitoring program. And this individual was doing X-10 work and was being monitored by X-10, so this individual's data was in the X-10 data set.

So they were included in the X-10 internal -- or they would have been included in the external co-exposure data set because they were monitored by X-10 even though their physical location might have been inside the Y-12 footprint. And it would not have been included in the Y-12 co-exposure data.

Member Clawson: So this is Brad, I've got a question on that. So you're telling me that they were having a badge from X-10 wearing it in Y-12. Is that correct?

Ms. Gogliotti: It sounds that that is the correct interpretation.

Member Clawson: That's kind of at a conflict with the way the DOE orders were running earlier in that because I just have to go by my past experience, anytime I went into another facility, I had to wear their badging. And even though I was an employee of the other place, once I went in to their facility, I had to be under their badging program. So that's --

Mr. Siebert: Well, once again, this was a very specific program that was run by X-10 in a specific facility that happened to be on the Y-12 property. So it appears that they actually did separate out and use -- it was X-10 who was monitoring this individual. The individual is an X-10 employee, and they're using X-10 monitoring while they're doing X-10 work. It's just they're physically located at the other facility.

I know what you're saying, but this is a specific case

where I don't think it's -- this is a -- it appears from our work at looking at X-10 and Y-12 how they handled the situation, that this is exactly what happened. The person was an X-10 employee and was monitored by X-10.

Member Clawson: Okay. I'm understanding what you're saying now. So this whole thing was cut up. This whole project was an X-10 project inside of Y-12 and --

Mr. Siebert: Correct.

Member Clawson: -- X-10 was actually operating this portion of the test. So, okay.

Mr. Siebert: Correct.

Member Clawson: I understand what you're saying, Scott. That makes more sense to me. I was under the impression it was a little bit different. But I understand now, that makes sense to me.

Mr. Siebert: Great. Good clarification. Thanks, Brad.

Chair Kotelchuck: Okay.

Ms. Gogliotti: So based on Scott's comments that this work would have been included in the X-10 coworker modeling, which I am not familiar enough with that data to know that that's true, but I can believe him on face value. If that's true, I think we can accept this though there is still the problem with the DR report not agreeing with what was actually done in the dose reconstruction.

Mr. Siebert: Well, we agree there was a misprint.

Chair Kotelchuck: Okay. My audio was fine, but my screen has gone off, so I'm not sure. This case, is it a finding or is it an observation? I --

Ms. Gogliotti: It's currently a finding.

Chair Kotelchuck: Yeah. Okay. And what's the case number? Pardon me.

Ms. Gogliotti: 575 Finding 2.

Chair Kotelchuck: 575, okay. So there is agreement to close it. Again, subcommittee folks comfortable with closing it? Acceptable?

Member Clawson: I'm good with it. This is Brad.

Member Beach: Yeah, this is Josie, I'm good also.

Chair Kotelchuck: Okay, very good.

Member Lockey: Dave, Jim Lockey, I'm conflicted on Y-12, so.

Chair Kotelchuck: Okay, fine. Good, good. And all right. So is that all of us? Okay.

Member Valerio: Dave, this is Loretta. I'm --

Chair Kotelchuck: Loretta.

Member Valerio: -- good with closing it as well.

Chair Kotelchuck: Very good. Thank you. Okay. All right. Very good. So we're closed. Closed on that one. And let's see, is the next one Clarksville?

Ms. Gogliotti: No. The next one is from the same case, 575 Observation 1.

Chair Kotelchuck: Okay.

Ms. Gogliotti: Can I confirm that everyone else -- it's just Dave's computer that he can't see me, or can anyone not see my --

Chair Kotelchuck: Right. In fact, I was tempted to

simply go off and come back on.

Member Beach: I can see it.

Member Clawson: I can see it.

Chair Kotelchuck: Pardon?

Member Clawson: I can see it, Rose.

Chair Kotelchuck: Good.

Member Clawson: This is Brad.

Chair Kotelchuck: Okay. I'm sure --

Ms. Gogliotti: Okay, great.

Chair Kotelchuck: -- it just went off. And if we could, maybe, Brad, if you can see it, would you mind just taking over for a -- taking over for a moment while I go out and come back in, and I'm sure it'll come, the screen will come back up as well as the phone?

Member Clawson: Sure.

Chair Kotelchuck: So, Brad, could you?

Member Clawson: That's sounds --

Chair Kotelchuck: Okay.

Member Clawson: Yeah.

Chair Kotelchuck: Thank you very much. I'll be back in a few moments, folks. Bye-bye.

Member Clawson: Dave?

Chair Kotelchuck: Yes. There you go.

Ms. Gogliotti: Okay. This one is an observation, and so we're not necessarily --

Member Beach: What --

Ms. Gogliotti: --saying something was wrong. But I want to caveat all of that, this conversation here so no one jumps on me. Here we believe that the coworker doses were calculated correctly and entered into IREP as -- incorrectly entered it as log-normal distribution with a GSD of three.

What happened here was the dose -- or at least it's very unusual. We're not used to seeing it, and actually it was probably one of the most challenging cases I've come across in terms of trying to identify where all the doses came from that were assigned in IREP.

And what was done in this case, and we don't see it done a lot, but this one really amplified the changes. Here they used a single chronic annual dose workbook to calculate a lot of dose components all at once. Seventy-five to be exact. And then several of the dose components were intermixed.

So your chronic annual dose workbook, when you use it, it says your uranium dose, this was the dose. And it summarizes it for every single radionuclide. So generally it's very easy to tell what dose came from where.

But in this case, what happened was because there were so many entries that came out of this workbook, possibly because they used so many entries going into the workbook, they combined dose components when they were actually assigning them in IREP.

And anything less than 0.0005 rem, so anything that didn't round to a millirem was deleted, which according to the program guidance is totally fine and allowed. But what happened in this particular instance was it made it very difficult to track numbers because once you're deleting doses, then things start

not adding up anymore.

So this was very difficult for us to follow and audit. It took a lot more time than we're used to. We were able to get through it, but we thought it was important to point this out because it was so unusual in this particular case.

Chair Kotelchuck: Right. Hi, folks, I'm back. Dave. Still no screen, but that's okay. We'll continue on. Brad, thank you. And what do the NIOSH folks say or ORAU?

Ms. Gogliotti: They essentially agreed that it can be difficult to determine the specific dose from each site component based on the number of IREP entries that they came up. It was necessary for them to truncate these and to minimize the number of entries in order to go into IREP. But we have a question. What is the maximum number of entries that can actually go into IREP?

Mr. Siebert: One thousand lines.

Ms. Gogliotti: Okay.

Chair Kotelchuck: Wow. Okay. But --

Member Beach: This is Josie. I know this case was compensated and such. But do you see that, Scott, very often where there's 75 and a lot of them are dropped off? I know SC&A hasn't. But do you see that quite a bit?

Mr. Siebert: I'm not going to say -- it is relatively infrequent that we have to do that process. I'm not going to say it's, you know, a one-time deal. But, you know, it is very -- it's uncommon to have to deal with it because it's just -- right, it's when we have to deal with many, many different types of intakes at the same time over many different years. You can get

many, many lines of output and that can happen.

It tends to be long -- somebody who's worked at either multiple facilities or long periods of time, different type of radionuclides, that kind of thing. So, as I said, it's not unusual but it's not horrendously rare.

Chair Kotelchuck: Right.

Mr. Siebert: That's a technical term.

Chair Kotelchuck: Right. All right. I mean it's clear. It's hard to track, and understandably. On the other hand, there's nothing -- this was done properly and there was nothing that needed to be changed, and it does seem to me something that we can close this observation. Right?

Ms. Gogliotti: I did have one more question.

Chair Kotelchuck: Good. Okay. Go ahead.

Ms. Gogliotti: I know it's acceptable to remove things that sum to less than a millirem and they're regularly excluded from the program. But we did have a remaining question. Has it ever been evaluated the cumulative impact of having so many of these entries being removed? If you could have a thousand entries, theoretically the maximum that you could be getting rid of is fairly high then. Like a thousand entries of less than a millirem can equal a half rem dose.

Mr. Siebert: Well, back up a second. It's not that we can remove a thousand lines. The upper limit that IREP can handle is a thousand lines. And we only do this limitation when we exceed that limit.

Ms. Gogliotti: So I don't know how much was removed in this case. I'm sure that it wasn't an exorbitantly high number of millirem. I was just kind

of curious when --

Chair Kotelchuck: Well --

Ms. Gogliotti: -- at what point does that start to make a difference.

Chair Kotelchuck: Yeah.

Ms. Gogliotti: And has that ever been done --

Chair Kotelchuck: It is an interesting question. It could be checked on a case where there are 500 and a whole bunch of zeros, and you can leave them in, right? You can leave 500 -- you can leave another couple of hundred in that are, you know, that would otherwise be knocked out by being too small and see what kind of impact it has. You can't see this in every case. It could be looked at.

On the other hand, I'm not sure -- because it's unusual, I don't personally see that it would be -- it would have that much of an effect. But I can't tell without somebody putting the work in to do this checking a few cases. And I'm not sure, Scott, how much, you know, whether it's worth the time frankly. It doesn't seem to me to be a serious error, and it's an appropriate way to handle lots of small doses, so.

Member Beach: Dave, I guess my --

Mr. Siebert: I can't speak to that. I have to leave that to Grady.

Chair Kotelchuck: Okay.

Member Beach: This is Josie and I was going to ask if that was something you all tracked when you did start dropping lower doses like that.

Mr. Calhoun: This is Grady. I don't know if we, quote, track it. But I'm going to look back because I seem

to remember that we did something many years ago about the less than one millirem. But I don't recall for sure. So I'm going to check and see if there's something, if someone else remembers.

Chair Kotelchuck: That would be nice. It would be good if you would do that. And could you just send an email to the subcommittee if you find something?

Mr. Calhoun: Sure.

Chair Kotelchuck: If you find that information.

Mr. Calhoun: The email might be that -- might be that I misremembered. So just to --

Chair Kotelchuck: Well, that's okay, or you just couldn't find it. But I don't see keeping this open until you get a chance to look for it because, as you said, you may have misremembered. Or it may just be, you know, buried so deep you can't find it, too many years ago. So although --

Ms. Gogliotti: I would agree with that, Dave. I just know that the decision to drop things less than a millirem happened -- must have happened in the very early years of the program because it was --

Chair Kotelchuck: Oh, yeah.

Ms. Gogliotti: -- well established when I started in 2010.

Chair Kotelchuck: Oh, yes. Absolutely. Well, look, I would like to close this with Grady's taking a look for that, and telling us what has happened. Or if you want to just say work, Grady, just tell Rashaun and she'll contact committee members, pass it on to committee members, or pass it to me and Rashaun. Okay. Let's close.

Mr. Barton: This is Bob Barton. Grady, maybe what you're remembering, I know in past SEC discussions at least, and we're talking eight, nine, maybe even 10 years ago, there was a lot of work done about what is a dose's significance. And I think the crux of that was trying to look at if you're comparing populations of workers, you know, what actually amounts to a significant difference even on a necessarily qualitative level. Does that sort of ring a bell as to what you were talking about, or am I remembering something different?

Mr. Siebert: No. I think I remember that that was done. I want to make sure that there's not something else, too.

Chair Kotelchuck: It would be nice to know.

Mr. Barton: Okay, great. I just wanted to throw that out there.

Chair Kotelchuck: It would be nice to know. But I would say --

Mr. Calhoun: Well, Bob, I appreciate you giving me an out on that. That was really nice. But --

Chair Kotelchuck: Okay.

Mr. Calhoun: -- I'm still going to look.

Chair Kotelchuck: Okay. Good, good. All right. And you're going to look at -- and we're going to close, right, unless I hear some objection as opposed to more questions. Okay, no objection. Closed. So let's go on.

Ms. Gogliotti: Okay.

Chair Kotelchuck: What would we come to next?

Ms. Gogliotti: The next one is from Tab 580 and it's

Finding 1. And this is an INL case.

Chair Kotelchuck: Okay. All right, very good. Brad?

Member Clawson: I understand.

Chair Kotelchuck: Okay. Go ahead.

Ms. Gogliotti: Okay. So this finding has to do with: the EE had a record of continuance dosimeter external monitoring for their entire employment period, with the exception of several months during the later years of their employment. And at that time NIOSH did not assign recorded modeled or missed external doses to those periods, and so they assigned the ambient dose.

And NIOSH essentially responded and said that they assigned missed dose in the dose reconstruction using the actual zeros, and that the unmonitored periods in question had onsite ambient dose assigned in accordance with their TBD.

And they go on to quote section 6.31 of the INL and the ANL West external TBD that says, "It was INL and ANL West policy that personnel who were exposed to receive any radiation dose or the work was centered at the site were assigned a radiation monitoring badge." End quote.

Based on that, all INL and ANL workers with the potential to receive any radiation dose were monitored for external dose, and then they assigned environmental dose accordingly. And because ambient dose was assigned for the EE's INL employment including the unmonitored periods, the external dose doesn't make sense essentially for them to assign. And they say that based on OTIB-88.

And here we responded, I know this comes up a lot, but a lack of records is not always useful in

establishing whether or not the EE was monitored. In the CATI report, the EE indicates that they were always monitored by TLD. And at the period in question, they worked at the waste processing facility Advanced Mixed Waste.

Now the TBD also states that all workers that entered through a security access checkpoint were required to wear a dosimetry including administrative and clerical personnel. And Advanced Mixed Waste is, of course, behind the security checkpoint. So if the worker was working at that location, they should have been required to wear a badge. And so we believe it's reasonable to assume that the EE wore a badge and that record was not available.

Chair Kotelchuck: And these were the last months of the person's employment?

Ms. Gogliotti: No, they were several months --

Chair Kotelchuck: Oh --

Ms. Gogliotti: -- within the last years of the EE's employment. And actually, NIOSH also assumed during the same period of time for internal dose, that the EE was a radiation worker. And we believe that if the assumption was made that the EE was a radiation worker for internal exposures, a similar assumption is also appropriate for external. And, of course, we don't --

Chair Kotelchuck: Right.

Ms. Gogliotti: -- think that assessing a missed dose in this case would have an impact on the PoC or the outcome of the case, but it was brought forward nonetheless.

Chair Kotelchuck: Right. Just the question is what's proper, not what the result was. Right. Comment on

that?

Mr. Siebert: Okay. This -- yep, this is Scott. Yeah, I understand the whole idea of lack of records isn't always used to establish the lack of monitoring. However, INL when we're talking about timeframes in the late 2000s, under 10 C.F.R. 835, we have a pretty good indication they are actually monitoring the way they were supposed to be doing so.

And there's no indication that we don't have the monitoring records from this individual. They wouldn't just drop off a couple months here and there. We have what appears to be their full monitoring record. It's just they weren't monitored for specific timeframes. So we really don't have an indication of that. Matt Smith, are you on the phone?

Mr. Smith: Yeah, this is Matt Smith with the ORAU team, and for the record, I do not have a conflict with Idaho. Yeah, in this time period, if someone were to be on monitoring, but for some reason didn't turn in their dosimetry, eventually a lost dosimetry report would be expected and estimated dose would have gone into the dose of record. And we're not seeing that.

And just going back to the observation that I read from the SC&A report, that the EE did not have internal bioassay records during these periods. So, again, it's appropriate given the hierarchy of data sources that's in OTIB-88 and that stems from 001 that the ambient dose would be the appropriate dose to apply for those periods.

Chair Kotelchuck: I don't understand why -- maybe I'm misunderstanding -- why you can't extrapolate the doses before and after that weren't monitored. Right?

Mr. Smith: There is provision in the TIB and in the IT

for filling in gaps. And there's actually several paragraphs of description of going into that process. In this application though, for these years, it is appropriate to step in and go ahead and apply the ambient dose as was done here.

Chair Kotelchuck: So --

Ms. Gogliotti: It's just strange because if the EE were --

Mr. Smith: It would be like -- if we're going to do gap -- just let me finish real quick.

Chair Kotelchuck: Yeah.

Mr. Smith: If we're going to do gap filling, we really would prefer that to be as tight as possible. So, in other words, January had a dose. March had a dose. But February's missing. So, yeah, we have that bookended and we fill in that one month. When we've got in this case, you know, months of -- in 2007, 12 months in 2008, three months in 2009. Now we've got an extended period. And so, again, per the hierarchy of data, we would go with ambient to assign to the EE. Bless you.

Chair Kotelchuck: Okay. Rose, you were trying to say something.

Ms. Gogliotti: I just think it's unusual that this EE could possibly be working at Advanced Mixed Waste and not have dosimetry records. That's my point.

Chair Kotelchuck: Well --

Member Beach: If they were working at Advanced Mixed Waste during the time period should have dosimetry.

Mr. Smith: Again, this is -- as Scott pointed out, we're

in the -- yeah, as Scott pointed out, we're --

Mr. Siebert: Let me step in --

Mr. Smith: Go ahead.

Mr. Siebert: I'm sorry, Matt, let me --

Chair Kotelchuck: One person.

Mr. Siebert: -- hit this real quick. Matt, this is Scott. One of the things that's not being said here also is, yes, the individual worked in that location or with that area, but it also stated in the CATI that during that timeframe they were writing procedures, which is generally not something that is a high-risk job.

So it would make perfectly good sense for the individual to not necessarily be in the areas themselves while they were writing the procedures. It doesn't seem surprising to me the person doesn't have monitoring.

Member Beach: He could still have TLD even if he's assigned to that area, even if he was writing procedures.

Chair Kotelchuck: Right, right.

Member Beach: They wouldn't pull it for --

Chair Kotelchuck: Which is --

Member Beach: -- that time period because he may --

Chair Kotelchuck: Right.

Member Beach: -- enter in the ground in the course of his procedure writing I would think.

Mr. Smith: Well, I --

Chair Kotelchuck: Yeah. Josie --

Mr. Smith: This is Matt again. And again, as many people on the call are familiar, you know, this is occurring in 10 C.F.R. 835 timeframe, so if it was warranted that he be on a dosimetry program, and the dosimeters were not turned in for the period in 2007, the whole of 2008, and the period of 2009, certainly my experience here at the DOE site near us in Richland would be that if the dosimetry department, if you will, were not able to retrieve the dosimetry from the employee, a missing dosimeter report would be generated and a dose estimate would also be generated and put into the dose of record.

Chair Kotelchuck: You know, I --

Mr. Smith: That was Matthew Smith with ORAU team. Sorry.

Chair Kotelchuck: Right. Yeah, I feel as if -- if I'm thinking about claimant-favorability, while it is possible that the person was, in fact, in an office or not on the regular site that they had been working at. And it's not an unreasonable thing to think that that may have been the case.

On the other hand, having actually done the internal monitoring, treating it as if they were working all the way through, it seems to me that it's -- it just seems inconsistent. And I, you know, apparently the argument is you were following the rules. On the other hand, this seems to me to be a problem with those rules. And my sense would be that we should take claimant-favorability and simply extrapolate.

Mr. Smith: Well, let me clarify one thing.

Chair Kotelchuck: Okay.

Mr. Smith: Let me clarify something as well.

Chair Kotelchuck: Sure.

Mr. Smith: During that gap period, we have no indication that individual entered those areas whatsoever. There's no monitoring results. There's no internal bioassay. There is nothing that that individual should be doing if they were entering those areas, and there's no indication that they weren't doing it and they should have been doing it. Just because the --

Chair Kotelchuck: Yeah.

Mr. Smith: -- individual was assigned to a location, doesn't mean they were physically entering that location. They may have been assigned to write procedures in a totally different area that did not require badging, did not require bioassay.

I will address real quick, the inconsistency between the two of internal and external. External, since it is discrete, is much more -- it's much more straight forward to start and stop. Internal, since it's based on after the fact and monitoring, is less clear as to start and stop times. It becomes much more convoluted when you do start and stop times.

In this case, even though it's a best estimate case, my assumption was the reason they assigned the internal -- the individual had bioassay monitoring after this timeframe as well based on entering different areas and did have badge results and so on.

And rather than do a start/stop, which increases complexity on the internal assessment, they were assumed that, yes, they were exposed during that timeframe as well even though we know they likely weren't. It's a slight overestimate case. Maybe it shouldn't have been done in a best estimate case. But, once again, that inconsistency doesn't sound like an inconsistency to me on what we believe their

actual exposure potential was.

Chair Kotelchuck: Right. You know, again, well, I understand and I accept the argument about the inconsistency about external and internal and why the internal had to be -- and needed to be done straight through.

Nevertheless, it seems to me you're really arguing then that the absence of a record, it's due to lack of information. And is that a reasonable interpretation of why this information was -- the external was lacking. And it doesn't -- I have to say it just doesn't appear to me a reasonable assumption.

Although, it may have been following the rules that we've set down, and after all, the procedures that we developed can't cover every single case, of course, which is why your, you know, why profession judgment is so important. But it does not -- I know I'm not comfortable. In that respect, I agree with Rose's perspective --

Mr. Smith: Well --

Chair Kotelchuck: -- that -- I don't -- what do others think? Others --

Mr. Calhoun: This is Grady. And I'll --

Chair Kotelchuck: Sure.

Mr. Calhoun: -- add another thing here. It's not the case that we automatically assume that there was no exposure because there's no records. You have to couple the operations at the facility and the timeframe of those operations.

There are certainly facilities where if we don't have external records, or internal records, or whatever it may be, that we say, well, that's not uncommon at

that facility. Therefore, we need to assign coworker doses during that period.

But in this particular case, you know, the history of that facility and that timeframe is that we are receiving all of the dosimetry records and they were monitoring appropriately. So there's a lot more that goes in to that thought than just no records equals no dose. You got to look at --

Chair Kotelchuck: But --

Mr. Calhoun: -- the facilities and the operations at the time.

Chair Kotelchuck: And I -- Dave, I mean I respect that. This is not a, if you will, a simpleminded thing that we don't have a record, and, you know? But it's still --

Member Beach: The one thing, Dave --

Chair Kotelchuck: Yes.

Member Beach: Dave, this is Josie. The one thing we do have is the CATI report, and the CATI report, he clearly says he had dosimetry during that time period.

Chair Kotelchuck: That's true. That's true.

Member Beach: Wasn't like it was 50 years ago. It was pretty recent.

Ms. Gogliotti: And he was working at Advanced Mixed Waste during that time.

Member Beach: Yeah. And he was working at the waste site, so.

Chair Kotelchuck: Yeah.

Ms. Gogliotti: And it's not beyond feasibility that he could have done procedure writing in town at Idaho Falls. But I just don't have record of that, and lacking records, I always favor the claimant.

Chair Kotelchuck: Yeah.

Member Beach: Well, he didn't mention that he was doing that during that time period either. You would think he would have mentioned that.

Chair Kotelchuck: Right. And -- yeah, right. Right. And we have to assume that his memory is correct, and there's good reason --

Mr. Siebert: And this is Scott.

Chair Kotelchuck: -- to believe him.

Mr. Siebert: I also tend to look at the preponderance of evidence, and also, it has to work in the negative as well. Not only --

Chair Kotelchuck: Okay.

Mr. Siebert: -- did this individual not have external badging. But there were no internal monitoring results during that timeframe either. So that means two separate systems had to break down for us to assume this individual was going in there and there was no monitoring whatsoever. So it --

Ms. Gogliotti: No.

Mr. Siebert: -- just doesn't --

Ms. Gogliotti: He was writing procedures.

Mr. Siebert: -- doesn't make sense.

Ms. Gogliotti: I don't think that he would have been monitored internally. And Advanced Mixed Waste,

you're behind glass so there would be limited exposure potential to begin with. They wouldn't be actively working with materials hands on.

Mr. Smith: This is Matt Smith with ORAU team. I'll just repeat. Again, my experience being monitored during this same timeframe at a very similar DOE site under 10 C.F.R. 835, if I've been assigned dosimetry and it has not been turned in over the period of one, two, and three years, there would be the expectation of a missed dose. In other words, missed dosimetry, lost dosimetry report in the records. And then also an estimate of dose put into the dose of record. And, again, this is not being seen in this case.

Chair Kotelchuck: Well --

Member Clawson: It's not that --

Chair Kotelchuck: Scott, I accept your statement that there was no internal monitoring during those periods. That's significant. But I'm not sure how to resolve it. I tend to think that claimant-favorability alone plus the man's -- the person's, excuse me -- the person's CATI report would lead me to think one should do it differently. I'm not sure how to proceed given this difference of opinion.

Ms. Gogliotti: I will say that this does not have an impact on outcome of the case.

Chair Kotelchuck: Yeah, yeah. I understand that.

Ms. Gogliotti: And we could chalk --

Chair Kotelchuck: But that --

Ms. Gogliotti: -- this up to different professional judgments.

Chair Kotelchuck: Yeah.

Ms. Gogliotti: That's a reasonable path forward.

Mr. Calhoun: Yeah, I think this is Grady. This is Grady. No, I know this is Grady actually. I don't think it. But --

Chair Kotelchuck: All right.

Mr. Calhoun: -- I think that all this discussion is good given the fact that, you know, it doesn't affect compensability. But either way, we're not likely to change what we're doing relative to a situation like this. So, you know, my recommendation would be we accept it as a finding, or an observation, or whatever it was listed as, and move on.

Member Lockey: This is Jim Lockey. I agree. I think there's strong data, the CATI report you want to believe what the gentleman is saying. The objective evidence indicates that he probably did not need to be monitored. So I don't think we'll resolve it. I think we just accept it and move on. Hello?

Ms. Gogliotti: We can hear you.

Member Beach: Yeah, Jim, I agree with that also, Dave.

Member Clawson: I'd tell you what I thought, Dave, but, you know, that's besides the point.

Member Lockey: Dave, are you there?

Mr. Calhoun: This is Grady. I'm here. It sounds like a bunch of people dropped off.

Member Lockey: Yeah, did something happen to David?

Member Clawson: See what you did, Grady. You made him hang up on us now. I can't believe that.

(Simultaneous speaking.)

Member Clawson: It sounded -- something sounded terrible on my end right before everyone dropped off.

Member Lockey: Yeah.

Ms. Gogliotti: Yeah, I had the same experience.

Member Lockey: Hey, Brad?

Member Clawson: Yes.

Member Lockey: What'd you do?

Member Clawson: Just one of those things, buddy. Just one of those things.

Ms. Gogliotti: Can a Board Member see if we still have a quorum? And if not, we need to go off the record.

Member Beach: So this is Josie, I'm still on. I know Brad's still on. Jim's still on. There's three of us. We can't go on --

Member Valerio: This is Loretta, I'm here.

Member Beach: We need four. We need four. So just Dave is missing.

Ms. Gogliotti: So do we want to proceed without Dave, or wait for him?

(Simultaneous speaking.)

Member Lockey: Can you take over, Brad?

Member Clawson: Well, I can't, I'm conflicted on this one. I was going to suggest that Josie take over for Dave until he gets back on. I already had to change out one of my phones because my battery went dead. So --

Member Lockey: Okay. Josie. Take over, Josie.

Member Beach: All right.

Dr. Roberts: And in the meantime, Zaida and Nancy, can someone try to get in contact with Dave and see if, you know, he can get back on as soon as possible?

Mr. Barton: This is Bob. Are we still on the record, then, or are we paused for a moment?

Member Beach: No, I think we're still on.

Mr. Barton: Okay. Just let me ask, because I'm little confused about sort of what the end game was here with this particular discussion. Because as Grady mentioned, you know, if they'd, for example, gotten this case or similarly identical case, they would have treated it the same way. And a lot of this, obviously, the discussion comes down to a professional judgment on how you treat those periods when there wasn't a dosimetry record.

I guess I'm wondering, you know, if we were to come across this case again in a dose reconstruction audit, I just envision us bringing forth the same finding or observation however this one pans out. And I'm wondering, you know, I guess what did we really accomplish with going over this case if we're, you know, NIOSH has stated they're going to do it the same way.

I mean do we just agree to disagree and going forward these types of professional judgments should be noted, but not necessarily become the type of discussions repeatedly that we have over and over again?

I know each case would be different, but I'm just wondering going forward -- I mean we can close this out and move it on, move on to the next one, but I'm

wondering if a case came up like this again in the future, I mean how do we deal with that? Just note it as a professional judgment, briefly discuss it and then move on, just sort of like we did here today, or is that something that we shouldn't necessarily be pointing out?

I guess I'm just confused how we sort of resolve, not just this case, but as a general rule going forward because, you know, part of the subcommittee is to look at the actual procedures themselves that would direct the dose reconstruction to reach certain decisions. And as Grady noted, they would have in theory reached the exact same decision were a case like this to come up again. So I guess I'm just a little confused what the sort of conclusion to this is beyond closing it and moving on.

Chair Kotelchuck: I wonder --

Mr. Calhoun: This is Grady. Bob, I think it can't hurt to discuss it, you know? I don't think that this discussion's going to hurt. It clarifies it and, you know, where you guys are coming from and where we're coming from in future cases. I don't mind discussing these things.

Mr. Barton: Right.

Member Lockey: This is Jim Lockey. I think you're right. I think when it comes up again, we discuss it again, because each situation may be a little different, maybe subtly, that pushes us one direction or the other. I think they deserve to be discussed when they come up.

Chair Kotelchuck: Except, Jim -- Dave, I'm sorry, I got cut off by the way for a moment. But what we're looking at are -- we're looking at dose reconstruction of 1 percent of the cases that NIOSH is handling, the dose reconstructions. So, I mean, it is a concern,

what do we do if it came up again? And the answer is it would come back here.

Well, one percent chance it will come back here, 99 percent chance a dose reconstructor at ORAU would go over it and follow the rules, which they obviously have. And they put thought into this. This is a thoughtful exchange.

Member Lockey: Right.

Chair Kotelchuck: I think -- and let me ask, is this something that the Procedures Review Subcommittee might want to look into whether there needs to be a -- whether this kind of a decision has an impact beyond the cases that -- these cases that we're looking at, and therefore, there should be some sort of change in the protocol? We can't do much.

Ms. Gogliotti: I don't think that you can even proceduralize something like this. This is professional judgment.

Member Lockey: No.

Member Beach: No.

Chair Kotelchuck: Yeah.

Member Lockey: That's professional judgment.

Chair Kotelchuck: Yeah. Well, and professional judgment we do monitor with the blinds at this point. We are beginning to keep track, but we don't have enough material. We don't have enough data to say anything useful at this point, and we will not for a while. That is one thing that we will hopefully in time, this would come up and we could take a look at other professional judgments.

I do think it makes sense to close it however. That

we cannot do anything further. And we do have a disagreement. But in this case, I am willing to say it doesn't affect compensability. In fact, not the way we try to make decisions, and we avoid that.

On the other hand, here's a case where there is a professional disagreement and that's not terrible. These are complicated cases to do those reconstructions. So I think we can close it. I do buy, Grady, your suggestion that we close it despite the disagreement. Can I ask other Subcommittee Members how you feel about that?

Member Lockey: Jim Lockey, I agree, close it and move on.

Member Beach: This is Josie. I'm going to have to agree because I don't know what the next step would be.

Member Lockey: Right.

Chair Kotelchuck: Yeah. Okay.

Member Valerio: This is Loretta, Dave. I say we close it.

Chair Kotelchuck: Okay. And Brad is conflicted so he's not speaking. So I think we're going to close it. So I'm ruling it is closed. And now it is a quarter after 12, and generally we close around 12:30 for lunch. What is the next one, Rose, coming up? Is that something that may be resolved in 15 minutes?

Ms. Gogliotti: We have three more slides to go, so I would suggest that we just power through this and then take --

Chair Kotelchuck: Okay.

Ms. Gogliotti: -- lunch afterwards if that's --

Chair Kotelchuck: Very good.

Ms. Gogliotti: -- good with everyone else.

Chair Kotelchuck: It's okay with me. Anybody have problems?

Member Beach: No, it's fine with me.

Chair Kotelchuck: All right.

Member Lockey: Good.

Chair Kotelchuck: Good.

Ms. Gogliotti: Okay.

Chair Kotelchuck: Let's go ahead.

Ms. Gogliotti: This one is Tab 584.4, and I don't know if we want to say the site in this particular case because it is such an unusual cancer. It is on the screen there, and I know that there is a conflict at the second site there on the screen.

Chair Kotelchuck: Yes. I'll leave you folks to talk more about it because my screen is not up. I tried going off and coming back on, and it never came up. And I'm going to work on that during lunchtime. So let's proceed as we will as if everybody has access to the information on the monitor. And I will probably not say very much except Chair. So do go ahead, Rose.

Ms. Gogliotti: Okay. In this particular case, we saw that there was a lip correction factor that was applied to the measured shallow dose, but it was not applied to the missed shallow dose. And a lip correction factor is discussed in OTIB-17, and specifically it states, "That a claimant-favorable approach would be to apply a correction factor of 3.6 to the non-penetrating dose component of beta particles." We interpret that to mean that for skin cancers of the lip,

all dose components, whether that be missed, measured, coworker should be assessed using the lip correction factor.

And, of course, the lip correction factor is intended to account for the lips' thinner epidermis layer and other skin locations. And because of that, we believe it's reasonable to conclude that the electron doses below the LOD over 2 would still have the same impact per millirem to the lip as those that were above the LOD over 2. And so, therefore, we believe that it would have been appropriate to apply the lip correction factor to the missed shallow dose in this case.

And NIOSH responded indicating that the missed shallow dose applied for employment at this site -- or is applied. Since the predominate material at this site is uranium and plutonium, no correction factor was required for a lip cancer unless the case was an overestimate.

But they do acknowledge that the correction should have been applied do both dose categories or neither for consistency purposes. So this is kind of a hybrid partial overestimate. And they go on to quote a different part of OTIB-17 that I'll paraphrase.

"The claimant-favorable approach would be to apply a correction factor of 3.6 to the non-penetrating dose component assigned as beta particles for cases with the factor results in a PoC greater than 50 percent, a more appropriate correction factor should be applied." And then it goes on to say, "Beta exposures from uranium are dominated by high energy beta particles, so these cases, a correction factor would not be needed for the lip."

So essentially NIOSH agrees with us that a correction factor should have been applied to both components or neither. And, of course, correcting this doesn't

have an impact on compensation. But we do recommend adding more guidance to OTIB-17 to clarify that that is the intent to improve consistency going forward.

Mr. Siebert: And this is Scott. OTIB-17 is presently in revision. And I've spoken to Matt Smith, we are adding clarification language to the attachment saying exactly that, that it needs to be applied to both or neither when it's not used for clarification. So we are doing that.

Chair Kotelchuck: Good.

Ms. Gogliotti: Fantastic. All we could ask for, so I think it's reasonable to close this.

Chair Kotelchuck: Okay. Good. And I may not have copied down, but this is an observation, is it not?

Ms. Gogliotti: No, it is a finding currently.

Chair Kotelchuck: It is a finding, okay. Got it. Sure, sure. Yeah. Okay. All right.

Member Clawson: This is a Brad.

Chair Kotelchuck: Good. Closed, folks?

Member Lockey: Yes.

Member Beach: Yes.

Chair Kotelchuck: All right, fine, so decided. So it is closed. And we have one more?

Ms. Gogliotti: One more, the last one.

Chair Kotelchuck: Okay.

Ms. Gogliotti: And this is from Tab 585 Finding 2. And it's a Pantex Plant as well as an Albuquerque

Operations Office case. Here what happens was our finding was that the correction factor for the rotational geometry dose correction factor value to the lung was not applied to the missed dose component.

To us, it appeared that it was being applied to the measured dose component. But according to NIOSH, the correction factor of 1.5 was not assigned for either of the measured or missed component to the lungs. They say that the job title of assembly worker, which the EE had in this case, and exposure geometry of 100 percent AP was appropriate.

But they acknowledged that the report should have provided more detail to indicate the reason for this application. And here we quote IG-001, which does specifically address this issue, and I can read that for you if you'd like.

Chair Kotelchuck: Yeah, please do.

Ms. Gogliotti: "The AP dose correction factor values in Appendix A are not the most claimant-favorable for the bone, bone marrow, esophagus, and lung when the dosimeter is worn on the chest. For these organs, if the dosimeter is worn on the chest, multiply the Appendix A values of rote and isolateral by the factors in Table 4.1(a) instead of using the AP value.

In these cases, rote and iso geometries are more claimant-favorable than AP values in Appendix A. However, the correction factors need not be applied if it is determined that the most representative geometry is 100 percent AP or other compensating claimant-favorable determinations have been made in the dose reconstruction."

And here NIOSH is saying that they're using 100 percent AP geometry. But we can't really find evidence that that is true. There is a record that

indicates that 100 percent was used, but that particular file doesn't actually appear to be used to support the doses that were assigned in IREP.

There is another file in the EE's records, it was a complex-wide best estimate workbook. And that workbook shows that a correction factor of approximately 8.1 and 0.7795 was used for the measured and missed doses respectively. But these values don't correspond with any of the AP values for the lung in IG-001.

I will say that our interpretation of the measured dose came from the rotational dose correction factor for 30 to 250 KeV photons is 0.552. So if you were to multiply that by 1.45, you get approximately 0.8. And if you were using Monte Carlo assumptions, that appears to align with the values that were assigned in the workbook because there is such a range there and they were using some sort of Monte Carlo calculation for that. But we don't know where the values came from if they're using 100 percent AP as they claim to. So we need some clarification on that.

Mr. Siebert: Sure, and this is Scott. Yeah, it's 100 percent AP that was assigned. Now we have to look back through the mists of time because this claim was actually done in 2010. This was prior to us using those. So at the time, OTIB -12, the Monte Carlo methods for dose uncertainty calculations, OTIB was being used and that's where those values come from. It's part of OTIB-12 which was applied in the tool at the time.

Ms. Gogliotti: Okay. And I will acknowledge that this is an old case. This particular set had a lot of very old cases which is unusual. But we just don't know where the numbers came from because they don't correspond with the ones from IGO one, and they're not close enough that we would expect that it was

from Monte Carlo alone.

Mr. Smith: Yeah. This is Matthew Smith with ORAU team, and I did take a look at this into the appendices of OTIB-12. And confirmed that things matched up given the uncertainty that was part of this claim. It's a retired OTIB and I realize folks are -- maybe it's tricky to get hands on it. But I did go in and verify that the pre-calculated values for this particular claim were correct.

And as Scott, pointed out, before we had those technology to help with our tools, and currently Monte Carlo runs real time for each claim, back in those days of the project, doing a Monte Carlo calculation was taking a long period of time. And so what we did is we pre-ran a whole bunch of scenarios with different dosimeter uncertainties run against the various organ DCFs and compiled tables, and tables, and tables for each organ based on those parameters.

And what the tools would then do at that time was go and choose these pre-calculated values. So that DCF that you're seeing is what I would call a mixed -- or a calculated DCF that also includes the normal distribution of the air for the dosimetry. So, in any event, yes, we did go double check that and it looked to match up to me just right.

And then the response here from 9/27, based on that energy employee's work, 100 percent AP was assumed. And, Scott, I'll turn it back to you regarding how it was written up in the DR report. But the assumption is based on the work function looks to be appropriate.

Mr. Siebert: Yeah, I have nothing else to at, it's OTIB-12.

Ms. Gogliotti: I'm not familiar with OTIB-12 enough.

That procedure is canceled and I don't know when the last time it was in effect was. But it seems to be higher than I would expect for Monte Carlo alone, but I don't have a way of verifying that because I don't have access to that procedure currently, and it's not posted on the website.

Chair Kotelchuck: So what are we being asked as a subcommittee?

Ms. Gogliotti: Now --

Chair Kotelchuck: There's a finding.

Ms. Gogliotti: It's currently listed as a finding because we could not verify where these numbers came from, and they don't match up with what we expected. NIOSH said that it comes from OTIB-12. We could get our hands on OTIB-12 and verify that if you'd like. Alternatively, we could take them at their word. This is a very old case, and close it out based on that. We're talking about a factor of --

Chair Kotelchuck: That would make me more --

Ms. Gogliotti: -- 1.45.

Chair Kotelchuck: Sure.

Ms. Gogliotti: Okay.

Chair Kotelchuck: It would make me more comfortable if you could get ahold of the OTIB-12 because this is really that you don't have access to something that you would really need to check what they did.

Ms. Gogliotti: If someone --

Chair Kotelchuck: I think I may have missed the last thing you said, Rose.

Ms. Gogliotti: If someone could send it to me, that would be great. We could verify this and get it closed by the next meeting, or potentially even this afternoon.

Chair Kotelchuck: That would be nice.

Ms. Gogliotti: I just don't have access to the --

Chair Kotelchuck: Sure.

Ms. Gogliotti: -- the full database of things that we used to have access to prior to the security --

Chair Kotelchuck: Right, right.

Ms. Gogliotti: -- upgrades.

Chair Kotelchuck: Cybersecurity modification, right. Could somebody send that to her? It doesn't have to be done by this afternoon. We can hold it to the next time. What do other subcommittee members think? Is it worth asking them to run it --

Mr. Calhoun: Well, this is Grady, and let me just answer your question. I think that Lori and Rose have spoken multiple times in the past. So I think Lori can probably, and I haven't talked to her yet, but we can try to find that document and place that in a place where Rose can get to it and go from there.

Ms. Gogliotti: I think that's reasonable. And actually, Lori is in the process --

Chair Kotelchuck: Yeah.

Ms. Gogliotti: -- of trying to get me access to all of these published files that are not on the website currently anyway, so.

Chair Kotelchuck: Okay.

Mr. Calhoun: Okay.

Chair Kotelchuck: So that sounds like a reasonable resolution.

Mr. Calhoun: Okay. And then to me it looks like this might be bordering an observation too, but we'll wait until the end on that.

Chair Kotelchuck: Okay. Shall do, and I'll make -- so note observation. Sure. And other subcommittee members, are you comfortable with that? I am.

Member Beach: Yeah, Dave, this is Josie, I'm comfortable with it. Yeah.

Chair Kotelchuck: Yeah.

Member Lockey: Yeah, Jim Lockey, I am too.

Chair Kotelchuck: Sure, good.

Member Clawson: This is Brad, I'm good with it.

Chair Kotelchuck: Very good. And, Loretta?

Member Valerio: Dave, I'm conflicted.

Chair Kotelchuck: Oh, yes, of course. I wasn't paying careful attention. You're right, you are. Okay. Well, then I would agree, and so this will be left open, rerun OTIB-12. And --

Ms. Gogliotti: In progress.

Chair Kotelchuck: In progress, right. Okay. Excellent. All right. Now we have powered our way to lunch I believe. Let me just see.

Ms. Gogliotti: Yes. That was the last of the Set 29, and so we have three --

Chair Kotelchuck: Okay. Excellent.

Ms. Behling: Okay. This is Kathy Behling. Before we leave all of this, can I ask a question of NIOSH on the previous observation or finding? There was a discussion that OTIB-17 is in the -- or in progress, it's being revised. And I know that when I did a presentation for the full board on procedures that we have already reviewed and OTIB-17 was one that we discussed back in 2018, and at that time, we were told that the revision was coming, that it was around the corner. And I just wondered if NIOSH has any timeframe as to when OTIB-17 will actually be revised.

Mr. Calhoun: This is Grady. I don't have that in front of me, you know, since we got -- we literally have a project plan with 10,000 steps on it, so I'd have to go back and look at that.

Ms. Behling: Okay. Because I do know that there were a lot of findings associated with OTIB-17 and when that was discussed at the board meeting, there were a lot of questions from the board members, and that led to additional changes that were going to be made to OTIB-17. But it's been a long time. And I, you know, it was promised several years ago and I haven't seen any changes yet. Just curious as to what the timeframe may be.

Chair Kotelchuck: Okay.

Mr. Siebert: Well, this is Scott.

Chair Kotelchuck: All right.

Mr. Siebert: I can speak. Part of that is the fact that we're implementing and integrating ICRP 116 into OTIB-17 which was just hitting the streets back in the timeframe you were talking about if I remember correctly, and ICRU 95.

So all that information -- we haven't just been sitting

on 17. We've been working on all that information including the ICRU that just came out last year to roll those together. So it is in the pipeline, it's getting much closer. I can't give a date off the top of my head, but I do know we're way closer and that's the reason it's been held up for that long was the ICRP 116 and ICRU 95.

Ms. Behling: Oh, okay, thank you.

Chair Kotelchuck: Okay. Fine. But before we -- we do have -- Rose, we do have cases from Set 29 remaining, do we not, to discuss after lunch?

Ms. Gogliotti: No. That was the end of Set 29.

Chair Kotelchuck: And we have, however, blinds cases from Set 30, is that it --

Ms. Gogliotti: Correct.

Chair Kotelchuck: -- after lunch? Okay. Very good. So it is now almost 12:40, so let's get back together at 1:40, folks. Adjourned for lunch till 1:40. Is that okay, everybody?

Dr. Roberts: Sure.

Chair Kotelchuck: Okay.

Member Clawson: Sounds good.

Chair Kotelchuck: Very good. Have a good lunch. Speak to you all later. Bye-bye.

(Whereupon, the above-entitled matter went off the record at 12:38 p.m. and resumed at 1:41 p.m.)

Dr. Roberts: Okay. And before I turn it over to you, Dave, I did hear some interference in the meeting here and there, so if people can just make sure that their phone stays on mute if they're not talking by

pressing *6. That would be great. So, Dave, back to you.

Review Cases from Set 30

Chair Kotelchuck: Okay. Well, we're going to start now with Set 30, blinds. So first one I think we call B45.

Ms. Gogliotti: Actually, we're going to start with B47.

Chair Kotelchuck: Okay. That's fine.

Ms. Gogliotti: With this set, we got hit with a cybersecurity update right at the very beginning of this set. And so based on where we were with different cases, we were able to complete three of the six blinds within our normal timeframe. So those are the three that we have prepared for you today.

Chair Kotelchuck: Okay.

Ms. Gogliotti: We're just starting to get up and running again on the remaining three. One of them we're still waiting on a workbook in order to proceed. But the other two we are finalizing now, and so we'll be starting the comparison reports

Chair Kotelchuck: Good.

Ms. Gogliotti: And so you should have those by the next meeting.

Chair Kotelchuck: Good.

Ms. Gogliotti: But I wanted to give you a status update on that.

Chair Kotelchuck: Sure.

Ms. Gogliotti: Okay. These are the blinds. As a reminder, because these are actual claimant files that

we're dealing with, we're going to be extremely vague. Although, we try to remove all PII, some of this information could be used and filtered down. So we won't be saying cancer types and exact dates of employment. All of that's going to be on your screen as a remainder. But we're consciously trying not to say these things. So when we're discussing them, if everyone could also respect that, that would be wonderful.

And so the first case we're going to start with the Savannah River case, and this is B47. And, Ron, do I have you on the line?

Dr. Buchanan: Yes. Can you hear me?

Ms. Gogliotti: Yes.

Member Beach: Rose, are you sharing?

Ms. Gogliotti: I thought I was, but apparently I'm not. Give me a second.

Member Beach: I don't see anything.

Chair Kotelchuck: No, I don't see anything.

Member Clawson: I was going to say, I'm kind of like Dave, I'm seeing nothing here except all of our names.

Chair Kotelchuck: Yeah. Something's loading, something's loading. There we are. There we are.

Ms. Gogliotti: Sorry about that. Got ahead of myself.

Chair Kotelchuck: Not at all. Thank you.

Dr. Buchanan: Okay. Rose, can you go to page 6, it's the --

Ms. Gogliotti: Okay, got that up.

Dr. Buchanan: Yeah. Okay. And go down a little bit. Okay. Okay. This is Ron Buchanan of SC&A, and today I'll be presenting a blind dose reconstruction comparison for an EE that worked at the Savannah River site in the 60s through the 90s, several different periods of employment there.

We see that Table 1-1 on Page 6 lists the cancers. I won't name them, but you can see them listed there. And so we'll analyze those cancers, and we see that at the bottom of the page that the combined PoCs were less than 50 percent. And that was both SC&A and NIOSH, so we'll be comparing two dose reconstruction methods, where they was similar and where they was different.

And so now we'll go to Page 7, Table 1-1, and we see that -- oh, excuse, 1-2. Page 7 and Table 1-2. And that lists the doses and the PoCs of the individual cancers. And we see we have a breakdown of the external and internal doses. And we see that at the bottom of each of the listed cancers, that the total doses in rems there are very similar and the PoCs are very similar.

So we keep going down that list all them till we get to Page 9, and we see that the combined PoC was just under 50 percent for both NIOSH and SC&A. Now we did have a note on our percentage there at the bottom of that page, it says that SC&A inadvertently assigned one cancer constant distribution for the ambient dose rather than the logarithmic which was intended. And when that was corrected, the PoC came up slightly as noted there.

So if we go to Page 11 now, we'll start off with the comparison, and this is in Table 2-1. This lists the methods used by both NIOSH and SC&A for the different types of doses, both external and internal. And what we do is under NIOSH's column, we list the

method used or the documents. And then in the SC&A column, we don't relist them, we just put a dash if we agreed, and that's the method we used in our blind dose reconstruction. If there's a different, then we note that.

And you see that they pretty well all match. We did have slightly number of zeros under missed photon dose. We calculated a few greater than NIOSH did, and we'll go into detail that when we get into the external section. And, again, the IREP, we see that we noted there that we started out constant and log-normal, and found out it should all be log-normal and did that correction.

So that takes us to the external doses on Page 13. And so we had the general arrangement of doses, we had recorded photon dose. And the worker was monitored during quite a bit of the period of employment. Not all of it, but some of it. And then there was some of the later years when there was some missing periods of badging, and one year that was not badged. So look into detail on that.

We see that NIOSH used the recorded doses, assigned it as 3250 KeV, and also as greater 250 KeV according to the Savannah River site TBD using the correct dose conversion factors for the cancers.

And so we both, NIOSH and SC&A applied the photon adjustment factor of 1.119 for prior to '86, and 1.039 for the year 1986. And NIOSH and SC&A assigned essentially the same recorded doses, slight difference in rounding when using the adjustment factors, but the doses were almost alike.

There wasn't a whole lot of recorded dose for this worker, brings us down to Section 3.2 on Page 13. And to missed dose, there was quite a few missed doses, or not missed in that they didn't record them.

It was to less than LOD over 2, and so that assigned as a missed dose. And so NIOSH used a large number there as shown.

And now that's divided up into open window which is where the film is almost directly exposed or the TLD and it detects both a high and low energy, and whereas a shielded, the S, detects only the higher energy photons. And, of course, missed dose, according to OTIB-17, is assigned as 30 to 250 KeV photons. And we see that NIOSH assigned those open windows and shielded windows a number, and the LOD values are listed there in Table 3-1, for all the years that the worker was monitored. And then the final dose for that year in the right-hand column.

And we see that SC&A did a very similar process. On page 14 is a little bit of detail. You see we got a similar number of missed photon doses, slightly greater than NIOSH used, and our distribution between the open window and shielded is slightly different. This is detailed in Table 3-2 of the same information I just discussed for NIOSH, and we see that they're similar, but not identical.

So on page 14, second half of the page, we have a comparison of NIOSH and SC&A missed dose, and we both used the same guidance in the SRS TBD. Now it's a rather lengthy process and complicated when you get OTIB-17 and the SRS TBD, and you try to figure out what is considered open and what is considered shielded readings and one half LOD.

And so sometimes dose reconstructors come up with slightly different values. And in this case, SC&A did especially during the gaps. If there was a gap in year, which there was in this case, you have to fill in the gaps, and NIOSH counted those gaps as open window. SC&A counted them as shielded.

And so that gave a slightly different number and also dose. And you can see that at the bottom of the page. SC&A assigned a slightly lower dose than NIOSH did because of the counting of the open window and the shielded window.

So it brings us to Page 15 which is missed shallow dose. Not that was for the 30 to 250 KeV photons, missed shallow dose in Section 3.3 is for the greater than 15 KeV missed electron shallow dose. And, again, in this NIOSH used a clothing attenuation factor for the electrons of 0.855 as recommended in OTIB-17 for any area of the skin that might have been covered, and so that would attenuate some of the electrons, and so they assigned that dose as missed on the top of page 15 to the covered skin. And then to the open skin a slightly higher dose because that dose conversion factor wasn't applied.

Now SC&A used the same number of missed shallow doses, and assumed the same dose conversion factor, and greater than 15 KeV electrons. But, however, analyzing the EE's work was mostly where the worker might have not have worn coverings on the arms, SC&A assigned the -- did not assign the attenuation factor due to clothing to the skin doses and assigned a slightly higher dose to all -- assigned the higher dose to all of the cancer sites. And so did not apply the 0.855 attenuation factor. That was the only difference, otherwise it was the same dose reconstruction.

Now still on Page 15, we look at unmonitored photon dose. Now the worker was periodically not monitored during some of the earlier years as listed there, and during one of the latter years, and a portion of one of the latter years also. And in this case, SC&A and NIOSH both assigned environmental external dose or missed dose for those unmonitored period, and no co-exposure external dose was assigned.

And so in Section 3.5, neutron dose, the worker's job description didn't indicate that the EE was potentially exposed to neutrons, and so neither SC&A or NIOSH assigned neutron dose.

Brings to the occupational medical in Section 3.6, and the worker did have records of occupational medical X-ray exposure from exams. And both SC&A and NIOSH used those records and assigned the doses, and they both agreed and we had no differences in that.

That brings us down to the bottom of Page 15 and ambient dose for the external. The EE wasn't monitored during some of the earlier work periods, and just sporadically during a couple of the last years. And so NIOSH and SC&A both assigned ambient environmental external dose for this period.

And now SC&A assigned missed dose during one of those short periods to fill in the gap, whereas, NIOSH assigned an ambient dose. So it made a difference. And NIOSH used the guidance in Procedure 60 on Table 3.4-1 of SRS TBD to assign the doses. There it's given on top of Page 16.

SC&A used the same documents to assign dose, the only difference was a few months in one of the years they assigned missed dose instead of ambient dose, so that resulted in them assigning a slightly lower ambient dose and -- total ambient dose than NIOSH's there in Section 3.7.3 on Page 16. So the external dose was fairly compatible. Both NIOSH and SC&A assigned very similar doses.

So that brings us to Page 17 which is occupational internal dose. And so the records indicate that because of the worker's job description, that the whole body count -- they had only one whole body count one year in the later employment period, and

was monitored for tritium during one of the later years too.

And the results of a whole body count indicated that fission activation products below the detection level, and most of the tritium bioassays were below the detection level except several were above the detection level. So we'll break those down into those two components.

And so we have Section 4.1 is tritium on Page 17, and NIOSH used the OTIB-11 to assign measured and unmonitored tritium skin doses from all the tritium bioassays that year. And it was assumed that the worker might have been exposed before that, so NIOSH assigned tritium dose from the earlier monitoring period through the time of the tritium bioassays. And so they assigned it as less than 15 KeV electrons with a triangular distribution.

And SC&A went through the same process, used the same tritium bioassays from the same year, and assigned it using OTIB-11. And the tritium doses from uranium -- or urine workbook to assign measured and unmeasured monitored tritium dose. And they assigned it for the same period during all the time that the worker was monitored for external dose. And so they assigned it as less than 15 KeV electrons, and assigned a dose that was slightly -- well, it was lower than what NIOSH assigned. About half.

So we see on Page 17 there in 4.1.3, we have a comparison of the tritium assignments and assumptions. And we see that we used the same information and the same workbook. However, essentially, SC&A used the last LOD or minimum detectable activity divided by two that was listed for the last bioassay which was 0.1 microcuries per liter.

Whereas, NIOSH went back and varied the minimum detectable activity from the earlier year through and stair-stepped it to the last year. And so what this did was that made NIOSH assign a larger intake for the missed dose, and so that resulted in NIOSH assigning a larger dose than SC&A did.

That brings us to Page 18, Section 4.2 for fission product intakes. Now NIOSH and SC&A viewed the whole body count that was done in the later year differently. NIOSH identified the single whole body count as a potential monitoring for potential exposure. And they used the nuclide chooser workbook and found Type M europium-154 to be most claimant-favorable and assigned it a year prior to the whole body count through -- to the whole body count. And the doses were less than 1 millirem in the IREP.

And so now the rest of the employment, NIOSH used the guidance in the Savannah River Site TBD and assigned fission products equal to the assigned tritium dose for each of the cancer sites. And so what the SRS TBD recommends is that if you don't have fission product monitoring, you assign a dose that's equal to the tritium dose and assign it as greater than 15 KeV electrons with a triangular distribution as a missed dose.

And so we agree with that, and that's essentially what we did also. However, SC&A viewed the whole body count appeared to occur in between -- this worker had a number of periods of intake -- I mean of working, and so it looked like that the whole body count might have occurred in between employment periods, or just before or just after an employment period.

So SC&A took this as a pre-employment or termination baseline whole body count, and did not

assign mixed fission products from that body count itself, but instead assigned mixed activation and fission products during the whole period using the tritium dose as greater than 15 KeV electrons with a triangular distribution.

And so, of course, this resulted in SC&A assigning a slightly lower fission activation product dose. On Page 19, we do a comparison there in 4.2.3. And we see that we both acknowledge the whole body count, treated it slightly different, and assigned it doses equal to the tritium dose when we felt it was appropriate. But there's a little difference in what we interpreted the whole body count to mean, or why it was done.

So that brings us on Page 19 to environmental intakes on Section 4.3. And so NIOSH used the maximum Savannah River Sites statewide environmental intake for tritium, Iodine-131, plutonium, uranium from Naval Sea Base 17 of the TBD for chronic annual dose workbook, CADW. And tritium was assigned for the years when missed or bioassay tritium was not assigned.

Iodine, plutonium, and uranium environmental intakes were assigned for all years of employment because the EE wasn't monitored for these radionuclides during those employment periods. And so NIOSH assigned it for those years, and prorated for the years of employment of course.

And assigned a tritium dose as less than 15 KeV photons. The plutonium and uranium as alpha. And iodine 131 as greater than 15 KeV electrons. And assigned that dose as stated in the middle of the page with a log-normal distribution.

Now SC&A used the same document, the Savanna River Site statewide environmental intakes for

tritium, iodine, plutonium, and uranium from the same table. And now in this case as an efficiency measure, SC&A assigned all those nuclides for the complete appropriate period that the worker was monitored for external radiation, and assigned him the same, less than 15 KeV electrons for tritium and et cetera. And so SC&A assigned a dose there listed at the bottom of the page as, of course, with a log-normal distribution.

And now the reason that this was slightly greater in the comparison on Page 20, we compare that SC&A assigned a dose that was somewhat larger, and not a whole lot, but somewhat larger than NIOSH assigned. And the reason for that mainly is that SC&A assigned environmental tritium for all years in employment. Whereas, NIOSH cut out the section that the worker was assigned missed or positive tritium intake. And so that gave SC&A a larger environmental base dose.

Now we see on Page 20, we discussed OTIB-49 Super S type plutonium that's retained longer in the lungs, but it's not in other organs. And for these cancers for this worker, it did not apply, and the other types of plutonium resulted in a greater dose. And so that was used and Super S was not applied.

So that brings us to Page 21 which is decision points requiring professional judgment, and we've already seen that today, came into play a number of times. And when two separate groups do a dose reconstruction, you're always going to have some judgment calls. And we see that we had two of the main ones.

And this dose reconstruction was, number one, was the application of the clothing attenuation factor, which depends on whether the worker may have had the arms covered or not. And we see that NIOSH

assumed that they did on certain of the cancers, and SC&A said we don't know so we're not going to apply the attenuation factor. And so that made SC&A assigning a slightly greater measured shallow dose to some cancers as compared to what NIOSH assigned.

The other judgment call was unmonitored tritium dose. They used identical records. However, NIOSH assigned it using a stair-step IMBA values. Whereas SC&A used the last bioassay IMBA to assign it for the whole period. And that resulted, of course, in SC&A's assigning a slightly lower dose than NIOSH. And this also dominoed down into the fission products depending on the tritium dose.

So that brings us to the summary conclusion on Page 22. We see that Table 6.1 compares the total doses and resulting PoCs calculated by NIOSH and SC&A on behalf of this case. We see that the doses, like I said at the beginning, were very similar. And Table 6.2 shows the comparison of the combined PoCs, they're quite similar. And that the main difference in the external and internal dose in PoC values arose from what we have listed on Page 22 there.

We take missed dose depending on how you interpret some of dosimetry readings, how you fill in the gaps, exactly how many open windows and shielded windows missed dose you get. And then also if you fill in the gaps with environmental or missed dose brings you to a slightly different numbers.

The doses were very similar but not exact. We stated unmonitored tritium, we just talked about there that NIOSH just assigned unmonitored tritium to periods that the worker wasn't monitored. Whereas, SC&A assigned it through the whole employment period. Plus they used the last IMBA. Whereas, NIOSH used a stair-step IMBA.

And let's see, Page 23 then, we have the last differences and environmental intake, and I've covered that a little bit that tritium was assigned only during the time that the worker wasn't monitored for NIOSH. Whereas, SC&A assigned it throughout the full employment period. And that gave a slightly greater dose for SC&A than it did for NIOSH.

So, all in all, the doses are very similar, the PoCs of each individual cancer is very similar. And the final PoC, combined PoC was very similar for both dose reconstruction methods. So with that, I'll open it to questions.

Chair Kotelchuck: If I may comment, another fine level of agreement thinking about what we talked about earlier at the board meeting, the last board meeting. The NIOSH was within 1 percent -- it was 49.4 percent, within 1 percent of changing the compensation decision. And SC&A got the same compensation decision within 1.3 percent of NIOSH's. So, awfully good agreement for something where our sensitivity would -- or where the compensated -- where we were near the compensation point. So, good. Really good job. Other comments or questions?

Member Beach: I agree, Dave. I don't have any questions. This is Josie.

Chair Kotelchuck: Yeah. Yeah.

Member Valerio: No questions here, Dave. This is Loretta.

Chair Kotelchuck: Yeah. Okay.

Member Clawson: This is Brad, no questions. I think they both did a fine job on this.

Chair Kotelchuck: They did, I agree.

Member Lockey: Jim Lockey, I agree with that.

Chair Kotelchuck: So I think we accept this and unanimously, and we're ready to move on. And congratulations, good job.

Dr. Buchanan: Thank you.

Ms. Gogliotti: Thank you, Ron. Okay. The next one we have here, oh, there we go. Let me get it ready for you here. It is an Oak Ridge sites case, and Kathy's going to present it.

Chair Kotelchuck: Okay. This is B-40 --

Ms. Gogliotti: Eight.

Chair Kotelchuck: -- five or six?

Ms. Gogliotti: Eight. Forty-eight.

Member Beach: Forty-eight.

Chair Kotelchuck: Oh, of course. Pardon me, of course.

Ms. Behling: Okay. If you're ready, this is Kathy Behling from SC&A. And Rose --

Chair Kotelchuck: Sure.

Ms. Behling: -- we can start on -- okay. We can start on Page 7.

Chair Kotelchuck: Fine.

Ms. Behling: Okay. This is going to be a process, so a lot going on here. All right, we're going to start. As Rose said, this particular case, the EE worked at the Oak Ridge National Laboratory, or the X-10 facility, and the National Security Complex Y-12 in Oak Ridge.

Table 1-1 shows you the cancers that the EE was diagnosed with. And if we move on to Page 8, that is our Table 1-2, which compares NIOSH and SC&A's dose reconstruction. And although there were some differences in the calculated doses, which we'll discuss as we go through each dose component, the total doses were similar for each cancer, and the combined PoCs, which are shown on Page 9, were close and on the same side of compensation. In other words, this case was -- PoCs were less than 50 percent.

I'm going to move on to Page 10 where Table 2-1 shows the EE's employment history and occupations. And as you can see, the individual worked off and on for 16 years. And then at the end of his employment, there was a 10 year period -- consistent 10-year period at X-10.

The EE was monitored for external and internal exposure. And at the bottom of Page 10 you can see the primary guidance documents that were used to do these -- that both SC&A and NIOSH used to do this dose reconstruction.

If we move on to Page 11, that's our Table 2-2, which summarizes the documents, and assumptions, and dose parameters that were used by each method. And as Ron pointed out, if SC&A and NIOSH did the same thing, we put a dash there and it shows that the process was the same.

I'm not going to go into detail on this table because we'll discuss it as we go through, but if you look down through this table, you can see in most instances the procedure and the process was the same. Assumptions pretty much the same. There's just one significant IMBA issue that I'll point out in the internal.

Okay. So we will move on then to Page 15, and start with the external doses. Okay. And as I mentioned, the EE was monitored for penetrating and non-penetrating dose based on quarterly exchanges in the early years, and most of the records indicated some greater than LOD over two readings, some positive readings.

However, during the later years of employment, most the external monitoring records shows results less than LOD, and therefore, they were treated as missed dose.

NIOSH assumed work locations that are cited in the second paragraph there, if we can just back up a little bit, Rose, because this always is an important aspect as to where do we think that this individual worked. And based on NIOSH's assumptions, those work location assumptions, for the early years they assumed that the photon dose was 30 to 250 KeV. However, in the later years based on the TBD information, it was assumed 25 percent, 30 to 250 KeV, and 75 percent greater than 250. And that was based on their decision as to where this individual worked.

Shallow dose was also assigned as less than 30 KeV for certain years for the earlier year, and greater than 15 KeV electrons for later years. Now SC&A's assumptions were a little bit different, and they resulted in assuming that all photon doses were 100 percent 30 to 250 KeV, and all of the shallow doses were electrons greater than 15 KeV.

So we'll move on to recorded photon doses, and there were positive recorded doses at the X-10 facility. And both NIOSH and SC&A calculated record photon doses using identical methods and deriving nearly identical doses. Both assumed the same surrogate organs and DCF values. And both also assumed the

EE worked with glove boxes during the early years and applied a glove box correction factor of 2.19.

NIOSH and SC&A's doses are nearly identical. SC&A entered the doses into IREP as constants for two of the four cancers. NIOSH applied the DCF using a Monte Carlo method which resulted in those doses for those two cancers to be entered as a Weibull distribution. So that was the only difference between SC&A and NIOSH for the recorded dose for X-10.

There were also recorded doses at Y-12. Same methods were used, and nearly identical doses were calculated. Again, there was a difference between entering the data into IREP as a constant and Weibull distribution because of the Monte Carlo approach used by NIOSH. And SC&A entered all their doses as constant.

For missed photon dose at the X-10 facility, NIOSH calculated or counted 73 zeros. They used an LOD value of 30 millirem for the early years and 10 millirem for the later years. They also applied a glove box correction factor of 2.19, and for five years of the employment.

A 100 percent of the photon dose was entered for two of the cancers as 30 to 250 KeV. And for the other two, it was entered as 30 to 250 KeV for the early years, and the 25/75 percent split between 30 to 250 and greater than 250 for some of the later years.

Again, because NIOSH applied this Monte Carlo methods, they entered the doses into IREP as a log-normal distribution with varying GSDs. NIOSH doses are shown in -- you can see them there in Section 3.2.1. Okay. Okay. So there are the NIOSH doses.

SC&A calculated missed doses and they calculated them based on -- they counted 75 zeros as opposed to 73, fairly close. They also used an LOD of 30

millirem for the early years, and 10 millirem for the later years. And also applied a glove box correction factor for five years.

Doses were entered as 100 percent 30 to 250 with a log-normal distribution and a GSD of 1.52. And, obviously, SC&A's doses are slightly higher, and that's due to the number of zeros that were counted. A little bit of difference there.

Okay, moving on to missed photon doses at Y-12. Missed photon doses were calculated in a similar method and with similar assumptions. Both counted 13 zeros. They applied the appropriate DCF values, and identical or near-identical doses were calculated. SC&A entered the data into IREP as a log-normal with a GSD of 1.52. And again, the NIOSH distribution for the geometric standard deviation varied because of the Monte Carlo.

Okay. Recorded shallow dose. NIOSH assumed that the recorded shallow dose was greater than 15 KeV electrons three years of employment. And for the remaining years, they assumed that the shallow dose was a low-energy photon, less than 30 KeV photon.

NIOSH applied a clothing attenuation factor of 0.855 to one of the cancers that would be considered to be protected by clothing. And they also applied a film badge overresponse correction factor of 0.6. Again, two of the -- because of the Monte Carlo method, two of the doses were -- two of the doses associated with two cancers were entered as a Weibull distribution and a constant for the others.

SC&A also calculated shallow dose by subtracting penetrating from the non-penetrating, but they assumed 100 percent electrons greater than 15 KeV. They also applied a clothing attenuation factor for one of the cancers, and all doses were entered as a

constant distribution.

In this particular case, because NIOSH assumed -- or SC&A assumed that the shallow dose was all electron dose, they were only assigned to two of the cancers because it wouldn't have an impact on the other two cancers.

All right. Moving on to missed shallow dose. There was no missed shallow dose, and neither SC&A nor NIOSH assigned any. There was a recorded neutron dose, the EE was monitored for neutron dose for one year of employment at X-10. Both assigned missed dose based on a neutron to photon ratio.

NIOSH stated that they multiplied the photon dose by a 4.39 ratio and appropriate DCFs. They also applied an ICRP 60 correction factor of 1.9 for two of the cancers. For the other two cancers, based on our assessment of what was done, it appears that NIOSH used a photon dose times the Monte Carlo DCFs, and an ICRP 60 correction factor of 1.9, and a glove box correction factor of 2.19. And that led us to believe that the neutron to photon ratio that they used was 1.1. I know that that was specifically stated.

If we move on then to Page 19, SC&A calculated their neutron dose based on a neutron to photon ratio of 2.5. That was assuming the work location that they had selected and taking data from attachment D of the TBD. They also multiplied that by the appropriate DCF values, the ICRP 60 correction factor of 2, and a glove box correction factor of 2.19 for two of the cancers. And SC&A's doses are shown in Section 3.5.2.

Now the doses differ just because of the difference in the neutron to -- yeah, neutron to photon ratios that were used. For missed neutron dose, there was one single reading at the X-10 facility where missed

neutron dose was calculated.

NIOSH calculated the dose based on missed photon dose times neutron to photon ratio of 1.13, 1.13. They also applied the ICRP 60 correction factor of 1.9. And the doses were entered into IREP as a log-normal distribution with a GSD of 1.52. And that dose is shown in Section 3.6.1.

In addition, for the other cancers, a missed photon dose was based on neutron to photon ratio of 1.2, and again, applying the ICRP correction factor, and glove box correction factor. And doses are shown in the last paragraph of Section 3.6.2, and were entered as log-normal distribution.

SC&A calculated the missed photon dose based on a neutron to photon ratio of 2.5. Also applied the ICRP correction factor, a glove box correction factor, and the doses were entered the same as a log-normal distribution with a GSD of 1.52.

Okay, we can move on to Page 20. Again, the differences in doses between SC&A and NIOSH is that the difference in the ratios, the neutron to photon ratios that were used by the two different methods.

Occupational medical dose, the individual did have 16 occupational medical records, and SC&A and NIOSH used the same methods and the same assumptions, and calculated doses in accordance with TIB-6. And that resulted in them identifying or calculating the exact same dose, and they were both -- both methods would enter those into IREP as a normal distribution with a 30 percent uncertainty. And no onsite ambient dose was calculated by either method.

Okay. We're going to move on to internal. All right. At the X-10 facility, the EE was monitored by urinalysis for gross alpha, uranium, and strontium.

And also there were fecal samples for thorium. And at Y-12 there were urinalysis for uranium and lung counts for uranium and thorium.

So to calculate doses associates with these bioassays, that there were nine urinalysis for gross alpha. One of those showed a result that was greater than the MDA value. So to calculate those doses, NIOSH assumed the exposure was to plutonium 239 and they assessed a chronic intake when the results were less than MDA or considered a missed dose.

And a one acute intake regime was used to calculate the positive results. It was determined that type Super S resulted in the highest dose, and doses are shown in Section 4.1.1, and were entered as a log-normal distribution with a GSD of 3.

When the EE was not monitored but had positive external doses, NIOSH calculated a co-exposure dose based on 50th percentile of the plutonium-239. And that was calculated for a six year unmonitored period at X-10. Again, they used type Super S solubility, log normal distribution, and all doses were approximately 200 millirem.

Okay, if we move on to Page 22. SC&A also assessed a chronic intake for plutonium results that were less than MDA. They assed Type S and then adjusted for Type Super S, and that data was entered as a triangular distribution where the minimum dose is zero, the mode is the calculated value, and the maximum value is twice the mode.

SC&A also assumed an acute plutonium intake, found Type Super S to be most claimant-favorable, and entered the data into IREP as a log-normal with a GSD of 3. And you can see most of those doses were around 3 rem. That's measured in missed doses together.

In addition, SC&A also calculated co-exposure dose, but for three years of unmonitored period at X-10, also based on a 50 percentile of the co-exposure. And they modeled M, S, and Super S, but inadvertently did not exclude the button in CADW to -- and included all doses from the three solubility types. But they did not adjust for Type Super S. And this resulted in doses of less than 100 millirem that were entered into IREP as a log-normal distribution.

Okay. If we move on to Page 23. For chronic exposure, NIOSH used an MDA value of 0.26 dpm for 24 hour sample, and they took that value from Table 5-9 of the X-10 TBD. SC&A calculated their chronic exposure based on an MDA of 0.45 dpm for 24 hours, and they took that value from Table 2 dash -- no, I'm sorry, Table A-2 from Appendix A of the X-10 TBD. And SC&A's doses were nearly double because of the difference in the MDA values used.

Co-exposure dose was calculated by SC&A for three years, where NIOSH calculated it for six years. And NIOSH used Type F, S, or Super S plutonium. And SC&A used solubility from three types of -- the three solubility types. And Table 4-3 shows the differences in the co-exposure doses as an example for one of the cancers.

Okay, moving on to Page 24. The EE was monitored for strontium by urinalysis at X-10. So NIOSH assigned a strontium and associated fission product dose for five years when the EE was monitored. They assumed two chronic intake periods. One for the missed portion of the dose of those values less than MDA, and one that included this sample that was above the MDA value.

The missed dose was calculated based on an MDA value of 6.3 dpm per sample from Table 5-9, it was previously done. And the greater than MDA value was

adjusted for a urine volume of 1.1 liters.

NIOSH also calculated an unmonitored dose for three years based on co-exposure data from OTIB-34. And using OTIB-54, which is the fission and activation product workbook, NIOSH calculated associated fission product doses that are shown in the last paragraph of Section 4.2.1.

Okay. Moving on, SC&A also assigned strontium and fission product doses and assumed two chronic periods. The missed dose was based on an MDA of 12.26 dpm per hour from Table A-2. And measured results were adjusted by a urine volume of 1.4 liters as opposed to NIOSH's using 1.1 liter.

SC&A's doses all resulted in less than 1 millirem, and they were not included. SC&A also used the OTIB-54 workbook to calculate the associated fission product dose, and that resulted in doses somewhere around 40 millirem.

Okay. And in this case, NIOSH's doses were slightly larger, and that was primarily due to them including co-exposure doses for three additional years that SC&A did not include those doses for.

Okay. Uranium and thorium at X-10 was measured by urinalysis and fecal bioassay. NIOSH calculated urine uranium doses by comparing the bioassay results to uranium MDA values, missed doses, and selected the higher for each year.

This thorium was based on the fecal sample results. Type F was assumed as the highest for the uranium and Type M was the higher solubility for thorium. All doses that were calculated by NIOSH were about 50 millirem, and entered as log-normal distribution with a GSD of 3.

Okay. They also calculated an unmonitored dose for

three years that was based on 50 percent of the X-10 co-exposure data, and that resulted in a very modest dose. SC&A used the uranium bioassay data to calculate the doses since there were several results that were greater than MDA. They didn't compare missed to actual recorded. They used the bioassay data.

Type S was assumed at the most claimant-favorable for uranium. And the thorium dose was based on the fecal bioassay. Type M thorium was -- the Type M solubility was the higher, you know, resulted in the higher dose. All the thorium and uranium doses were calculated to be about 50 millirem. And they were also entered into IREP as a log-normal distribution with GSD of 3.

Okay. In addition, SC&A calculated unmonitored uranium dose based on 50 percent of the co-exposure data at X10, and compared the F, M, and S solubilities, and all doses that were calculated were less than 1 millirem. NIOSH and SC&A used similar methods and derived doses that were nearly identical for this component.

Okay. Environmental internal dose at X-10, NIOSH assigned environmental internal dose for the periods when the EE was not monitored. In addition, they assigned a potential exposure from cerium, tritium, radioiodine, ruthenium based on data in the X-10 TBD, and that resulted in a modest dose.

SC&A did the same thing. They used the CADW default general area environmental data, which also includes the cerium, and iodine, ruthenium, tritium doses, and calculated same very modest dose.

Okay. Uranium intakes at Y-12. As we mentioned, the EE was monitored for uranium via urinalysis and lung counts. And if we go to Page 27, NIOSH compared

the bioassays and the lung data to derive their uranium 234 intakes. They compared all of the solubility types and found Type M to be the highest. And they also included the recycled uranium component based on ratios identified in the TBD. And all doses were around 100 millirem.

SC&A followed a similar method. However, they used both the bioassay and the lung count data to calculate the uranium intakes. They concluded Type M resulted in the highest dose, and they included the associated recycled uranium component and derived similar doses.

NIOSH entered their doses as a log-normal distribution while SC&A entered it as a triangular distribution. So that's a little difference there. The slightly increased or higher dose that was calculated by SC&A was because of SC&A using both data sets to derive the U-234 intakes.

Okay. Let's go on. Thorium intakes at Y-12, the EE was monitored for thorium through lung counts. All of the lung counts showed results less than MDA. So NIOSH calculated a missed thorium 232 dose using one half the MDA value for the lung counts. They compared Type F, M, and S solubilities. Type M resulted in the highest dose.

And they entered this dose for the years of the lung -- that the lung counts were taken. However, they inadvertently added one additional year to the lung count data one year after the actual lung count had been done. So they added one additional year of dose calculated in their thorium.

So they also calculated a thorium 228 chronic intake which is 80 percent of the thorium 232 based on the TBD guidance, and that resulted in all doses being somewhere around 2.5 rem. And that was entered

into IREP as a triangular distribution.

Okay. SC&A employed the same methodology. They used MDA values. Type M was the most claimant-favorable. They also calculated the thorium-228 dose based on 80 percent of the thorium 232. Their doses resulted in somewhere around 400 millirem and were entered as a triangular distribution. And the significant difference between NIOSH's doses being so much higher than SC&A was just the additional year or exposure that was inadvertently entered into IREP.

Okay. Environmental dose at Y-12. NIOSH assessed environmental dose for the unmonitored Y-12 period of exposure -- or employment and based it on TBD guidance, and that resulted in doses of less than 1 millirem. SC&A did the same thing, used CADW general area environmental intakes, and the doses were all less than 1 millirem. SC&A did not include those doses in IREP. NIOSH choose to include those doses.

All right. We are done to Page 2, decision points. And as is the key thing -- the key decision point that I know I always talk about is the person's work location. We have to dig through a lot of records and try to come up with some clues as to where did this person work.

In this particular case, SC&A and NIOSH made similar work location decisions in the early years, but a little bit different in the later years. And what that really did was just change the energy distributions that were used for the photons. It didn't really have an impact on the dose. But it can have an impact on the PoC.

Also, the assignment of shallow dose. Should it be assigned as all electron dose greater than 15 KeV, or

should it be assigned as low energy photons? And a lot of that has to do with whether you determine if the individual was monitored for the internal gross alpha during the time period because of exposure to Plutonium.

NIOSH assumed, yes, that there was exposure to plutonium, and assumed the less than 30 KeV photons. And SC&A assumed that all of the shallow dose was the greater than 15 KeV electrons.

Okay. I can go through the summary of conclusions. You can look at the table. I think we've touched on of the points. The only thing I do want to point out in this case, and there may clearly be a justification for -- the point that struck me was that the MDA values used by SC&A and NIOSH were different, but they were taken from the same document.

And it struck me that the blind dose reconstruction process really was designed to ensure that the guidance is clear enough that each dose reconstructor will make similar decisions, and that there really are no inconsistencies.

And in this particular case, it looks like that, obviously, the two methods choose MDA values from different locations that were quite different. And even if this can be justified and NIOSH dose reconstructors know exactly what to take and where to take it from, it does show that this blind process to me is working.

It's highly improbable that we would have pointed out or we would have identified something like this in doing a dose reconstruction review. It's really this blind process that brought this MDA value to light in my mind.

So there it is. And I also just want to make mention, I do go through how all of this data, the uncertainties are entered, as tedious as it is, how the uncertainties

are entered into IREP just because that does play a role in the final PoC values.

But in this particular case, final doses that are shown there on Page 31 and PoCs matched fairly closely. Though I do think we do need to address this MDA value issue. So that's it, sorry to go on so long. But if you have any questions, I'll attempt to answer them.

Ms. Gogliotti: Thanks, Kathy.

Ms. Behling: You're welcome.

Member Clawson: This is Brad. I think you did an excellent job of explaining everything to it.

Ms. Behling: Thank you.

Member Clawson: And, you know, some of those things I think can also be NIOSH's side as trying to be as claimant-favorable as possible, too. But it's amazing how two independent people can come this close. I think this is a really, really good show for us to tell you the truth.

Mr. Siebert: This is Scott for ORAU team. Just to point out that the question on the MDAs, the table that's given in the text of the TBD, which is Table 5-9, those are the values for the MDA that we used in the dose reconstruction report.

The name of the table is actually Recommended In Vitro MDAs, and that section in the text actually states they are the historical MDAs. It goes on to detail that Attachment A is given that gives more supporting information for discussion of it and a decision for the values that are in that table.

So, granted, there are additional values in the attachment, but they're source material for the

determination of the recommended MDAs which are in the table in the text. So that's why there's a difference.

Ms. Behling: This is Kathy. So in other words, the dose reconstructor would not use the Table A-2 MDA values. It is just there to support the data that is in Table 5-9?

Mr. Siebert: Correct.

Ms. Behling: So you would not have a dose reconstructor that would inadvertently use table A-2 for calculating any of the MDA values or -- yeah, assuming any of the MDA values?

Mr. Siebert: Well, I'm not going to say nobody --

Ms. Behling: That would --

Mr. Siebert: -- can ever inadvertently do anything. But, yes, they know to use that table in the TBD.

Ms. Behling: Okay. Yeah, it -- okay. Any questions from the Board?

Member Beach: Kathy, this is Josie. Does that satisfy your question on the MDA values in the Table 5-9?

Ms. Behling: Well, you know, SC&A doesn't do dose reconstructions obviously as often as a full dose reconstruction. We just do the blinds as we were given them. It did strike me that we selected the values from Table A-2.

I'm hoping that the guidance in the TBD is clear enough that the NIOSH and ORAU dose reconstructors understand that they are supposed to use. And Scott's correct. Table 5-9 does say recommended in vitro MDA values. So I think that answers that. I don't know if Rose or Bob have any

additional comments.

Ms. Gogliotti: I'm not familiar enough --

Mr. Barton: Well, this is Bob. I do agree. I mean you do have two tables. And it's been a while since I looked specifically at that TBD. But as I recall, the values in the attachment that SC&A used seem to be more specific to given facilities and time periods. And I think that might be the reason why we opted for that as in they seem to be a more specific value to use for this specific case.

However, if the intent of that attachment is really just to provide the technical basis for the recommended values in the body of the TBD, I mean I wonder if that's something that's worth clarifying moving forward. I mean I suppose if it's understood by all the dose reconstructors at ORAU, then it's not much of an issue.

But certainly our reading of the technical basis document seem to leave it open for either choice. And that's what I recall. Is that in line with what we're looking at, Kathy? And I think the attachment had many more values for specific locations that we could have chosen from.

Ms. Behling: Well, I don't know that there are a lot of different values, or a lot more values. The only thing I will point out, that Table A-2, the title is MDAs Calculated from Recovered Data for Radionuclides. So I'm not sure that we would have interpreted that as data that should not have been used based on that title.

And like Bob says, I think it needs to be very clear that this is not data that should be used in dose reconstruction. Obviously, we felt it was appropriate. And based on that title, MDAs Calculated from Recovered Data for Radionuclides, I don't know it has

all the same column headings and saying years as to Table 5-9.

And I know that in the past, a lot of the TBDs in various things have appendices that sort of summarize everything for the dose reconstructor to make it a little bit easier rather than paging through, you know, each and every section of a TBD. And they often include an appendix that summarizes data that can be used by the dose reconstructor. So maybe that was our thinking also. Don't know if that helps, but --

Member Clawson: So, Dave?

Ms. Gogliotti: Did we lose him again.

Ms. Behling: I think we may have lost him again. I must have bored him with my presentation.

Member Clawson: Well, I haven't heard any snoring yet, so that's a good sign.

Ms. Behling: Thank you. I know this was quite long and there was a lot of dose components.

Member Clawson: No, I think it was really quite well done myself. I still stand amazed that -- how you guys can at least get this close. I was worried about the distance between them, but I think you went over that very clearly.

Ms. Behling: Great.

Member Beach: I agree with that also.

Dr. Roberts: Do we still have the other members of the subcommittee on? I know I don't hear Dave anymore.

Member Valerio: This is Loretta, I'm still on.

Member Beach: And Josie.

Dr. Roberts: Okay.

Member Beach: I'm still on.

Chair Kotelchuck: Sorry. Here I am.

Dr. Roberts: Okay.

Chair Kotelchuck: Bob, you know what happened? A fire engine came by and I put myself on mute. No, we're here, I think.

Dr. Roberts: Okay.

Chair Kotelchuck: Brad, Josie.

Member Lockey: Jim Lockey. I'm still here.

Chair Kotelchuck: And Jim. Yeah, and Loretta.

Member Beach: Yes.

Chair Kotelchuck: Well, I was going to suggest, incidentally, rather than calling -- it's almost 3:00. We usually take a five or 10 minute comfort break right now and then we have one more blind to go. And --

Member Beach: So we're finished up with this one, Dave?

Chair Kotelchuck: Yes. Oh, I was saying, yeah, that we accept. And I thought we had agreed. Okay. Oh, of course, I was talking and said, do we accept, and, of course, nobody heard me, which is why I got no response. All right, folks. Pardon me. When you're living in New York City, you've got to deal with the fact that fire engines go by, ambulances, trucks. Noise is prevalent. I'm not living in --

Member Beach: Idaho.

Chair Kotelchuck: Yeah, Idaho, right. So, folks, let's take 10 minutes. It's 2:55. 3:05, we're coming back. And we'll do the last blind. Okay. See you in 10 minutes.

(Whereupon, the above-entitled matter went off the record at 2:56 p.m. and resumed at 3:05 p.m.)

Chair Kotelchuck: Okay.

Dr. Roberts: Well, everybody, I have 3:05. I just want to check one more time if the court reporter has made it back. Okay, excellent.

Chair Kotelchuck: Very good.

Dr. Roberts: And we'll do a quick roll call just to make sure we have the quorum. So, Dave, you're there.

Chair Kotelchuck: Yes.

Dr. Roberts: Josie, are you back?

Member Beach: I'm back.

Dr. Roberts: Brad?

Member Clawson: Yep.

Dr. Roberts: Jim?

Member Lockey: Yes, I'm here.

Dr. Roberts: Okay. And Loretta? I don't hear her yet.

Chair Kotelchuck: But I'm sure she'll be coming back in a moment.

Dr. Roberts: Yeah.

Chair Kotelchuck: And we have a quorum.

Dr. Roberts: Yeah.

Chair Kotelchuck: Okay. Shall we begin?

Ms. Gogliotti: Okay, we've got one more blind for you, and this one is much less exciting than the last one, so.

Chair Kotelchuck: All right.

Ms. Gogliotti: Can everyone see my screen?

Chair Kotelchuck: Not yet. I can't, but --

Ms. Gogliotti: Anyone else?

Chair Kotelchuck: I don't see --

Ms. Gogliotti: It says sharing, but I can try again.

Chair Kotelchuck: Okay. Loading. Okay, looks good. There we are.

Ms. Gogliotti: Okay. Perfect. All right.

Chair Kotelchuck: Yeah.

Ms. Gogliotti: So this is a GSI case, a General Steel Industries.

Chair Kotelchuck: If I may ask, pardon me for interrupting. This is by our designation, B what?

Ms. Gogliotti: Fifty. B-50.

Chair Kotelchuck: Okay. So we skipped around in terms of the, right, because today we --

Ms. Gogliotti: We did because I assign the cases when they come in their case number. And just based on what was in progress when we lost access to the security thing --

Chair Kotelchuck: Very good.

Ms. Gogliotti: -- some cases were further along than others which is why these --

Chair Kotelchuck: Absolutely. Absolutely.

Ms. Gogliotti: -- a little piecemeal.

Chair Kotelchuck: Well, very good.

Ms. Gogliotti: And I think I numbered them, but I was concerned that that would cause problems later on.

Chair Kotelchuck: Right.

Ms. Gogliotti: So --

Chair Kotelchuck: Okay. All right, very good. We're glad you got the three done, life has been hard for getting data in this period. So B-50 it is. And I'm sorry interrupting you, it's General Steel Industries.

Ms. Gogliotti: That's All right.

Chair Kotelchuck: Okay.

Ms. Gogliotti: Okay. So this case, the EE only worked for a short period of time, a few years in the 1960s. And they had a single cancer which you can see here on the screen in Table 1-1. And that was diagnosed fairly recently in terms of cases that we look at.

This was a blind dose reconstruction, and both NIOSH and SC&A had a PoC calculated of less than 50 percent. Therefore, neither one of us came to the conclusion that it was compensable.

Here up on the screen you'll see Table 1-2, and when you look at these, you'll notice something, they are identical. The only difference is the uranium dose. And it is a very small difference. And that is the only

difference is in the uranium in this entire case.

And the reason for that, as we'll get into, this EE did not have any external monitoring results, or internal monitoring results, or X-ray records. So this is entirely assigned dose rather than based on the EE's actual record which tells you how prescriptive the TBD is. And you'll see here our combined PoCs are very close.

Chair Kotelchuck: Yes.

Ms. Gogliotti: Okay. This case, there weren't a lot of guidance documents that we needed to review because there wasn't a lot of manual dose reconstruction that had to happen. The main one that was used here was TBD 6000 Appendix BB, and that's the GSI TBD.

And you'll see here in Table 2-1 the summary of the differences. And you'll notice all the dashes here because we did them identically. The only difference you'll see is in the type of uranium that we assigned and the distribution. And I will go through these quickly because there really isn't any difference.

For occupation external dose, both NIOSH and SC&A used TBD Table 6 for the operation period and Table 11 for the residual period. We use the same dose correction factors from IG-001, and assigned dose in the same way as a constant distribution, and no differences there. Neither of us assigned electron dose, and that's because of the location of the cancer.

Dr. Roberts: Excuse me, I can hear some noise in the background. Please go on mute please.

Ms. Gogliotti: Thank you, Rashaun. Our assigned neutron dose, we both used Table 8 for the operational period. There was no residual period neutron source term so we did not assign residual

period neutrons. But we did assign identical neutron doses which is about 3 rem. The occupational medical dose. Again, the EE didn't have any records.

Both NIOSH and SC&A assumed an annual posterior chest X-ray during each year of employment during the operational period. Neither one of us assigned occupational medical dose during the residual period because they're not covered. And here you'll see we assigned a dose of about 0.3 rem. And for ambient dose, because we assigned dose all during the entire external period, we did not have any assigned ambient dose.

For operational internal doses, again, the EE was not monitored. But both NIOSH and SC&A assigned uranium inhalation and ingestion using Table 10 and Table 11. NIOSH used Table 10 and 11, and when they did their modeling in the chronic annual dose workbook, they modeled dose from Type M and Type S uranium.

And the difference between that and SC&A, SC&A modeled Type F, M, and S. So we modeled an additional solubility type. And because of that, we found that Type S -- F, I'm sorry, was more claimant-favorable than Type M. So we choose to assign Type F while NIOSH assigned Type M.

In both cases, the annual doses were less than a millirem per year, and so neither one of us actually needed to even assign this dose in IREP, but we both choose to. NIOSH assigned theirs as a constant distribution and we assigned as a log-normal distribution. That's the only difference in that case.

The only professional judgment involved came down to the professional -- or the potential uranium solubility types. The appendix BB of TBD 6000 is silent on the appropriate solubility types of GSI.

NIOSH only modeled Type M and S, while SC&A modeled all three solubility types. The difference there is the only difference in this case.

So in summary, you'll see in Table 6-1, all the doses that were assigned in this case, the difference being here in the internal dose section, and that does have a small impact on the PoC. But very modest and you could contribute part of that just to a simple seed selection in IREP which you're going to get some variation no matter what.

Chair Kotelchuck: Sure.

Ms. Gogliotti: Were there any questions?

Chair Kotelchuck: Thanks. We challenged ourselves to go talk to PoCs up right against the 50 percent mark, and again, got agreement. And that's, again, impressive. And that ends for all three today that were reported today. So, good. Are there any questions?

Member Beach: I don't have any on this one, Dave. Josie here.

Chair Kotelchuck: Right, right. Nor do I.

Member Valerio: None here, Dave. This is Loretta.

Chair Kotelchuck: Yeah.

Member Lockey: And none here, Jim.

Chair Kotelchuck: All right. Very good. And I think we're in agreement here, and I think we should just accept -- unless I hear -- I've heard from everyone, too. We'll accept -- okay. Accepted. And I'm impressed. And continues the good record that we were able to show the board at our last meeting.

Rose, you had -- we had asked you at the last

meeting, I did not remember I have to say, but you remembered, which is great, that you had some remarks about choices for cases in the future. And I don't know if you sent out a note or if you just want to tell us for the first time.

Ms. Gogliotti: Sure.

Member Beach: Yeah, we got that.

Chair Kotelchuck: Okay. Of course, I didn't get it, because my machine's out. So everybody else got that?

Member Lockey: Yep.

Chair Kotelchuck: Other folks got -- Rose is --

Ms. Gogliotti: I just kicked out of the Skype meeting. Hold on one second. All right.

Chair Kotelchuck: Oh, okay, sure.

Member Valerio: I'm not sure I got that. Josie, when did you get that?

Ms. Gogliotti: It came through on December 20th, so right before --

Member Beach: Yeah.

Ms. Gogliotti: -- Christmas.

Member Valerio: Okay.

Ms. Gogliotti: It might have gotten lost.

Member Valerio: Okay.

Member Beach: And it was emailed to us. It's also in the work folder for today's meeting. But I know not everybody got to get into that.

Chair Kotelchuck: Right, right. Okay. I'll look for it. There's no need to -- there's no need to repeat. But we should all take a look at it, those of us who haven't seen it. So I think we're ready to plan when we should have our next meeting. We'll finish --

Ms. Gogliotti: Do you want me --

Chair Kotelchuck: -- just a little early.

Ms. Gogliotti: -- to talk about this at all? Or do you --

Chair Kotelchuck: Sure, sure.

Ms. Gogliotti: -- want to keep it in the back of your mind when you're collecting cases? It's entirely up to you.

Chair Kotelchuck: Okay. Well, do others want to have -- people want to make some remarks about that? As I say, I haven't seen it so I don't --

Member Clawson: I'd like -- Dave, this is Brad. I'd like to have Rose just kind of go over it a little bit with us, what her thoughts were.

Chair Kotelchuck: Right. Well, I'd certainly appreciate that. And I assume Loretta would too since neither of us have seen it yet. So do go over it --

Member Valerio: Yes.

Chair Kotelchuck: -- if you would.

Ms. Gogliotti: Sure. Well, at the last DR meeting, we had talked about selecting new cases, and we haven't selected new case sets yet. And I don't know if NIOSH is in a position to provide more cases to us because, at least at the last meeting, they weren't able to access old case files. I don't know if that's still the case.

But we went back and looked at just basic summary statistics on the cases that we've reviewed historically as well as the ones in the past few years just to see what we've been reviewing so far and how that compares to the general population as a whole.

Chair Kotelchuck: Good, good.

Ms. Gogliotti: So NIOSH was not able to provide us with current statistics. Again, the cybersecurity modernization initiative is presenting us problems. But I used the most recent historical data that they had provided us which, unfortunately, is 2015. But a lot of the data I assume follows a very similar trend. And we can make some assumptions and recommendations based on that.

So in this memo, we just looked at a series of just different things, so the PoCs of cases we're looking at, the decade the case was first employed, employment duration, the gender distribution of cases, when the case was initially completed by NIOSH as well as our representativeness of employment sites.

And so in each attachment here, I went over and did a comparison just of what was done. And then my recommendations are summarized in the beginning here, but we can go through each attachment first if you'd like.

Chair Kotelchuck: Yeah. Could you put it up on the screen? Is there --

Ms. Gogliotti: Oh, can people not see my screen?

Chair Kotelchuck: I'm not seeing it.

Ms. Gogliotti: It says sharing, but --

Chair Kotelchuck: Well --

Member Lockey: Well, it's on my computer.

Ms. Gogliotti: Okay.

Chair Kotelchuck: Okay.

Ms. Gogliotti: I'm sorry, Dave.

Chair Kotelchuck: Okay. Nothing left to say. Go ahead. Stand by.

Ms. Gogliotti: Okay.

Chair Kotelchuck: Yes. Do please go ahead.

Ms. Gogliotti: We historically have been targeting the PoC range of cases close to 50 percent. So those are the cases that are the 45 to 52 percent.

Chair Kotelchuck: Right.

Ms. Gogliotti: And the rationale for that is we want to get the cases that are closest to the compensation decision. Those are the cases that are more likely to apply the assessment's assumptions. And so these are the cases where we really have been targeting because if there is an error, it's less likely to be offset by the over and under estimating efficiency assumptions that are being applied. And, of course, we don't like errors at all, but if there is an error, we don't want it to be impacting the compensation decision.

So here in Figure A-1, we just looked at the population of claims that NIOSH has reviewed versus what the subcommittee has actually looked at. And these are percentages. As you remember, we're only reviewing about 1 percent of cases. And you'll see here that we review a lot of cases in a very short window, the 45 to 49 percent when it's really only a very small percentage of the cases that NIOSH

actually evaluates.

And while SC&A, we totally want to stay close as possible to the 45 to 52 percent, we'd recommend maybe expanding it a little bit just so we can increase the population of claims -- the pool of claims that we have available to us for target selection because there is such a small window there.

So we recommend switching -- or updating it to 40 to 55 percent simply so we have a bigger pool of claims to pick from. I do think it's worthwhile to keep targeting close to 50 percent, but we're just running out of claims to be reviewing. So I think expanding that might be something worth considering. Okay.

Chair Kotelchuck: Sound --

Ms. Gogliotti: Decade of first employment.

Chair Kotelchuck: Sounds good.

Ms. Gogliotti: We don't specifically target this, but we do report this metric to the secretary of health and human services. So I did look at just the data that we have to see what we're doing and what we've reviewed so far in comparison to, again, the population of claims that NIOSH has reviewed.

And overall, we're here in the orange. You'll see that for the most part we're doing a pretty good job, especially in the early time periods. But in the later time periods, we're dropping off a little bit in terms of representativeness.

So SC&A just simply recommends that we select cases with the decade of employment beginning in the 1970s and more current. And just target specifically some of those cases to see if we can get more representativeness in these cases.

Chair Kotelchuck: Okay, good.

Ms. Gogliotti: And I'm not saying we should stop looking at earlier cases by any means, but simply if we could increase the number of cases that we're looking at in that window, I think that would be beneficial.

Chair Kotelchuck: It certainly sounds good.

Ms. Gogliotti: Similarly, for employment duration, I looked at the same statistics, and you'll see here in orange again, we are doing a great job of looking at the really long cases. The long cases I agree or long employment period cases, there is value in looking at these cases.

Longest employment period if covering more time. There's a greater chance of error in these cases. But we might be missing some of these shorter cases. So I recommended looking at just some of these shorter employment cases also simply because we're under representing them currently and --

Chair Kotelchuck: Right, right.

Ms. Gogliotti: Okay. Gender distribution. You know, we have been making an effort to target, making sure that we're getting enough female employees in our data set. And way back in 2015, we decided to start taking that into account when we were selecting cases because at that point in time, we only had 10 and a half percent of cases that we were looking at that were female and that didn't represent NIOSH's statistics.

Back in 2015, NIOSH provided us with this table that I have printed now, D-1, and you'll see that they had an average of 13.6 percent of cases were female. But you'll notice it's trending upward here, and I suspect this number is low. And if we were to look at more

current data, I suspect it's closer to the 16.7 to 19 range only because of the changes in employment distribution over time. As more women enter the workforce, we should be expecting to see more of them in our data sets.

But when we look at what we've actually reviewed, and I update it with the newest material, we're still sitting in only at 10 and a half percent. So we haven't really increased the number of females that we're looking at even if we were thinking we were targeting them. So going forward I would recommend that the subcommittee select at least five, maybe even six or seven female cases per 30 set of cases just to increase our representativeness over time.

Chair Kotelchuck: Okay.

Ms. Gogliotti: And then DR completion date. We historically have not tracked this, but beginning with the 27th set, I did start tracking this information because I thought it was important. And this is the date that NIOSH completed their dose reconstructions.

And so we only have two sets of data on this so far, the 27th set which we evaluated in 2017, and the 29th set which we evaluated in 2019. And if you look at figure E-1 here, you'll see that despite these being cases that we looked at in 2018 and 2019, we have a lot of really old cases here.

In fact, the 29th set, seven of them, or 23 percent of that set, were more than a decade old. And not that there's not value in looking at some of the older cases, but I believe that targeting newer cases has a greater value to the subcommittee. That way we're inputting --

Chair Kotelchuck: Right.

Ms. Gogliotti: -- the most current procedures that are being used. We run into problems constantly where we're talking about a 10-year old procedure and new procedures are in place now that have corrected issues that we were talking about.

So I'd recommend focusing more on cases that were evaluated fairly frequently, or more recently than these older cases. I think there's more value in that. That way we're seeing the newer guidance documents, and if we find problems, we can get them addressed quickly rather than waiting for 10 years or more.

Chair Kotelchuck: Although you have, if we do take your recommendation to do more in the 1970s and going forward, that would take care of that, right?

Ms. Gogliotti: Not necessarily.

Chair Kotelchuck: But isn't that the same -- isn't that the same --

Ms. Gogliotti: That's the decade of the --

Chair Kotelchuck: That would give the same advice.

Ms. Gogliotti: -- start of employment. Eventually, we would expect the earlier cases should -- not to be very many of them just simply because more time is passing and a lot of those claimants are --

Chair Kotelchuck: That's right.

Ms. Gogliotti: -- more likely to pass away.

Chair Kotelchuck: Right.

Ms. Gogliotti: But certainly these newer claims, I think there's value in reviewing them. We haven't looked at anything that was done in the past two years.

Chair Kotelchuck: Oh, I see. Okay. Really new. Okay. Okay.

Ms. Gogliotti: Just something to keep in mind as you're selecting cases.

Chair Kotelchuck: Sure.

Ms. Gogliotti: And then for a final thing, I looked at our goal of 1 percent claims, and although we're not explicitly targeting the representativeness of claims for sites, we have historically looked at the number of claims that the subcommittee has evaluated versus the total population of claims just to see what percentage we've evaluated at each site to see how it compares with the population.

And I had to do some guesswork here because we have old data, and my process is clearly described here, that we can go into if you'd like, but I had to estimate the number of claims that NIOSH has reviewed simply because we don't have current statistics for each of these yet.

Chair Kotelchuck: Right, right.

Ms. Gogliotti: I assume at some point this can be updated.

Chair Kotelchuck: That's always been difficult figuring out that number, and I remember consulting Grady on it each time we did a report to the secretary.

Ms. Gogliotti: It is. And there are definitely numbers associated with these that are better, but this is my rough estimation until we get those better numbers. And for the most part, we're doing a great job, but I did identify a number of sites that were under our 1 percent goal. And I think it would be beneficial to select some cases from these sites if possible.

Chair Kotelchuck: Good.

Ms. Gogliotti: And those are all summarized in this beginning table here in the report.

Chair Kotelchuck: Very good.

Ms. Gogliotti: And not to say we need to select only cases from here, but these are underrepresented currently. And there may be some reason why we're underrepresenting them. For instance, if there was an SEC or something that is changing the distribution of cases. That is something to keep in mind while you're selecting cases.

Member Lockey: Yeah.

Chair Kotelchuck: Very good. Comments? Thank you.

Member Beach: And I thought this was -- this is Josie, I just thought this was very helpful. I didn't give a real thorough read, but a quick going through it, and there's a lot of good points here. So thank you.

Chair Kotelchuck: Right, right. While --

Member Lockey: Jim, is -- but --

Chair Kotelchuck: Sorry, go ahead, Jim.

Member Lockey: Yeah, I agree. I actually did read through this pretty in detail, and I think she did a great job. And I think there are paths on either side that we can pick up on and you've identified those. So I think that's great, especially the female population.

Chair Kotelchuck: Right, right. Okay. Hey, maybe, Rose, you can write the next secretary's report if you're still inclined.

No, but this is exactly what one does as one develops

a report. You did a very good job, and a lot of really good ideas here. Till I get my new machine, you can't send it to me because it hasn't been PA cleared. But might it be PA cleared? Is there information in there that might be -- I think because it's profile information.

Ms. Gogliotti: My concern with this was only that in this last table here, some of them -- we have only evaluated one claim and one claim was evaluated for the site.

Chair Kotelchuck: Okay. Right.

Ms. Gogliotti: And so I was concerned that that would give away claimant information.

Chair Kotelchuck: Yeah.

Member Lockey: Yeah.

Ms. Gogliotti: If you were interested in, I could redact some of these lines, I wonder if we could get it PA cleared if that was the case.

Chair Kotelchuck: Right. I'm interested enough that I'd love to get it before I get my new CDC laptop. So if it was possible, if it wasn't too big a bother to just delete some of that information, and then get what you can PA cleared and send it to us.

Well, for the other people, you have your CDC computer, just go back to December 20th. But I appreciate it if it -- again, if it's not a big bother. If it is --

Ms. Gogliotti: I'll see what I can do.

Chair Kotelchuck: Okay.

Ms. Gogliotti: I'm not 100 percent sure, again, because it's some of this information. But if we

remove --

Chair Kotelchuck: Right.

Ms. Gogliotti: -- some columns, I think --

Chair Kotelchuck: Right. And --

Ms. Gogliotti: -- we can get it PA cleared.

Chair Kotelchuck: Okay. That would be really nice. And if it can't be, it can't be because I will get a -- that long I hope -- will get my new machine. Good. Other comments, other --

Member Clawson: Rose, you gave -- this is Brad. You gave us a lot to think about here. But, you know, Rose, there's some of these sites that are not going to have later claims.

Ms. Gogliotti: Yes. And I can --

Member Clawson: You know?

Ms. Gogliotti: -- completely agree 100 percent.

Member Clawson: Yeah.

Chair Kotelchuck: Yeah.

Member Clawson: I was just looking at Tonopah, you know, there was a switch from Nevada Test site to theirs. So I was just looking at some of those and stuff like that. But you have given us food for thought on this, and I really appreciate getting this put forth for us. But my big question is basically to Grady now is when would we be able to look at the data to be able to make these picks?

Mr. Calhoun: Well, this is Grady by the way. I cannot see what's going on here, but I'm listening intently. I pulled a Dave here on that. But if you could tell us

what you want, I can certainly -- I think once we know what cases you want or what your criteria are, I'll see if I can find that because I think that ORAU may be able to do those searches for that information for us.

So you narrow it down to what you want, ask me and I'll let you know if we can do it. But I think we probably can.

Ms. Gogliotti: To clarify, you mean pulling new cases to review or new statistics?

Member Clawson: New cases.

Mr. Calhoun: New cases --

Ms. Gogliotti: Okay.

Mr. Calhoun: -- to review.

Member Beach: Well, this would be for Set 31, correct? That's our next -- right.

Ms. Gogliotti: Because we are basically caught up right now. We have the three blinds outstanding.

Chair Kotelchuck: Yeah.

Ms. Gogliotti: Two of which you should have soon, and one we're waiting on a workbook. But other than that, there's not really anything left for the subcommittee until we start to review some new cases.

Chair Kotelchuck: So there is --

Member Beach: And we haven't even picked -- we haven't even picked the Sets 31 for the board to review. That's correct, right?

Ms. Gogliotti: Yes.

Chair Kotelchuck: Right.

Member Beach: I guess that's the question -- that's the question before we get --

Member Clawson: Well, like --

Member Beach: -- together.

Member Clawson: Yeah. Here's what I was going to say is I was going to suggest, Rose, because you have a better kind of idea of on this, is there any way you could kind of get with Grady or whatever, and kind of put out a criteria that we're possibly trying to look at and see what they could come up for cases for us to review?

Ms. Gogliotti: And I think they're going to need to come up with a fairly large list of case that the Board can then whittle down to what they're looking for specifically.

Chair Kotelchuck: Right.

Member Clawson: Right.

Ms. Gogliotti: I don't know how many --

Chair Kotelchuck: But there is a priority on this.

There is a priority in getting that out because, as you said, we're near the end of our cases for review. Can we even pick a date for the next meeting? I'm not sure we can at this point.

Member Beach: Well, so right now the next meeting we have the three blinds that should be done, the comparison blinds, right?

Chair Kotelchuck: Right. Right.

Ms. Gogliotti: Two I can commit to being done by the

next meeting. I don't know when the workbook that we need for the final one will be added to the portal.

Chair Kotelchuck: Right. Well, that would be a relatively short meeting just the two blind cases.

Ms. Gogliotti: It would be short, I agree. And then just a handful of things that are left open historically. And even those are hard to track down because we don't have the BRS currently.

Chair Kotelchuck: Right. I don't think we can set a date. I mean when we say setting a date, what it really means is we have to get it -- it's at least three months and we have to put it in the Federal Register. And we can't put anything -- I think, Rashaun, we can't put anything in the Federal Register until we know that we have cases.

Dr. Roberts: Mm-hmm.

Ms. Gogliotti: And there's no reason we can't have a shorter meeting also if you only wanted to discuss two blinds.

Chair Kotelchuck: Well, I think it --

Member Clawson: Dave. Hey, Dave --

Chair Kotelchuck: -- cost money and resources.

Member Clawson: Dave. Here's an idea for stopping it.

Chair Kotelchuck: Okay. Go ahead.

Member Clawson: Here's food for thought, Dave. If we do set a meeting now and we can be able to go through it, depending on what Rose and Grady come up with and so forth, like that, we may have time at that meeting to be able to discuss kind of a path forward with how we're -- for our dose reconstruction

how we're going to be able to do things.

I hate to put off -- because we've been playing catch up for years now, and now we have caught up. I just don't want to get -- I don't want to get behind it again, and we're doing a lot better. Everything else I get. But I think what we ought just take the opportunity and try to set it up now. And if something changes, then, of course, we can always cancel it or whatever. But --

Chair Kotelchuck: Yeah.

Member Clawson: -- I'd hate for us to lose momentum.

Chair Kotelchuck: Well, you know, we can always cancel. That's one thing that doesn't take three months. As one matter -- and we do have -- we have to -- to get it in the Federal Register and we're going to have to have a three-month waiting period.

So, folks, do you want to just set a date now with the feeling -- I will say with the feeling that we can cancel in three months. But in response to whether we should have a meeting with two blinds, my feeling is it costs money to have this transcribed. It costs resources. And I actually would look to Rashaun who has to deal with finances.

Member Beach: It may -- when we know -- Dave, maybe when we know we'd have all three completed. And then we also have this memo that should be on the agenda as a discussion for the subcommittee to decide which ones we're going to go with and which ones we aren't on this suggested list.

Chair Kotelchuck: Well, that's a good point. That's a good point. That is to discuss this group, the December 20th, a lot of good ideas. But which ones do we go with?

Member Beach: Yeah.

Chair Kotelchuck: I buy that. I buy that.

Ms. Gogliotti: Well, and --

Chair Kotelchuck: So let's --

Ms. Gogliotti: -- I do hesitate to wait another three months even with tasking another sets because that puts you --

Chair Kotelchuck: Yeah. Right.

Ms. Gogliotti: It takes us at least six months to review them, factoring in the --

Chair Kotelchuck: Right.

Ms. Gogliotti: -- one-on-ones is another two or three months with NIOSH responses. We're talking about not having anything for the Board to do a year from now if we were to get them passed on today.

Chair Kotelchuck: Yeah. Yeah. True.

Ms. Gogliotti: So that's something to keep in mind.

Chair Kotelchuck: Right. And I must say the other thing that I'm -- the number that you just reported that I was listening to most carefully was the 1 percent because that is our productivity as a subcommittee, and I'm glad it's still at 1 percent. So I think we have pretty well decided that let's schedule something for three months from now. So --

Member Beach: And then, Dave, before --

Chair Kotelchuck: Josie.

Member Beach: -- we close out.

Chair Kotelchuck: Sure.

Member Beach: I know we're going to on to scheduling. But I have a question on the NOCTS database for Grady.

Chair Kotelchuck: Okay.

Member Beach: I know he said ORAU has access to that. Is there some reason why SC&A doesn't have access to that? They're kind of in the same spot as ORAU in needing it.

Mr. Calhoun: It just can't be done or we'd have it. And it's not exactly NOCTS. It's something similar. But I can't even access it, you know?

Member Beach: Well, I understand --

Mr. Calhoun: It --

Member Beach: Yeah.

Mr. Calhoun: It's a secure --

Member Beach: I kind of understand how --

Mr. Calhoun: -- the potential -- there's potential security issues and other data governance issues with somebody from outside the organization accessing that information. That's my understanding.

Chair Kotelchuck: Right.

Mr. Calhoun: I am not an IT person, and I'm struggling to understand it myself. But I know I can't get to it, so it's been very frustrating as you know, so.

Chair Kotelchuck: Yeah.

Member Beach: So what --

Mr. Calhoun: We're still trying to get you all the

information that you request, and, you know, as quickly as we can --

Chair Kotelchuck: Right.

Mr. Calhoun: But usually that involves asking ORAU to come up with a report and do some searches, and then saving the files and dumping them into an area that you can access.

Member Beach: So that workbook that SC&A needs, is there a timeline on that for that third blind review?

Mr. Calhoun: I don't know. I'll ask about Lori about that.

Ms. Gogliotti: It is on Lori's high priority list.

Mr. Calhoun: You know, we've been able to get -- it is on her list?

Member Beach: It is?

Mr. Calhoun: Okay. Good.

Ms. Gogliotti: Yes.

Mr. Calhoun: Yeah.

Ms. Gogliotti: I've communicated that with her.

Member Beach: Yeah. And then one more question for you, Grady. What's it take for you to be able to put together the sets for Set 31? Is there any kind of a timeline for when you could get that put together for the next meeting?

Mr. Calhoun: Well, I think -- right now I think -- do I understand it right, you're not sure what you want yet, right? So if you give me the -- I think what I'm hearing you say is that there is some criteria you're going to give us. And then we're going to try to come

up with several cases -- well, many -- that fit those criteria, dump them into the ADW or a secure area so you guys can go through them, and you pick from those cases. Is that my understanding? Am I understanding that right?

Member Beach: That's generally --

Ms. Gogliotti: Yes.

Member Beach: -- what we do. Oh, go ahead, Rose.

Mr. Calhoun: Right.

Ms. Gogliotti: I think normally you give them a very broad summary table of each case, so the years the EE was employed, the final PoC, the types of doses that were assigned in an Excel file. And then the subcommittee goes through and selects 30 cases from that to review. Is that --

Mr. Calhoun: Right.

Ms. Gogliotti: -- everyone else's perspective?

Mr. Calhoun: And --

Member Beach: Yeah.

Mr. Calhoun: -- we used to have the criteria of, what, 45 to 52. And then if we couldn't get enough of those, we'd go a little bit in each direction. But now you've got new criteria for us to look at. So once you get these --

Chair Kotelchuck: Well --

Ms. Gogliotti: And I don't know that these are new criteria for you.

Chair Kotelchuck: No.

Ms. Gogliotti: I think these are just --

Chair Kotelchuck: No.

Ms. Gogliotti: -- new criteria that the Board needs to take into -- or should take into account --

Chair Kotelchuck: Exactly. The subcommittee and the board need to take this into account. So for the next round, I think you really should just use what we've always done, which is 45 to 52.

Mr. Calhoun: Okay.

Chair Kotelchuck: And we will talk --

Mr. Calhoun: All right. Well, that --

Chair Kotelchuck: Yeah. Just do the old --

Mr. Calhoun: I'll just --

Chair Kotelchuck: -- the old one -- good. And the next meeting of --

Mr. Calhoun: Okay.

Chair Kotelchuck: -- our subcommittee, we'll move ahead on the report, make some changes. And then the next 33, we'll --

Member Beach: Thirty-two.

Chair Kotelchuck: Thirty-two.

Member Beach: It would be 32.

Chair Kotelchuck: Well, blind, we usually do blinds and --

Member Beach: Oh, right, right, right.

Chair Kotelchuck: Yeah. Okay. Let me make a

suggestion.

Dr. Roberts: Okay.

Chair Kotelchuck: Let's get a date. Three months from today is April 13th, Wednesday April 13th.

Dr. Roberts: Well, it's actually Tuesday the 19th if we're doing three months. Okay?

Chair Kotelchuck: Oh, is it? No?

According to my calendar --

Member Lockey: The 19th is good for me. The 19th is good for me. The 13th is not.

Chair Kotelchuck: Well, that's a good reason. The 19th is Tuesday the 19th. That would be fine. How is it for other people? It's fine by me.

Member Beach: That's fine. The 19th or 20th, we usually meet on a Wednesday.

Chair Kotelchuck: We usually do.

Member Beach: Yes.

Chair Kotelchuck: What's the 20th like?

Member Lockey: Twenty is fine for me.

Member Clawson: Good for me.

Chair Kotelchuck: Sounds like it's good.

Member Valerio: The 20th is --

Chair Kotelchuck: -- anybody -- right, April 20th.

Member Valerio: Dave, this is Loretta.

Chair Kotelchuck: Yes.

Member Valerio: Dave, can you hear me? This is Loretta.

Chair Kotelchuck: I can.

Member Valerio: The 20th works for me.

Chair Kotelchuck: Terrific. Okay.

Dr. Roberts: Dave, the only thing --

Chair Kotelchuck: You guys --

Dr. Roberts: This --

Chair Kotelchuck: Go ahead.

Dr. Roberts: Dave.

Chair Kotelchuck: Yeah.

Dr. Roberts: The only thing I want to point out is the week prior to the board meeting in April, does that cause any conflicts for anybody?

Chair Kotelchuck: That's a good question.

Member Lockey: No.

Chair Kotelchuck: No, doesn't for me.

Member Beach: Okay. It won't for me, but I was concerned with NIOSH and SC&A for prepping other things.

Ms. Gogliotti: It shouldn't present any problems for me and my team.

Member Beach: Okay.

Chair Kotelchuck: Okay.

Member Beach: Good.

Chair Kotelchuck: That sounds good. So did we decide Wednesday the 20th with say a fallback to the 19th? Is there anybody who's missing? Yes, Dave Richardson. So let's make Wednesday the 20th as our first choice of April. And Tuesday the 19th will be our fallback because we're all okay with that.

Member Beach: Yep. Sounds good.

Dr. Roberts: And, Dave, just one question for you. I was trying --

Chair Kotelchuck: Sure.

Dr. Roberts: -- to -- try to avoid confusion, like make all of the start times of work group meetings and subcommittee meetings about the same.

Chair Kotelchuck: Yes.

Dr. Roberts: So 11:00 a.m. remember? And you said that you wanted to discuss it with the subcommittee if we could just move it --

Chair Kotelchuck: Well, that --

Dr. Roberts: -- to a later --

Chair Kotelchuck: Good. Appreciate that because I didn't want to do it myself. What do people think?

Dr. Roberts: Right.

Chair Kotelchuck: Can we do it at 11:00? It would be helpful to Rashaun.

Member Beach: Yes.

Chair Kotelchuck: So we're not --

Member Beach: That's fine.

Chair Kotelchuck: That's fine by me.

Member Beach: Yes.

Member Lockey: Yes, it's fine.

Chair Kotelchuck: All right.

Member Valerio: Yes. This is --

Chair Kotelchuck: We're all --

Member Lockey: It's still early in the morning, so that'll be fine.

Chair Kotelchuck: Right. Okay. You'll sleep till 8:00 o'clock. Hey, you're lucky.

Dr. Roberts: Okay. So --

Chair Kotelchuck: All right.

Dr. Roberts: So I have Wednesday -- the first option's Wednesday, April 20th starting at 11:00 eastern. And if that doesn't work, the 19th.

Chair Kotelchuck: Yes.

Dr. Roberts: Correct?

Chair Kotelchuck: Precisely.

Dr. Roberts: Okay. Great.

Chair Kotelchuck: All right. Wonderful. Folks, we've had a very good meeting, and we look forward to the next one. And I hope cases will be coming forthwith so we don't have to postpone.

Dr. Roberts: Okay.

Adjourn

Chair Kotelchuck: Okay. Thank you, all, very much. Again, good meeting. Okay. So move to close.

Member Clawson: I second it.

Chair Kotelchuck: All right.

Member Clawson: Take care, everybody.

Chair Kotelchuck: Me and Brad, that makes it unanimous. All right. Bye-bye, folks.

(Whereupon, the above-entitled matter went off the record at 3:49 p.m.)