Centers for Disease Control
National Institute for Occupational Safety and Health
Advisory Board on Radiation and Worker Health
Subcommittee for Procedures Review
Thursday, February 18, 2021

The subcommittee convened at 10:30 a.m., Eastern Daylight Time, via Video Teleconference, Rashaun Roberts, presiding.

Present:

Josie Beach, Member
Loretta R. Valerio, Member
Paul L. Ziemer, Member

Also Present:

Rashaun Roberts, Designated Federal Official
Nancy Adams, NIOSH Contractor
Dave Allen, DCAS
Bob Anigstein, SC&A
Bob Barton, SC&A
Kathy Behling, SC&A
Elizabeth Brackett, ORAU
Ron Buchanan, SC&A
Grady Calhoun, DCAS
Doug Farver, SC&A
Rose Gogliotti, SC&A
Megan Lobaugh, NIOSH
Lori Marion-Moss, DCAS
Jenny Naylor, HHS
Matthew Smith, ORAU
Tim Taulbee, DCAS

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Proceedings

(10:30 a.m.)

Roll Call/Welcome

Dr. Roberts: So we're going to go ahead and get started if that's okay with everybody. But good morning, everybody. Welcome to the Advisory Board on Radiation and Worker Health.

This, of course, is a meeting of the Subcommittee on Procedures Review. I'm Rashaun Roberts and I'm DFO for the Advisory Board. Before I do roll call, I am hearing a little bit of interference so if everyone could make sure that their phones are muted or their microphones are muted, that would be great.

So before I do roll call, let me start with addressing conflict of interest for this meeting. This Subcommittee, I've learned, deals with a lot of different documents.

I don't think that the documents we're dealing with today relate to a Subcommittee Member's conflict of interest, but just in case, let's just review the conflicts.

So for Josie, who is Chair of this Committee, any documents related to Hanford would be a conflict, correct, Josie?

Member Beach: Yes, that's correct.

Dr. Roberts: Okay and then for Loretta, any documents related to the New Mexico site and Pantex?

Member Beach: That is correct.

Dr. Roberts: Okay. Great. And for Paul, ORNL would be a conflict and perhaps LANL after the year 2000.

Member Ziemer: Correct. And there is one Oak Ridge document. It's identified as X-10 in the list, so that's Oak Ridge.

Dr. Roberts: Okay. Great. Thank you for clarifying that. So if any conflicts come up, of course, and if you do have a conflict, like you, Paul, then you would recuse yourself because of the conflict. So you would --

Member Ziemer: Right.

Dr. Roberts: -- recuse yourself from the discussion. Okay.

Member Beach: Rashaun --

Dr. Roberts: So it sounds like -- yes?

Member Beach: -- Rashaun, I have a quick question on conflicts. When I was reviewing the Peek Street information, that does talk about some Hanford numbers. Does that count as a conflict or not? Do you know?

Dr. Roberts: I would think that it does. You know, maybe just to be conservative about this, if you would recuse yourself --

Member Beach: Yes.

Dr. Roberts: -- from those portions --

Member Beach: Yes --

Dr. Roberts: -- of the discussion.

Member Beach: -- I'm thinking maybe Paul can handle that if you don't mind, Paul, that discussion when we get to Peek Street and if that's not the case, it's kind of a grey area I think, but just something to be aware about.

Member Ziemer: I'll be glad to do that. I don't recall how we handled that before because we're not specifically making a determination on what should be done at Hanford. They are taking --

Member Beach: Right.

Member Ziemer: -- values that have already been established for Hanford and applying them to Peek Street. So I don't know if counsel is on the line, but she might be able to help us. Is Jen on the line?

Ms. Naylor: I am on the line, hi. Sorry. I am on the line and I tried to pipe in here, but Josie, I'm happy to have an offline conversation with you, but Dr. Ziemer is right.

There is actually not a conflict for you. So just to recap, your conflict of interest actually arise out of both the regulation governing the government ethical conduct as well as the appearance of biased policy under the -- for the Dose Reconstruction program.

And both of which really is addressing any sort of appearance issues that might influence your interest which is sort of whether you would have a susceptible claim under the Part B program.

And so your participation in the Peek Street really is not affecting how any of your claim or your interest under Hanford will be adjudicated and so there really isn't a conflict of interest issue here so, but I'm happy to have an offline conversation with you in more detail if you'd like to. Because as of now --

Member Beach: No, Jen, that's, I just wanted to make sure and I'm fine with that. Thank you. So we're --

Ms. Naylor: Okay.

Member Beach: -- so that's good. Thanks a lot.

Ms. Naylor: Okay.

Member Valerio: So just to clarify, because -- this is Loretta, I'm sorry -- so just to clarify, because they do reference LANL in there, the same would go for me. It's not really a conflict of interest. Is that correct?

Ms. Naylor: So the LANL data that they're using has already been predetermined by the LANL Working Group and so it really is not affecting your financial interest that is derived from your employer, right, in the State of New Mexico.

So no, it really isn't a conflict for your either. But you do need to refrain from commenting on the LANL data only because the reason for Josie's conflict is different than, Loretta, your -- the reason for your conflict. So you shouldn't take what I said about Josie as applicable to you. Does that make sense?

Member Valerio: Yes.

Ms. Naylor: So you do not have a conflict to sort of deliberate over the Peek Street document, but the reason why you do not have a conflict is for a different reason.

Member Valerio: Right, right. Okay. That makes sense. Thank you.

Dr. Roberts: Yes, and thanks, Jenny, for clarifying those issues. Are there any other questions about conflict of interest for the Subcommittee Members?

Okay, so it seems that we have all three Members of the Subcommittee so we do have a quorum. So we can move forward with the meeting. Josie's the

Chair, as I mentioned before.

So let me finish the roll call since we've established the attendance of the Subcommittee Members and conflicts of interest. So if folks would, of course, register your attendance and be sure to acknowledge or make any conflicts you might have known, that would be great.

So, let's start with NIOSH and DCAS.

(Roll call.)

Dr. Roberts: Okay, I just want to go over a couple of additional items. In order to keep things running smoothly and so that everyone speaking can be heard clearly, please make sure that your phone is on mute.

It's important that you periodically check that. If you don't have a mute button, press *6 to mute, *6 to unmute. If you're on Skype, the mute button's at the bottom of your screen although I think people are speaking through the phone line.

The agenda and the presentations and background documents that are relevant to today's meeting can be -- are on the NIOSH DCAS website. And of course, all of these materials were made available to Board Members and to other staff prior to this meeting.

So with that, let's go ahead and get started and, Josie, I'm going to give the floor to you.

Member Beach: Okay, thank you, Rashaun. And it's been two years since we last, the Subcommittee last met. It was almost to the day, so we have a lot of time has passed since our last meeting.

I want to thank Kathy for putting together that

memo. That was very helpful to me and hopefully it was to other Subcommittee Members, having a lot of some of our background in one memo, White Paper.

So our first item is the ORAUT-OTIB-0001. Is SC&A, are you going to start on that?

ORAUT-OTIB-0001 (Maximum Internal Dose Estimates for Savannah River Site (SRS) Claims)

Ms. Behling: Yes, this is Kathy Behling.

Member Beach: Okay.

Ms. Behling: And Josie, if you would like, I can address OTIB-0001.

Member Beach: Okay, that would be great. Thank you.

Ms. Behling: All right. If you don't mind, I will just briefly summarize the 13 findings that are in abeyance for this OTIB. And first of all this OTIB is maximum internal dose estimates for the Savannah River Site.

And we reviewed this document, it's a very old document that has since been cancelled and I'll summarize very quickly the findings and if the Board Members or if NIOSH want to interject at any time or ask any questions, or comments, please do.

But in general, our findings had to do primarily with focusing on like lack of clarity in the document, insufficient data to reproduce some of the intakes.

We felt that the doses due to the organically bound tritium were ignored. There were some non-claimant-favorable issues among these 13 findings and NIOSH has responded to all of the findings with

the same comment.

And that comment is that OTIB-1 has been cancelled and site-specific hypothetical intakes are no longer assigned and that OTIB-18 and OTIB-18 is the internal dose overestimate for facilities with air sampling program OTIB or co-exposure values are used in place of this OTIB.

From my perspective, this seems like a reasonable approach. That was their response to all of the findings. The only question that came to my mind that perhaps someone from NIOSH could answer, I know OTIB-18 is a very, very claimant-favorable OTIB and typically it has been used as coupled with OTIB-33.

And OTIB-33 is application of the internal dose based on claimant-favorable assumptions for processing best estimate cases. And I know we've had this discussion several times in the past, but I believe that OTIB-33, even though the title suggests that it's used for best estimates, I believe NIOSH is not doing that.

That they still, even if they apply the OTIB-33 correction factors or percentage of doses that are generated in OTIB-18, it's still used as an overestimate. Is that still the case?

Is there someone from NIOSH that could answer that? We, SC&A, when we do our dose reconstruction reviews, are typically looking at best estimate cases and don't encounter this OTIB quite as often as we used to, so it's just a question that came to my mind.

Ms. Marion-Moss: This is Lori --

Ms. Brackett: This is Elizabeth Brackett.

Ms. Marion-Moss: Sorry.

Ms. Brackett: Go ahead.

Ms. Marion-Moss: This is Lori. We have some ORAU people on the line. Scott, are you there?

Ms. Brackett: This is Elizabeth Brackett. I'm the internal dosimetrist for the team. I was going to speak up.

Ms. Marion-Moss: Go ahead, Liz. Sorry about that.

Ms. Brackett: Yes, that OTIB, in spite of its name, it is not used for best estimates. It is used for overestimates. At the time it was written, that was the intent, but that's not how it ended up getting applied so it is an overestimate.

Ms. Behling: Okay, because the answer to these findings were associated with an OTIB that was a maximum internal dose estimate so that was an overestimate and so I assume that a lot of this will be handled under the Savannah River Site specific data.

So I know that in NIOSH's response, they're recommending closing these findings and I believe from SC&A's perspective, we agree with that based on their response.

So, Josie, I guess it's up to the Subcommittee to decide if you are in agreement.

Member Beach: Yes, thanks, Kathy. So in looking at OTIB-18, there -- and I know it's not on our agenda today, but since this is being transferred or 18 is being used instead of OTIB-1.

There were some issues with 18 and I don't know if this is the time to bring those up and go through

those, because that's also a very old document, but there's some of the findings that aren't very clear.

So, I guess it's a two-part question so first I'll ask the Subcommittee, do you have any problems with closing out the 13 findings with OTIB-1?

Member Ziemer: Josie, this is Paul. I'm okay with that. I think though, if we do that, we need to make it very clear that normally when we close a finding, we're indicating that the issue has been resolved. In this case --

Member Beach: Right.

Member Ziemer: -- we're indicating, we're not indicating the issue's been resolved, we're indicating that those findings don't apply simply because the document is no longer used. Am I hearing that whistle or what?

Member Beach: Yes, I heard it too, but it's gone, so.

Member Ziemer: Okay. Anyway, if we close this, it seems to me we need some kind of a notation in the main database that indicates that the reason that it's being closed is the fact that the document is no longer in use.

Member Beach: Okay.

Member Ziemer: The only thing I'll add is that we may want to look at those unclosed findings in OTIB-18. But that's actually not on our agenda and I don't think we've -- we probably should carry that forward or something.

Member Beach: Yes --

Member Ziemer: I mean, I don't know if NIOSH or SC&A are prepared to discuss those today in any

event, but we should make a note at least that there are still some issues on those -- well, we don't call it best estimate then, it's the claimant-favorable approach. Right?

Well they're all supposed to be claimant-favorable, but the bounding approach.

Member Beach: Yes, and that document was looked at I believe in my notes, 2008 and there's some recommendations of closing, but there's -- and the findings actually in '18 say close.

But the Subcommittee never actually closed them, unless it just wasn't written in. So yes, there's some work to be done there. Loretta, comments on OTIB-1?

Member Valerio: I'll agree with Paul that we can close them, but you know, and again, we should have some kind of a notation that, you know, they will continue to be reviewed under OTIB-18.

Member Beach: Okay, thank you.

Member Ziemer: Well, I'm not sure --

Member Beach: Kathy, would you like --

Member Ziemer: -- these findings won't specifically be reviewed, will they, under the other -- under OTIB-18?

Member Beach: No.

Member Ziemer: We're closing them for --

Ms. Behling: Okay, I'm --

Member Ziemer: -- a very different reason than we normally close, is what I'm saying.

Member Valerio: Okay. All right, but I'm good with closing them under OTIB-1.

Member Beach: Okay, thanks Loretta. So Kathy, or Lori, who would make the notations in 1?

Ms. Behling: I can do that. This is Kathy. I can make those, the notations in the BRS.

Member Beach: Okay, thank you.

Ms. Behling: Sure.

Member Beach: And I agree with closing those as well, if the document's no longer used there's no point in carrying them forward. However, we do need to make a note that 18, OTIB-18 would need to be looked at and then review those.

I think there's just three findings that are not clear. Did you get a chance to look at that at all, Kathy, in your preparing for this meeting?

Ms. Behling: No, I didn't go into the findings associated with OTIB-18, but I will certainly do that after the meeting. As I said, OTIB-18 is a very, very claimant-favorable OTIB.

And so if that was used, it would definitely be only used to -- for non-compensational cases. So, but we will, I will look at that.

Member Beach: And I don't think there's much work. We transferred one item to 9 and then there's another, the finding seven says to transfer it, but it's not clear where so I think it just needs to be cleaned up from our earlier --

Ms. Behling: Okay, yes. In fact, I am showing one in progress and one in abeyance and then two items, two findings that were transferred, but I will look

further into --

Member Beach: Okay.

Ms. Behling: -- that after the meeting.

Member Beach: Okay. So I'll write that down as a carry-over item and if -- as long as everybody's in agreement with that? Okay, so if there's no other discussion, those items are all closed.

Kathy's going to make the notation. Any more discussion?

Member Ziemer: That sounds good to me, thank you.

ORAUT-OTIB-0049 (Estimating Doses for Plutonium Strongly Retained in the Lung)

Member Beach: Okay, sounds good to me too. I think we can move onto OTIB-49.

Ms. Behling: Okay, and this is Kathy again and I'm ready to address these findings. OTIB-49 is estimating doses for plutonium strongly retained in the lung.

It's this Super S plutonium and we had two findings. Again, this was reviewed back in 2008 and our first finding was again there's this ambiguity and lack of some detail in this OTIB and we felt that there may be, you know, additional judgment needed and Finding 2, again there was a lack of clarification on how to apply correction factors.

Well NIOSH has responded to those findings, indicating that the adjustment factor system has been replaced by a new model. They are now using ICRP 130 which is the respiratory tract model and publication 67 for the systemic organs.

And apparently they are using a software, IDOT, which I was not familiar with until I read the response. And so the rewrite of OTIB-49 Rev. 2 of OTIB-49, that was published in September of 2020.

SC&A has not reviewed that and so I'm suggesting to close this out as -- the response from SC&A is that we be tasked to review OTIB-49 Rev. 2 based on this being a completely, it's a total rewrite, there's new models that are being used, and there's new software being used that I don't think the Advisory Board has looked at yet.

If you have, I'm not familiar with that. So that's SC&A's suggestion for continuing on follow-up actions for OTIB-49.

Member Beach: Okay and just to be clear, you're not suggesting closing out the two findings that were currently in progress?

Ms. Behling: No.

Member Beach: You're talking about -- okay, good. Okay.

Ms. Behling: Correct, yes. And apparently like I said --

Member Beach: Okay.

Ms. Behling: -- the software, I guess there's a user's guide and we may need some assistance from, if we are tasked to do this, we may need some assistance from NIOSH to just point us in the right direction with regard to the software looking at these models.

Member Beach: Okay, I'm in agreement with that. It's also a part of your list in a table further -- Table Two recommending some --

Ms. Behling: Yes.

Member Beach: -- reviews, so --

Ms. Behling: Yes.

Member Beach: -- other Subcommittee Members?

Mr. Allen: Josie, this Dave Allen. Could I speak up real quick?

Member Beach: Oh, please. Please do, I'm sorry.

Mr. Allen: As far as those findings, they're findings for Revision 0 of OTIB-49 and, there's two of them and one is that the document was ambiguous and the second was that it lacked clarification on how to apply correction factors.

I think Kathy can tell you right now that -- well I think she already mentioned the correction factors are gone and as far as the document being ambiguous, as she said, it was a complete rewrite so it really seems like we can close those two out.

They're irrelevant at this point and if any findings come from a review of Rev. 2, you know, they will obviously be put into the BRS and be a whole different ball game then.

But it doesn't seem like there's any reason we can't close out the two findings in OTIB-49 right now.

Ms. Behling: I agree with that. This is Kathy. I do agree with that. He's correct.

Member Beach: Okay. That makes sense.

Ms. Behling: These findings will still be listed in the BRS. If we are tasked to review Rev. 2, we'll just add on any findings that we may encounter during that review. But this will be documented and I will

explain why we felt that way.

Member Ziemer: (Audio interference.)

Member Beach: Paul, we're only getting a little bit. Hello?

Member Ziemer: -- I recently (audio interference).

Member Beach: Paul, we only got like two words out of what you were saying, so I'm not sure what the problem is. And we're not hearing anything. Are you speaking still?

Member Ziemer: No, no.

Member Beach: Okay, Loretta, any comments?

Member Valerio: So we are closing Findings 1 and 2 for OTIB-49. Is that what I'm hearing?

Member Beach: That is exactly what you're hearing, based on what Dave said and Kathy agreed.

Member Valerio: Right, right. And I'm in agreement with that. I'm good.

Member Beach: Okay. And Paul, are you in agreement with that as well? Okay. Can anybody else hear Paul? Are you there?

Dr. Roberts: No, I can't hear him, Josie. This is Rashaun. I sent a note in Skype to let him know that he is breaking up and asked if it would help if he would call in again.

Member Beach: Okay. Yes, I hate to, I felt like he was -- had a comment.

Dr. Roberts: Yes, me too. It looks like he's still on Skype, but the audio --

Member Beach: Yes.

Dr. Roberts: -- isn't working. Yes.

Member Beach: Is he on a phone or was he on his computer, do you know?

Dr. Roberts: I think most people call in on the conference line. Nancy or Zaida, can anyone, you know, try to call him and help with this?

Ms. Adams: Yes, I'll try to give him a call and see. Although, if he's on the phone, I'll let --

Ms. Roberts: I know.

Ms. Adams: -- I'll see about the chat box.

Member Beach: He probably has a cell phone that he could, you could text him on. Okay, we can -- well, shoot. I guess we can move forward.

Dr. Roberts: Perhaps, assuming that he can get back on, but without him on --

Member Beach: Yes, we'd better wait.

Dr. Roberts: -- I mean, because.

Member Ziemer: I'm back.

Member Beach: Oh, okay.

Member Ziemer: Can you hear me now?

Member Beach: Yes.

Member Ziemer: I don't know what happened.

Member Beach: Yeah, we felt like you were making a comment on closing out OTIB-49, but then we didn't get to hear what you were commenting on.

Member Ziemer: Well okay, the comment was that I, even though those are irrelevant now, wouldn't we automatically look at them if they're reviewing OTIB-49 Rev. 2 anyway and rule them out then, or -- I'm okay if we just declare them irrelevant now as long as we make a proper notation again and indicate that any issues would be covered in the review of the other.

Member Beach: Okay, then that makes sense. Kathy will take that on I think -- I believe she said, to make the proper notifications on those two findings.

Ms. Behling: Yes, I will do that.

Member Beach: Okay.

Member Ziemer: But I agree with the tasking. We have to formally task SC&A on this?

Member Beach: Yes, and I was going to wait until we get to Table Two. There's several --

Member Ziemer: Oh, sure. Yes.

Member Beach: -- tasking items. I mean we can task them individually now or go through it. Either way, it's fine.

Member Ziemer: Your call.

Member Beach: Okay, I say we should go ahead and wait because there's actually several today in this document that I feel like we'll be tasking as we go, so.

If we're ready, so I'm showing that OTIB-49, we're going to close those two findings, Kathy will make the notations in the BRS and then we'll look at the tasking when we get through this and we can move

on to OTIB-66.

Ms. Behling: Okay, this is Kathy again.

Member Ziemer: Sounds good.

ORAUT-OTIB-0066 (Calculation of Dose from Intakes of Special Tritium Compounds)

Ms. Behling: And I'm willing to start the discussion on OTIB-66. This is Cancellation of Dose from Intakes of Special Tritium Compounds.

And, again, SC&A reviewed this back in 2009, and there are two outstanding findings. Finding 1 discusses the fact that OTIB-66 refers to OTIB-11 for assessing dose to intakes of organically bound tritium and we felt that that was not claimant-favorable.

NIOSH's response to that is that they have issued a Rev. 1 of OTIB 66, and in Rev. 1 they have removed the reference to the OTIB-11. It now specifies that they must run IMBA.

And Finding No. 3, we, our findings stated that OTIB-66 does not ensure that result and doses are based on adequate monitoring data. And NIOSH had agreed with this finding and they indicated now that in a purpose of their Rev. 1 document, they have a discussion on the limitations of urine sampling for stable metal tritides.

So now when I went in to find OTIB-66 Rev. 1, I couldn't find it. It is not posted on the NIOSH website yet. But I did ultimately find it on the ORAUT on the Z-drive or the O-drive or whatever drive everybody has there, but I only saw it listed somewhere around the 26th of January.

So we -- I initially didn't have the opportunity to

look at it. When I wrote this table for you, I hadn't looked at it at that point in time. I did take notice that it constituted a total rewrite.

Since then I have looked over the document. And it seems to me, I was initially going to suggest that we do a full review of the OTIB, but when I compared Rev. 0 to Rev. 1, side by side, it seems like there's a lot of similarities.

And I am now going to suggest that probably SC&A only needs to do pretty much of a focused review to ensure that these two findings that we cited in Rev. 0 were addressed in this Rev. 1.

Because, like I said, side by side comparison looks like even though it indicates it was a total rewrite, there's quite a bit of similarities, and I think a fairly quick focused review would suffice to resolve these findings.

Member Beach: Okay, that makes sense. Any comments on that, Subcommittee?

Member Ziemer: Yeah, I agree. That makes sense. A quick question, Kathy. On the column, follow up actions taken, you refer to Finding 2. I think that you intended to refer to Finding 3, I assume.

Ms. Behling: I did. Thank you for that correction.

Member Beach: Yeah.

Ms. Behling: I apologize.

Member Beach: And then I have a question on OTIB-11. For -- this is for NIOSH. Is that --are you still using that? I understand it's not being used in this document, but is it still an OTIB that's being used?

Ms. Brackett: Yes. This is Liz Brackett. Yes, that's used for tritiated water assessment, HTO.

Member Beach: Okay. Thank you. And so back on that as a carry over, when I went in and looked at OTIB-11, it shows that the BRS, it shows that there's items that are closed, but the verbiage doesn't say the Subcommittee closed them.

So is that -- how did you guys used to do that back in the early days? Did you just close them or did you write in the verbiage that the Subcommittee discussed and closed?

Ms. Behling: Well, this is Kathy. I know Steve Ostrow used to update the BRS quite a bit, and I have listed here that the Subcommittee closed those.

We -- it wouldn't have been closed without a discussion in the Subcommittee, but I can go back and research that further for you and look at some transcripts and ensure that that was done.

Member Beach: Yeah, that's just -- and I don't know how much work you want to put into that. Like the first one says not explicitly addressed at this meeting, but given discussion held at previous meetings, it is recommended that this issue be closed.

So that, to me, isn't really a clear indication that the Subcommittee agreed to close.

Ms. Behling: Okay, I'll look into that --

(Simultaneous speaking.)

Member Beach: So, anyway -- and the only reason I looked at it was because it was associated with this 66, so that might be something to look at and make

sure that it's clear that those findings were actually addressed, so.

Ms. Behling: Okay, I --

Member Beach: Paul and Loretta, what do you -- how do you feel about those?

Member Ziemer: Yeah, well, I would spot check on -- in this case if it's not clear. I don't think they would have been closed without Subcommittee action, but sometimes we get on these calls and we think everybody's agreed to something.

And, you know, we don't always formally vote and depending on how the -- you'll have to double check those transcripts, I guess.

Member Beach: Okay. All right, Kathy. So if you don't mind noting that as one to go back and look at also.

Ms. Behling: Will do. Not a problem.

Member Beach: And I think -- is this -- I think we can go ahead and task this OTIB-66 for a focused review. Is everybody in agreement with that? Loretta? Paul?

Member Valerio: I'm in agreement.

Member Ziemer: Yes. I'm in.

Member Beach: Okay, so, Kathy, you are hereby tasked to do a focused review on OTIB-66.

Ms. Behling: Okay, very good.

Member Ziemer: And, Kathy, when you guys get into it, I mean, laying them side by side, you thought they looked pretty parallel and similar.

If you get into it and find that that's not the case, it seems to be that -- just let -- perhaps let Josie know, and I'm okay with, you know, changing the task if it's necessary.

Ms. Behling: Okay, very good.

Member Ziemer: Yeah, you know, if you just say you know what, these aren't as similar as I thought they would be so.

Ms. Behling: Okay. Yes, good suggestion. Thank you.

Member Ziemer: Yeah.

ORAUT-OTIB-0024 (Estimation of Neutron Dose Rates from Alpha-Neutron Reactions in Uranium and Thorium Compounds)

Member Beach: Yeah, I agree with that too, Paul. Thank you. Anything else on OTIB-66? Okay, hearing none, we can move on to OTIB-24 and is --

Ms. Behling: Yes.

Member Beach: -- Ron on that one, Kathy, or are you going to take us through that --

Ms. Behling: Actually, yeah, this is --

Member Beach: -- as well.

Ms. Behling: -- Bob Anigstein. And, Bob, did you join us?

I know that we were going to contact him prior to the discussion of OTIB-24.

Mr. Barton: Yeah, hi, Kathy, this is Bob Barton. I gave him a call about 5 or 6 minutes ago. Let me try him again.

Ms. Behling: Okay.

Member Beach: Yeah, we're moving through these quickly.

Ms. Behling: That's good because we have a lot of items on this agenda.

Member Beach: Yeah.

Ms. Behling: I think Bob has quite a few findings here, and I know he has spent some time reviewing these findings, and I believe he wants to discuss each -- or at least summarize each one of these findings. Hopefully we will --

Member Beach: Sure.

Ms. Behling: -- get him on the line.

Member Valerio: We could always move on and come back to it.

Member Beach: Well and then I was thinking since we've tasked OTIB-6, how does the Subcommittee feel about going ahead and tasking OTIB-049? Is there some discussion on that?

Member Ziemer: You mean just tasking it now? You were going to wait initially, right?

Member Beach: Yeah, just tasking it now since we've had the discussion and we're waiting for Ron.

Member Ziemer: Well, I'm fine in doing the tasking business whenever you're comfortable.

Member Beach: Okay.

Member Ziemer: As I say from -- it's your call if you want to go ahead with it. I'm -- I think we sort of agreed we should task it, but a key question, doing

them all -- doing all of the --

Member Beach: Yeah.

Member Ziemer: -- tasking at one time or as we go.

Member Beach: I'm okay with --

Member Ziemer: Maybe as we go works because we know what we're tasking more specifically at that -- before us older ones forget it all.

Member Beach: Okay, so as we're waiting for Ron to come on, we'll go ahead and go back, Kathy, back on to the tasking of OTIB-49 Rev. 2 for a complete review. Correct?

Ms. Behling: Correct. Yes, because --

Member Beach: Okay.

Ms. Behling: -- there have been a lot of changes there.

Member Beach: Okay, so you are so tasked on that item now.

Ms. Behling: Okay.

Member Beach: And then -- I don't really want to jump around too much. I think OTIB-6 is going to take a while. PER-047, Grand Junction, that one may not take too long if we wanted to start on that while we're waiting for Ron.

Ms. Behling: Yeah, we're actually --

Member Beach: What do you think?

Ms. Behling: -- waiting for -- we're waiting for Bob Anigstein.

Member Beach: Bob Anigstein. Sorry, I had Ron in

my brain for some reason.

Ms. Behling: Yes, Ron's OTIB-6, so he's next.

Member Beach: OTIB-6, yes.

DCAS-PER-047 (Grand Junction Operations Office)

Ms. Behling: If you'd like, I can discuss PER-47.

Member Beach: Okay, is that -- that would be fine. Let's do that.

Ms. Behling: Okay. All right, PER-47 was for Grand Junction operation office. And there was one outstanding finding, Finding 4. And in this particular case, we realized that the intake rates for radium-226 and thorium-230 were overestimated by about a factor of 2.

Because I believe NIOSH inadvertently did not apply the activity fractions. And so when I went to look at this, NIOSH agreed, and they indicated that they have -- at the time we reviewed this, it was one of those documents that did not have a Site Profile.

The dose reconstruction methodology was embedded in the dose reconstruction report. It's something we call a template. Just like Peek Street that we'll be hearing about later.

So the response was that the template -- the old template was updated, and now they've actually -- they have a Site Profile that has been published for the Grand Junction operations office.

So I reviewed that, and it just so happens that the finding that we had here had to do with the time period before -- between 1975 and 1984. That's where the error was introduced into a table.

Since then, there's an SEC for that period, so this

doesn't even apply anymore. And we had no other issues with this particular template, and I saw that things were incorporated into the Site Profile appropriately.

So I would recommend closing this finding, and I will make the appropriate notations to the BRS.

Member Beach: Okay, and that new -- it's OTIB-60 Rev. 2, is that correct?

Ms. Behling: Its new TBD is TKBS-60 and that's Rev. 0. That's a new --

Member Beach: Okay.

Ms. Behling: Okay.

Member Beach: All right.

Ms. Behling: We, now I believe there is, there's a Work Group for Grand Junction, isn't there? I'm not sure. So I'm not sure.

Member Beach: I'm not sure if there is.

Dr. Roberts: It's retired.

Ms. Behling: That's what I --

Member Beach: Yes.

Ms. Behling: Okay. I guess it would be appropriate then maybe for SC&A to look at this and compare in full the template to this new Site Profile.

What I looked at just very briefly, just in and able to answer the question for the Finding 4, it looked like things were similar, but I didn't look at any level of detail.

But perhaps that's something that the

Subcommittee would want to task us to do. Because that's --

Member Beach: Yes, I wrote it down in Table 2 as one, but so that is not a Rev. 2, that is a Rev. 0 or what is it? Because I don't know where I went and looked for that document.

Ms. Behling: The Site Profile, okay, the Site Profile that I'm looking at on the NIOSH website shows Rev. 0. Because in fact, well, and what's the date on this? Oh, 2018.

If NIOSH has another Rev. out, please correct me, but that's what I'm seeing on the website.

Ms. Marion-Moss: The active, this is Lori Moss. The active document for that Site Profile is Rev. 0.

Member Beach: Okay. So I don't know where I got Rev. 2, but thank you, Lori. Okay, so one other thing on your follow-up action column, it said that NIOSH updated the BRS responses on 2-1-2021.

It was actually updated on 1-27-21. I know that's a minor technicality there.

Ms. Behling: Okay. Thank you. Sorry about that.

Member Beach: And I'm in agreement with closing Finding 4 and with tasking SC&A to review the ORAU-OTIB-60. Rashaun, are you in agreement that that should stay with the Subcommittee since that workgroup is not, is closed or not functioning at this point?

Dr. Roberts: Yes, let's keep it with the Subcommittee right now.

Mr. Allen: Josie, this is Dave Allen. Can I say something?

Member Beach: You sure can.

Mr. Allen: I am not sure so I'm talking out of school here, but I don't think we have anybody that's real familiar with Grand Junction on the phone today, unfortunately, but --

Member Beach: Yes.

Mr. Allen: -- that Work Group did exist for quite a while and I could be wrong, but I'm pretty sure they reviewed the revision, the TBD that was created.

Member Beach: Okay.

Mr. Allen: I may be wrong on that, but it seems like this should be something for SC&A to look into and decide, you know, look at the transcripts from the Work Group and decide whether or not it's already been reviewed.

Member Beach: Maybe sort of a focus review?

Mr. Allen: Well, I mean, they may have done a detailed. I'm not sure --

Member Beach: Yes.

Mr. Allen: -- but if it's already been done by the Work Group, whether the Work Group still exists or not, is kind of irrelevant and --

Member Beach: Yes and I don't know when that --

(Simultaneous speaking.)

Member Beach: -- because this was issued in 2018. Correct? And --

Ms. Behling: Yes.

Member Beach: -- so maybe a little research into

that. When the last meeting --

Mr. Allen: Okay.

Member Beach: -- was held and if they did review it. That's a good comment, Dave, so.

Mr. Allen: Yes, that's --

Ms. Gogliotti: This is Rose Gogliotti. The last meeting of the Grand Junction was August 7th of 2017.

Member Beach: Correct. I'm, yes.

Mr. Allen: Okay. That'll answer that then.

Member Beach: Okay. Thanks both Rose and Dave. All right. So back to the Subcommittee, what are your thoughts on reviewing OTIB-60?

Ms. Behling: And that's TKBS. It's a Site Profile.

Member Beach: Oh, I'm sorry. I got it, I must have just wrote down the whole thing wrong.

Member Ziemer: Is it TBS?

Member Beach: No, it's TKBS. I keep saying it wrong.

Ms. Behling: Yes, it's a Site Profile rather than a technical information bulletin.

Member Beach: Yes.

Member Valerio: Josie, this is Loretta. So it is closing out Finding Number 4 --

Member Beach: Right.

Member Valerio: -- and tasking SC&A to review the Site Profile for Grand Junction. Correct?

Member Beach: Correct.

Member Valerio: Okay, I'm good with that.

Member Ziemer: So my call just dropped and I got back. What's the recommendation for SC&A?

Member Beach: The recommendation for Grand Junction is to close Finding 4.

Member Ziemer: Yes.

Member Beach: And task SC&A with reviewing the Site Profile for Grand Junction.

Member Ziemer: And is that TBS-60?

Member Beach: It's TKBS-0060 Rev. 0, yes.

Member Ziemer: TKBS.

Member Beach: Yes.

Member Ziemer: Yes, 60. Right. Got it. Yes, I'm good.

Member Beach: Okay, so Kathy, you are tasked to do the notifications and the BRS closing Finding 4 and then for reviewing Grand Junction TBS.

Ms. Behling: Okay. Very good. Thank you. So, did Bob Anigstein join us? Bob Barton, are you on the line? Did you communicate with Bob and if so --

Mr. Barton: Yes, hi, Kathy. I gave him a couple of calls. Unfortunately, I have been only getting his machine, but I'll keep at it.

Ms. Behling: Okay. All right. I apologize. Is, would the Subcommittee be okay with us moving on to OTIB-6?

Member Beach: I'm fine with that.

Ms. Marion-Moss: This is Lori Moss.

Member Valerio: I'm fine with that.

Ms. Marion-Moss: I have a question before we move on.

Member Beach: Okay, Lori.

Ms. Marion-Moss: Could you repeat, is that a focus review for the Grand Junction TBD or is that a full review of the TBD?

Member Beach: That would be a full review.

Ms. Marion-Moss: Okay. Thank you.

Member Beach: Yes.

Ms. Behling: Okay, I believe Ron Buchanan is on the line.

Mr. Buchanan: Yes, everybody hear me?

Ms. Behling: Okay.

Member Beach: Yes.

Ms. Behling: Go ahead, Ron. Thank you.

ORAUT-OTIB-0006 (Dose Reconstruction for Occupational Medical X-ray Procedures)

Mr. Buchanan: Okay. This is Ron Buchanan with SC&A. And I'll be presenting our focus review of OTIB-6, revision 6 for resolution of these issues that we identified in revision 5.

This is for Occupational Medical X-ray Procedures. This is fairly lengthy book of 140 pages, very complex, a lot of tables, a lot of references and such.

But it's underwent six revisions now so I think we're getting it worked out.

Dr. Anigstein: Bob Anigstein here.

Mr. Buchanan: Okay, do you want to continue on?

Ms. Behling: Yes. Hi, Bob.

Dr. Anigstein: Hi.

Ms. Behling: We started with OTIB-6. I'm not sure what the Subcommittee wants to do, if they want to go back --

Member Beach: If, yes -- that doesn't sound good. If Ron doesn't mind postponing 6 and go ahead and let Ron, or I'm sorry, Bob Anigstein go ahead and go through his, is that okay with the rest of the Subcommittee?

Member Ziemer: Sure.

Ms. Behling: Or have you both --

Member Beach: Okay.

Dr. Anigstein: So --

Member Beach: So let's go ahead and Ron, thank you, and sorry for doing that to you.

Mr. Buchanan: That's fine. No problem.

Member Beach: Okay.

Ms. Behling: And, Bob, excuse me, this is Kathy. I just had one more question. Will you still be on the line to perhaps discuss the PER-57, the General Steel Industries?

Dr. Anigstein: Yes.

Ms. Behling: Okay.

Dr. Anigstein: I'm ready for that too.

Ms. Behling: Okay, thank you.

Member Beach: And we can go out of plans, Kathy, and do both back-to-back if Bob's okay with that.

Ms. Behling: Okay, very good.

Dr. Anigstein: It'll be fine.

Ms. Behling: Bob?

Dr. Anigstein: Okay. So we have OTIB-24 which is the calculation of neutron emission from the alpha, well neutron emission from uranium and thorium.

And there were seven findings. I'm going to go over them briefly. Shall I just keep going or shall I pause and ask for NIOSH comments each time?

Member Beach: I think, what does NIOSH think? Do you feel like you'll have a lot of comments you'll want to make comments in between or just when Ron's done? Or when Bob's done. Sorry.

Dr. Anigstein: Okay, I'll just go ahead. Okay, the first --

Member Beach: Okay.

Dr. Anigstein: The first one is more of a procedural issue and probably should have been an observation rather than a finding. And that's the dose rates are expressed in terms of per gram of source isotopes rather than per gram of compound.

It just seems that it's much more likely that the dose reconstructor would know, say how much uranium oxide there is. You would then have to

calculate how much uranium, how much of that oxide is uranium to be able to use the tables that NIOSH provided.

However, that's a procedural matter and it's really, either way, it's correct. I just thought that expressing it in terms of the compound would be more convenient.

So that's, I would calibrate that into an observation. The second one, the second finding is that the original OTIB-24 only listed neutron generation from the alpha end reaction which is when the alpha particle strikes a light atom and generates a neutron.

But it's also the same material that uranium and thorium undergoes spontaneous fission and that was omitted. And NIOSH's response is that they're going to be using the sources 4C code which does include and incorporate the contribution of a spontaneous fission.

However, and also there's also a new code that is apparently unique to NIOSH but its source is 4C-m as in Mary. So our response is that in principle, that should solve the problem.

However, we have not had the opportunity to actually review the NIOSH results and particularly we have not had the opportunity to examine the sources for M code, because it's not a, it's not widely available.

We'll have to get that from NIOSH directly. So we will hold all judgment until we have a chance to do an in-depth review. So in principle that solves the problem, but in practice --

Mr. Smith: Okay.

Dr. Anigstein: -- withholding judgment. The third --

Mr. Smith: And, Bob, this is Matt Smith with ORAU Team and for the whole group, that is correct. 4C-m is a code that was developed within ORAU Team to address the limitation that sources 4C have in terms of the upper bound on the alpha energy limit I believe around 6 MeV.

And so yes, we'll take a look at what we can do to, I can't make a direct promise over the phone, but I'll work with management accessing that software.

Dr. Anigstein: Okay. Were we going to --

Member Beach: That is also, I'm sorry. This is Josie. Is that being used anywhere else or is it just new to this revised OTIB?

Mr. Smith: It was new to this OTIB. It was part of our process of dealing with this entire issue. So --

Member Beach: Okay.

Mr. Smith: -- yes, once we get these formal comments come over, we'll then address them formally backwards to you.

Member Beach: Okay, thank you.

Dr. Anigstein: Okay, the third finding is that the doses are, they don't deal with a full progeny for the U-238 series and U-235 series and one reason they couldn't is because the response, NIOSH response that they will be addressing the progeny or they did reduce progeny in Rev. 1.

However, again, this is undocumented so we don't have the documentation for 4C-m code so until we have had a chance to examine that, we can't really comment on whether this is a principle that should

solve the problem.

But we have some, we have to withhold judgment on that because the progeny exceeds that 3.5 energy limit for sources 4C.

Then Finding 4 is, again, no longer relevant if you use the original OTIB-24 used for outdated experimental results. And, of course, the use of the forces 4C will, again, it's the same thing.

So solve that problem, but first we have to review the calculations, but more important, we have to review the sources 4C-m code.

The fifth finding is, okay, refers again to the calculation of the neutron emissions and also the use of an older of 1971 NCRP for quality factors.

And we recommended that at that time that they use ICRP 74 and NIOSH responded that they are inside. They have in fact revised OTIB use on ICRP 74 for the ambient dose calculations so we agree with that as a technique, but again, we have not had a chance to do a detailed review on how ICRP 74 and more important how sources 4C were implemented. So we're waiting for that.

Participant: It's getting harder and harder for me to hear you.

Member Beach: Yes, I was just going to say the same thing.

Dr. Anigstein: Excuse me?

Member Beach: You're fading out just a little bit, Bob.

Dr. Anigstein: Oh, sorry. I'll try to talk more directly. Is this better?

Member Beach: Yes, thank you.

Dr. Anigstein: Okay. So do I need to repeat anything? Do I need to repeat what I said or --

Member Beach: No, I think you're okay.

Dr. Anigstein: Is that, okay. And, oh yes, okay, Finding 6, is again a procedural matter where for this purpose for the OTIB, original OTIB-24 and the revised OTIB-24 Rev. 1, the consultation presented distances of one foot and three feet for a point source. And just pointing out that there is a, most of the dose calculations that I've seen used the scenarios in, described in TBD-6000 and that specifies the two categories.

Among the categories that work are, one category that where the storage that is one foot away from the worker's body and another category, which is the general labor, the source is one meter away.

And those, many dose reconstruction, the many such TBDs and prescriptions, use the one-meter distance rather than a three-foot distance. Three-foot distance is unusual. So there's only a difference of 10 percent in the distance which translates to what is particularly a distance of 20 percent in the dose rate.

But it does seem to us that the consistency in the various types of dose scenarios, however, I say it again, it is an observation because certainly the calculation at three foot can't be done correctly.

So we are not saying it is a technically incorrect assessment. This assessment might be more consistent than the other at one meter.

And finally, the seventh one is similar to we spoke to an earlier one that we talked about the how do

we handle the progeny where there are energies.

Alpha energy is greater than 6.5 MeV and again, it's this new code that was developed with sources 4C-m than we would have to examine it and see if we can confirm the validity of that.

So we would hold off comment on that until we have a chance to make a more thorough review. So any questions before we go on to PER-57? Okay, so PER-57 --

Member Ziemer: NIOSH has already agreed with your findings in a sense. Right? And they are stating, I think, that Rev. 1 addresses those and you simply haven't had a chance to review Rev. 1 yet. Correct?

Ms. Behling: This is Kathy. That is correct. And, let me also ask a question based on a comment made by Matt. Do you want, would it be helpful for SC&A to put together either a memo or a White Paper discussing or reiterating these findings?

Is that what I understood NIOSH is looking for? Matt can --

Mr. Smith: This is Matt Smith with ORAU Team. I can't speak for NIOSH or my management, but certainly, from my perspective, just a memo outlining what Dr. Anigstein just ran through verbally would be helpful.

I know where Dr. Anigstein is coming from in terms of his request here today, but I think it's proper to get it into writing and then we can respond to it formally.

Dr. Taulbee: This is Tim. I would agree with that. If you would just kind of summarize. It looks like most of these findings, you're wanting sources 4C-m in

order to verify and so that would just kind of trigger for us to make sure that we get that code over to you all so that you can evaluate it.

Dr. Anigstein: Hello, I was thinking of posting these on the BRS. Or do you prefer a memo?

Ms. Behling: Bob, excuse me, this is Kathy. It sounds to me that perhaps a memo would be appropriate in this particular case.

Dr. Anigstein: Will do.

Ms. Behling: Is the Subcommittee in agreement with that? I don't want to speak for the Subcommittee. Josie, are you okay with that?

Member Beach: Sorry, I was talking into my muted phone. So would this review come before your review of the new Rev., the memo or would you review the Rev. first and then see that all apply?

Ms. Behling: Good question, Bob, what would you do to make --

Dr. Anigstein: It would seem to me that it would be more useful to review the Rev. first.

Ms. Behling: Right.

Dr. Anigstein: Which in this way, not a small job.

Member Beach: It sounds to me like we need to task SC&A to review the Rev. and then they need to go back to each one of these findings and determine if that was corrected.

In addition to that, NIOSH needs to make available the new M code before you do the review. Is that correct?

Dr. Anigstein: That is correct.

Member Beach: And then I think we do need to talk about Finding 1. Bob has recommended that that be reduced to an observation. And is the Subcommittee in agreement with that?

Member Ziemer: It seems --

Member Valerio: I am, Josie.

Member Ziemer: -- like it's more appropriate as an observation. I think there was one other one that Bob thought might be an observation. Was it six maybe?

Participant: Yes, Finding 6.

Dr. Anigstein: The one of the, one second, let me think something through. Which one was that?

MParticipant: The one with the distances.

Dr. Anigstein: Thanks.

Member Beach: Yes, that was it.

Dr. Anigstein: Number 6 is an observation. So it's --

Member Beach: Is that --

Dr. Anigstein: -- three foot versus one meter distance.

Member Beach: So are you recommending that one be reduced to an observation as well?

Dr. Anigstein: Yes.

Member Beach: Okay, and I --

Dr. Anigstein: Yes.

Member Beach: -- am in agreement with that.

Member Ziemer: Didn't SC&A discuss these in some detail many years ago in the original review?

Member Beach: I --

Dr. Anigstein: So the original review said the same thing about the distance.

Member Ziemer: Yes, well, I mean, Tim you were asking for kind of a summary memo or something, but are you thinking there's different information in what Bob said today from what they said a number of years ago when they did the initial review?

Dr. Taulbee: This is Tim. No, I don't think so. I think more of what I was interested in is the kind of the documentation of the downgrading of the two findings into observations as well as just getting a better clear picture here.

But it looks like Bob hasn't completed his review yet of Rev. 1 and he's needing sources 4C so I think we can just provide sources 4C and then we can wait for Bob's full review of Rev. 1 and then respond to any questions that he has about these findings and perhaps any other new ones that he may come up with.

Does that sound appropriate?

Dr. Anigstein: Yes, by the way, it's 4C-m. The 4C we have.

Dr. Taulbee: Yes, I understand. It's the modified version of 4C.

Dr. Anigstein: Okay.

Member Beach: Okay so that, it seems like it would be smarter to go through Rev. 1 so I agree with that. Bob, did you want to go ahead and go through

Finding 7 or are we okay to task --

Dr. Anigstein: Okay. Finding 7 is very similar to the earlier finding. I mean, it was, basically Finding 7 is that the original calculation excluded high energy alpha particles which are emitted from the project.

Not from the uranium and thorium isotopes on their progeny. And again, NIOSH has addressed this using the 4C-m code. So it's in abeyance because until we review the 4C-m code.

Member Beach: Okay. All right. So anything else, Bob, before I recap?

Dr. Anigstein: Oh, yes. So I'm ready to go on to PER-57.

Member Beach: Okay, so give us a minute to finish this up and then we'll move to 057. So, Kathy and Bob, for the BRS to update for Findings 1 and 6, we can go ahead and change those to observations.

Or do you, would you prefer to wait until after the review of Rev. 1 is complete?

Ms. Behling: I would suggest that we make them observations now and assign them to Rev. 0 and if there are additional findings that's typically what we do.

We will note that in the BRS that this is Rev. 1 findings and we'll add on to that. So I'll make that change.

Member Beach: Okay. So then, so you'll just need to document moving those from findings to observations --

Ms. Behling: Yes.

Member Beach: -- and then Subcommittee, are you

agreeable to tasking SC&A with reviewing OTIB-24, Rev. 1?

Member Ziemer: Yes, I am, Josie.

Member Valerio: Yes, I am, Josie.

Dr. Anigstein: So --

Member Beach: Okay, so --

Dr. Anigstein: -- should we put anything in the BRS about the others, the other five findings or should we just wait?

Ms. Behling: The, all --

Member Beach: I think --

Ms. Behling: -- the findings will be added. If they're not in the BRS, I think they are, but --

Member Beach: They are. There's not much information on them, but they're there.

Ms. Behling: Okay and I will note, I'll add to it that we've discussed it during this meeting and I'll embellish the BRS to capture what we've talked about today.

Member Beach: Okay, that sounds good. NIOSH, any other comments on that?

Dr. Taulbee: This is Tim. None for me. Thanks.

Member Beach: Okay and so at the earliest convenience, you'll be able, you'll get that new code info so that Bob knows where to find it. I'm assuming you'll let the Subcommittee know when that takes place?

Dr. Taulbee: Yes, we will.

Member Beach: Okay, thanks Tim. Okay, anything else for OTIB-24? Okay, I'll note that you're tasked and, Kathy, your work is getting longer here.

Ms. Behling: Okay.

Member Beach: We okay to move on or, so --

Ms. Behling: I think Bob is ready.

Member Beach: -- I was going to see

Ms. Behling: I think --

Member Beach: -- if anybody needed a break, but I think we'd better go ahead and finish up. We are near --

Member Ziemer: I have a quick question, general question. I'll ask either Rashaun or maybe Josie, you'll know the answer. I know many times in the past, we've really put it to the DFO to do the tasking.

In terms of some knowledge of budgetary issues or restrictions, are we okay, just having the subgroup do the tasking today? Rashaun, is that okay or --

Dr. Roberts: Yes, good question. I think it's okay just to move forward with the Subcommittee doing the tasking.

Member Ziemer: If there are any budgetary restrictions, I'm wondering if, Josie, would it be okay if Rashaun worked with you to on timing with tasking if it was necessary? In other words --

Member Beach: Yes.

Member Ziemer: -- if something had to be delayed, we need to decide, you know, which of these is most important.

Member Beach: All right.

Member Ziemer: But I'm comfortable leaving that to you guys. But I know that sometimes in the past, there's been some issues that come up with budgetary restrictions that sometimes appear.

Probably not so much this time of year, but, yes, it could be. Who knows?

Dr. Roberts: Yes. Certainly. And, yes, if anything comes up with regard to that, I could certainly be in touch about it. But I think it's okay for now to move forward the way that we have been.

Member Ziemer: Good. Okay.

Member Beach: All right. Thanks, Paul. Appreciate you bringing that up.

Continuation of DCAS-PER-057 (General Steel Industries)

Dr. Anigstein: Okay, so I should go on to 57, PER-57?

Member Beach: Yes, please.

Dr. Anigstein: Okay, the purpose of PER-57 is, this was a review of the original append or Rev. 1 rather of Appendix BB which is the TBD for General Steel Industries.

And quite a while ago, NIOSH had already prepared a Rev. 2 and then a Rev. 3 and there was a PER-80 for those which we are not, which has not come up.

So the seven observations, there are seven observations on PER-57. Several of them have been resolved so they're no longer, they're closed.

And the remaining ones, with one exception, have

been resolved, but I'll just go over it very, very quickly, the outstanding ones.

Observation one which is a question of how to apply the exposure to organs. Those conversion factors have been resolved. It was that they use a fixed value and we agree in the revision that that is appropriate.

Observation three was that there was an error in the way NIOSH calculated the doses and that has been resolved in the revision two.

But that is no longer valid, that can be closed. Then there's Observation 4 and there are no neutron doses in the Rev. 1 and Rev. 2 has corrected that so that's been resolved.

Observation five, we don't know the status because that was during the performing the PER-57 subtask four. We count one of the cases we were reviewing was a skin dose case.

And our comment on that was that the skin dose should have been resolved, but it was years 1964 to 1966 where the maximum exposure was to operate to a worker called the layout man who spent all of his time, eight hours a day in close contact with freshly irradiated steel castings.

So he's getting a chronic skin dose and NIOSH has find to be an acute dose and the, we're just quoting, this was directed to look up the IREP user's guide which says that they would, that anything less than 600 millirem per hour over one day should be considered to be chronic.

And this is certainly much less than 5,200 millirem per year and it's every day, every workday of the year. So and we do not know whether that's been resolved or not because we haven't seen another

skin dose case since then.

But we don't know how NIOSH is applying this. No direction in the actual TBD on that. And the seventh observation was a question of assigning medical x-rays that we agree that it should be done uniformly whether or not we had a comment that one worker said, no there were no x-rays.

So, but that was the last of these uniformly assigned x-rays. And that's it. All exactly the findings. So that's the end of the comments on PER-57. Any questions?

Mr. Allen: Well this is Dave Allen. If I can respond to that one observation, Observation 5 was beta dose and whether it should be assigned as chronic and that is true.

I think anything with a model unless it's modeled as a split second or, you know, a very short time, it should be modeled as a chronic.

Dr. Anigstein: Okay.

Mr. Allen: Our typical approach, however, is with the many dose reconstructions on many different sides is to automatically assume acute for protons and electrons and chronic for neutrons since that gives us the higher POC and it's not, as long as we don't have, you know, huge doses, you know, big incidents, that's usually not a big factor.

So our dose reconstructors are used to assigning acute for protons and for electrons even though they didn't have to in this case. That was discussed, I don't have the date.

That was discussed in the previous meeting back when Wanda was Chair and she closed Observation 2 based on that. But you'll see Observation 2 is

exactly in protons instead of electrons.

Observation 5 is the exact same story. And, I think it should just be closed. It's an observation. It's a small effect and it's something very, we're typically used to doing even though it is, we're typically used to doing as a favorable approach even though Bob is correct and chronic would be the more accurate means.

Dr. Anigstein: Very good. So we can close that based on that comment.

Ms. Behling: Okay and this is Kathy Behling. I just wanted to ask a question of Bob. Did you discuss Observation 6 or was I looking at something else? I don't remember hearing you talk about Observation 6.

Dr. Anigstein: I only printed out the ones that -- I believe Observation 6 was closed previously.

Ms. Behling: Okay, then that was my mistake. The other question that I have is, because the BRS did not get updated until I believe after I or it was very close to the time that I prepared this document, I simply put that SC&A would attempt to look at these responses.

Based on what you're telling me, I took some notes here, but for me to update the BRS, either I could ask that Bob update the BRS or that you provide me with a little bit more information.

Because your, I see it appears that both the observations are closed and correct me if I'm wrong here, they are resolved because of revision one and revision one has addressed these observations. Is that correct?

Dr. Anigstein: Okay, are we talking about PER-57 or

about OTIB-24?

Ms. Behling: No, PER-57.

Member Beach: Fifty-seven.

Ms. Behling: Yes, PER-57. And I will also make mention, subtask four, just as a reminder, that is when we, we've already reviewed the General Steel Industries PER.

And now our protocols indicate that we have to pull out some representative cases and review those cases and that subtask four and these observations are associated with the fact that Bob looked at some cases and in reviewing those cases, these observations came to light.

Dr. Anigstein: I'm a little confused. PER-57 referred to revision one of, which I think revision one goes back quite a number of years to something like, Dave, you can probably remember better than I can.

Mr. Allen: No, I can't really remember the dates, but I think Bob's just going to tell you, Kathy, that you said they were fixed as a result of revision one and it really should be as a result of the revision two.

Dr. Anigstein: Right.

Ms. Behling: Revision two.

Dr. Anigstein: It was also a revision --

Member Beach: Well and just for the record, Observation 6 is, shows open in the BRS. It does not show closed.

DR ANIGSTEIN: Oh, then that's my fault. I thought it was closed.

Member Beach: Yes, and Bob, you went through that very fast so it was hard to kind of keep track of where we were as we were going through.

Member Ziemer: Did you include Observation 3 and I thought you skipped one before. What about three? Did you all, did I miss that?

Dr. Anigstein: Three?

Member Ziemer: Observation three.

Dr. Anigstein: Observation three was a question that the, sent over the same distribution assigned to the DCF. There was also a triangular distribution, I believe, assigned to the doses to the exposure rates and the two, one was multiplied by the other which was assumed that it was a perfect correlation.

The lowest ECF would always correspond to the lowest dose. And NIOSH agreed that that was incorrect and that was corrected in subsequent calculations. So --

Member Ziemer: The matter was resolved, I just hadn't marked it then.

Member Beach: Yes, that one was closed actually.

Member Ziemer: All right.

Member Beach: It looks like back in 2017.

Dr. Anigstein: I have a printout. I'm not on the computer right now. I have a printout from January, dated January 3rd, 2017 and the status is open.

Member Beach: Oh, yes, you're right. Bob, I was looking at the findings, not the Observation 6s. Pardon me. The findings are all closed.

Dr. Anigstein: The findings are all closed?

Member Beach: That is correct.

Ms. Behling: Okay, this is Kathy. And please correct me here if this is not the way you want to approach it, Subcommittee members. From my perspective, I think it might be useful and forgive me, Bob, but could we go through each one of the observations one at a time and after you discuss one Observation 1, let's have a discussion among the Subcommittee members to determine should we close this or shouldn't we?

I don't know if Subcommittee members are ready to blanketly close all of these based on Bob's discussion or if you need, if we need to go through these one at a time.

And, that's maybe for my benefit. I don't know.

Member Beach: No, no, Kathy. I agree. That was too fast for any of us to really make a decision and yes, sorry, Bob. You're very thorough, but very quick.

So in order for us to document these and close them correctly, I think we do need to just go back and just briefly go through each one independently.

Other Subcommittee members, are you okay with that?

Member Ziemer: Sure.

Member Valerio: Yes, Josie.

Member Ziemer: I'm fine with it.

Dr. Anigstein: Okay, let me pull something out. Hold it, give me one second.

Member Beach: Kathy, do you have the BRS open?

Dr. Anigstein: Yes.

Ms. Behling: I do not.

Member Beach: Okay.

Ms. Behling: I was attempting to do that. I apologize. I am not as good with this. Especially on CITGO.

Dr. Anigstein: Okay.

Member Beach: Yes, I, all of --

Member Ziemer: Are there NIOSH responses in the BRS?

Member Beach: Yes, I was going to say in --

Ms. Behling: There we go.

Member Beach: -- January 29th, 2021, Dave Allen, put, I think they're all the same aren't they, Dave, that the Appendix tools and some techniques were revised and the new PER, PER-80 performed the new revisions and PER-80 were reviewed by SC&A and all the findings and observations were closed.

And NIOSH is recommending closing all observations for PER-57. And, Dave, is that the same on all of them?

Mr. Allen: Yes, it's the same on all of them. We did the same thing. Bob did his and just kind of brushed through it all to say that everything's okay now.

Member Beach: Yes. And that's okay except for whoever has to type it up and make sure it makes sense. Then we don't have to go back and try to figure out why we did it so.

Mr. Allen: Okay.

Ms. Behling: And I do have this whole, this is Kathy again. Excuse me.

Member Beach: Yes.

Ms. Behling: I do have PER-57 pulled up now and starting with Observation 1, subtask four.

Member Beach: And, Bob, I don't think you have to open it, if you would just slowly go through each one, we could just take care of them.

Dr. Anigstein: Okay, I'll do that. So, Observation 1 --

Member Beach: Okay.

Dr. Anigstein: -- is that NIOSH used a fixed value of the exposure to organ DCF for assigning doses to administrative personnel which is inconsistent with the directions in OTIB-1.

And on further review, when we were reviewing OTIB, excuse me, PER-080, SC&A concluded that given the limiting nature of that assessment, the bounding nature I should say, of that assessment of administrative personnel, the fixed value of the exposure to organ DCF was appropriate.

It was claimant-favorable and it was appropriate. So we agree with NIOSH that that has been resolved when we were, by our review of PER-80. Okay, should I go on?

Member Beach: Okay. That sounds reasonable to me to close that finding. Others? Loretta, Paul?

Member Ziemer: Yes. Well, observation, right? Is it a finding or an ---

Member Beach: Observation.

Member Ziemer: Yes.

Member Beach: Observation.

Member Ziemer: Yes.

Member Beach: All observations.

Member Ziemer: Yes. I agree. It should be closed.

Member Valerio: I agree. It should be closed, Josie.

Member Beach: Okay. Thank you.

Dr. Anigstein: And Observation 2 was previously closed. Observation 3 was a error in the way the, this arose again, out of PER-057, review of one of the cases that was an error on NIOSH's part in the way the doses were assigned.

That there was a triangular distribution assigned to the dose conversion factor. Another triangular distribution assigned to the actual doses.

And they all supplied the two in the sense that the lowest DCF was always, was multiplied by the lowest dose.

The highest DCF by the highest doses, so forth in between. And that is the detail random disputes and these are the typical uncorrelated distributions that should not have been done.

And NIOSH agreed with that and that error did not reoccur when we were looking at the reason, at the per PER-080. So PER-080 really superseded this.

So we recommend that it be closed. And I run after it's going to be closed and SC&A agrees with that.

Member Beach: Okay. And I have no problem with that. I agree as well. Loretta, Paul?

Member Ziemer: Yes. I agree --

Member Valerio: I agree.

Member Ziemer: -- as well.

Member Beach: And Kathy, chime in if you need any more information, please.

Ms. Behling: I will. Thank you.

Member Beach: Since we're going to be --

Ms. Behling: Yes. Thank you.

Member Beach: Yes, please if --

Ms. Behling: Okay.

Member Beach: -- you're going to be up after us.

Ms. Behling: Yes. I'm good. Thank you.

Member Beach: Okay. So Bob, I think we're ready for 4.

Dr. Anigstein: Observation 4 is that the attended DB Rev. 01 does not assigned neutron doses. Usually in the way it was silent on neutrons. It's ignoring neutrons.

And the Revision 2 and Revision 3 gave bounding values for neutron dose conversion factors used for all organs and neutron doses were assigned based on a MCNP analysis.

So the Rev. 03 contains the directions for how to assign neutron doses. So therefore we recommend that that observation be closed.

Member Beach: Okay. Agreed here.

Member Ziemer: And also agreed --

Member Valerio: Agreed.

Member Beach: Loretta, Paul?

Member Ziemer: Yes, also --

Member Valerio: I agree.

Member Ziemer: -- agree.

Member Beach: Okay. Observation 5?

Dr. Anigstein: Yes. Observation 5, we just had this back and forth between myself --

Member Beach: Yes. And?

Dr. Anigstein: -- and Dave Allen. And even though there is no documentation, I am not aware of any documentation. Okay. I'm sorry, I should back up.

The Observation 5 is that the beta doses that were assigned to the skin during the period of 1964 to 1966. 1964 and 1966 is unique because when the GSI got what is called the new betatron.

So the betatron was located right next to the main building and the person. So there was a very short distance between the betatron room and the room where the testings' were marked up and cleaned up and repaired and sent back for more radiation.

And during this period you had heavy activity, not radio activity, heavy industrial activity. And you had this layout, it was not always the same man, but we assumed for the purpose of doses, I mean, that is the same person.

He was constantly exposed so that the exposure to the skin took place over an 8-hour day. And it was not in bursts, like when beta, which was from the activated, the radioactive steel that was activated

through the betatron radiography.

And consequently, the chronic exposure had been in the one skin dose case, so it was entered as an acute exposure. I'd say that one just increased and I also eventually will be using a chronic exposure for this scenario.

So we haven't seen that document, but we accept the assurance that it will be done.

Member Beach: Okay. So you're okay to close this with NIOSH's agreement and stating that they're going to use this as a chronic. Is that correct?

Member Ziemer: I thought the resolution was that acute would be used since it's more claimant-favorable even though admittedly the exposure is chronic.

I thought that's what NIOSH planned to do and that SC&A had agreed on that. Did I misunderstand that?

Dave Allen was suggesting that they typically use acute for skin dose simply because it's more claimant-favorable.

Mr. Allen: Yes. This is Dave. I can only hear part of what Bob was saying there. It was a little statically and stuff, but I said before chronic would be the right way to go.

We often use acute as a favorable, the dosage instructors are used to using acute as a favorable and often will do that and it doesn't make a lot of difference.

Member Ziemer: So I guess I'm asking, is the resolution that NIOSH is agreeing to use acute or is the resolution that SC&A is agreeing that's it's fine

to use, did I say it backwards?

Member Beach: Yes. Good --

Member Ziemer: Is SC&A saying it's okay to use acute?

Dr. Anigstein: Well, if NIOSH claims that it's, I haven't investigated this. If NIOSH claims that the acute is more claimant-favorable, we won't object to that.

And that's why it's an observation anyway and not a finding. Because it's not a, the skin dose during those years is relatively small and whether you use the acute or the chronic, I don't think will make much of a difference.

Member Beach: Okay. So --

Member Ziemer: May not affect outcomes anyway, but I wasn't sure what was being agreed to on this one.

Member Beach: Well, yes. Sounds like NIOSH or Dave said that chronic is the correct way, but acute is more favorable. So it sounds like SC&A is okay with that?

Dr. Anigstein: Yes.

Member Beach: And Dave, you're not agreeing to change anything in the documents, correct?

Mr. Allen: Correct. I think the documents silent on this, honestly.

Member Beach: Yes. Okay. So the most claimant-favorable will be used. Is that what I'm hearing? And --

Mr. Allen: Well, I mean, we can always, we

generally say we can always go more favorable. When we get to the best estimates and stuff, we might have to use the chronic. You know, like I said, that is the correct one.

Member Beach: Okay. Bob, where are you at with this? Are you agreeing to close?

Dr. Anigstein: I'm agreeing it to close.

Member Beach: Okay. Subcommittee, agree with this also?

Member Ziemer: Yes. I agree with it. Just the transcript will include our discussion on this anyway. As Dave Allen said, if they use best estimate, they may actually end up using chronic anyway.

But for most of those --

Member Beach: Yes.

Member Ziemer: -- General Steel people, that's not going to make much difference.

Member Beach: Right. Right. And this will have a twice the conversation. So okay, we're agreeing to close Observation 5 and Bob, if you move on to 6. Unless there's a comment?

Dr. Anigstein: 7, we simply were being --

Member Beach: So we're on 6, right?

Dr. Anigstein: 6 was closed.

Member Beach: No. 6 is actually still open in the BRS. It's NIOSH's Used Deficiency Measures to Estimate Internal Doses to the Kidneys. Is that one we're not ready to look at then if you didn't get a chance to look at it?

Dr. Anigstein: That must have been an error on my part that I didn't, let me see if I can pull it. It's going to take; I don't want to hold the meeting up.

Member Beach: Maybe if we take a break, you can take a quick look at that Bob, what do you think? But, let's go on to 7.

Dr. Anigstein: Okay.

Mr. Allen: Josie, this is Dave Allen. I think some of the confusion might be that this observation is identical to Finding No. 2 --

Member Beach: Oh, that's right. Yes.

Mr. Allen: And Finding No. 2 -- and that was closed four years ago or whatever.

Member Beach: Correct. You're right. So just to be sure, when you get a chance if you'd look at that Bob, and then maybe get back to us after a break?

And just so you're okay with closing six. I don't --

Dr. Anigstein: Okay. I will --

Member Beach: I'm sure it's -- I'm sure it's probably okay. But let's look at 7 and then.

Dr. Anigstein: Seven. Seven we can handle. Seven we were just being, the Observation 7 was that there was a interview, the CATI of a worker, if I remember correctly, who stated that medical X-rays were not, it was asked were medical X-rays required and they said, no.

So my observation then was, then why assign him a medical X-ray if he's not, if he said it was not required? And we can see since then, a lot of water has gone under the bridge, and NIOSH has made a uniform policy of assigning medical X-rays unless

proven otherwise.

And we agree with that. The claimant-favorable, then consistent. Everyone's treated the same way. So that observation can be closed.

Member Beach: Okay. Everybody in agreement with that?

Member Ziemer: Yes. Let's close that one.

Member Beach: Okay.

Member Valerio: Yes.

Member Beach: And there is a document on Finding 2 that Dave Allen, it's on the BRS from February 15th, 2017. I guess we can close all of those except maybe 6 and then Bob, if you could look at that briefly and determine if you're comfortable with that?

Dr. Anigstein: I will do that.

Member Beach: And then how's everybody doing? Are you guys ready for a lunch break or a comfort break? I know this is East coasters lunchtime.

Member Ziemer: I'm okay with going along for a while, but whatever works for the others.

Member Beach: Okay. Anybody else need a break, or not? I'm okay with going on as well.

Ms. Marion-Moss: Josie, this is Lori. I need a break.

Member Beach: Okay. Should we just take a quick break, a ten minute, 15 or are you looking for a lunch break, Lori? I'm okay either way.

Ms. Marion-Moss: 15.

Member Beach: 15. Okay. Rashaun, shall we go ahead and take a 15-minute break?

Dr. Roberts: Yes. Do you just want to call it about 12:30, 12:35?

Member Beach: Just say 12:35.

Dr. Roberts: Okay. All right, back at 12:35, then.

Member Beach: Okay. Thank you. Thank you.

(Whereupon, the above-entitled matter went off the record at 12:19 p.m. and resumed at 12:37 p.m.)

Dr. Roberts: Okay. Well, I think everybody's on at this point. Court reporter's set up to get going. So it's yours, Josie.

Member Beach: Okay. Thank you. And I'm going to circle back to PER-57 and Bob, did you get a chance to look at 6?

Dr. Anigstein: I did.

Member Beach: Okay. What do you think?

Dr. Anigstein: Okay. The observation was that they use the efficiency method, which was that essentially the intake was spread out uniformly over the entire year.

And then if the employee in question did not work an entire year, then it's simply the total intake, the intake rate was reduced, not the intake duration.

The intake duration remained a year and his rate was reduced. So if he's only employed for six months, he only took in 50 percent of the intake that was assigned to a worker that was there all year. But it was still for the whole year. And the problem with that is, like uranium has a long period

of residence in the body.

So if, in fact, he worked during the first six months during the year, he would've taken in the uranium and it would have been a higher dose rate subsequently then if had simply taken it over a period of a whole year because he would have taken more uranium for a longer period of time.

Let me check I'm getting this straight. Yes. If it came, I mean, think of it as if it were an acute intake. So if he, it makes a big difference whether, I mean, I'm just giving a, not the real case, hypothetical case.

It's easier for me to grasp and make observation as exposure.

Member Beach: Sure.

Dr. Anigstein: If he had a single take, an accidental intake, it would make a big difference to the second-year dose if the intake took place in January or took place in December because the dose would have been distributed over a longer period of time.

And this was not resolved. There was a CAD tool that Dave Allen called attention to and I'm looking at my review of PER-057 and also my review of PER-080 where the same thing came up.

And even though we were able to match for a period, I'm sorry. When in fact, the exposure was uniform, we were able to match NIOSH's numbers very closely.

But the hypothetical case of an interrupted exposure, there could be some cases where -- I'm sorry. I'm having trouble. One second, please.

Okay. I'm back. Hypothetically, could be a case

where a worker worked earlier in the year and his dose would be understated as a result.

So that, to my knowledge, has not been resolved. I made an observation because the effects would be small, but they just, you know, since we calculate the PoC to two decimal places, there conceivably could be cases where compensation could be affected.

Member Beach: So Bob, this is Josie. I have a question. So Dave said that Observation 6 is the same as Finding 2. The Subcommittee closed 2 before we got the response from NIOSH.

So I'm wondering if that was closed prematurely or are you only basing this on Observation 6?

Dr. Anigstein: Give me one second. I've got it on my screen, let me look it up.

Member Ziemer: Yes. These are findings on a PER --

Member Beach: Right.

Member Ziemer: -- and so that's for a specific worker or for the general approach for the PERs. I don't remember.

And since those PER --

Member Beach: Yes. And if you look at Finding 2 in January 10th of 2017, the workgroup closed Finding 2, but we hadn't gotten NIOSH's response.

And NIOSH's response came in, I believe, after the fact, which is posted on the BRS. I'm just going back to that to see what the date is.

Ms. Behling: March 3rd, 2017.

Member Beach: February 15th. Yes. And the only

reason I bring that up, of course, is because it was stated that those were the same. So --

Dr. Taulbee: This is Tim. I mean, if you look this part of our response here is that we've modified the tool to account for partial years of employment.

So --

Member Beach: Right.

Dr. Taulbee: -- and that's what I'm reading as to why it was closed and so I'm not, I don't see any reason why --

Member Beach: Yes.

Dr. Taulbee: -- it shouldn't be closed.

Member Beach: Okay. And then --

Member Ziemer: So let me ask Bob a question. I don't recall it because I was involved with GSI, but I don't recall on the intakes if for internal organs if we were assigning a daily intake over the year?

Bob, do you remember that?

Dr. Anigstein: I'm sorry. Say again, please?

Member Ziemer: Were we assigning daily intakes over the year for internal?

Dr. Anigstein: Yes.

Member Ziemer: And maybe Dave Allen might remember. But it seems to me if we have partial year that's not that hard to calculate.

Dr. Anigstein: But the thing is IMBA has the, I'm not an expert on IMBA, Kathy could probably help me better.

I believe IMBA allows you to have regimen of less than a year. Whereas, NIOSH uses it's CAD tool, which everything is by a year. It's put out over a year. I just adjusted for, break adjusted.

And by the way, I agree, I'm not quite sure how this looks, looking at my original review of PER-057, there was a finding, the Finding 2 and Observation 6 apparently are overlap.

I think the reason that they, I was assigning findings case-by-case, there were five cases. And then I, yes, it was a number of years ago, I really don't know how it came about.

But the observation has not been fully responded to by NIOSH.

Member Beach: Okay. So Bob, can you write something up and either on the BRS or in a memo form? I don't know what NIOSH would need to answer your concerns with 6.

Dr. Anigstein: I think a memo would be more convenient in this case, more effective.

Member Beach: Okay. NIOSH, any comments?

Member Valerio: Bob, this is --

Mr. Allen: Yes. This is Dave Allen. I mean, that memo is in Finding 2.

Member Beach: Your memo, but Bob's got concerns. So maybe Bob, you can look at the memo in Finding 2 and then take some more time and then we'll come back to this at the next meeting.

Dr. Anigstein: Okay. Will do.

Member Beach: I mean, is that reasonable? And if you have more to add, of course, get that memo

out to the Subcommittee.

Dr. Anigstein: Yes.

Member Beach: Okay. Is everybody in agreement with that?

Member Ziemer: That's fine with me. I'm trying, again, ask Dave Allen if he can remember but, is this just specific to these PERs or does it go back to the Site Profile?

Mr. Allen: Okay. This is Dave. It doesn't affect the Site Profile. The Site Profile's okay. It's a question of the tool we were using.

The tool, the CADW could only estimate dose in full-year increments. So we would prorate a partial year, you know, the total intake for a partial year to spread it out over the full year.

That way the total dose was correct. And in that memo, I pointed out that that makes the first year off, but then second and subsequent years are off the opposite direction and it's --

Member Ziemer: Yes, and now it's a --

(Simultaneous speaking)

Mr. Allen: After about five years you have the right total intake.

So it only really affects the PoC significantly if you had, well, it could only affect the dose significantly if you had a diagnosis within a year or two of that prorated year.

And if you did, the latency would mean the risk factors are insignificant. So it would never affect the PoC, not significantly.

Since that time I've told our dose reconstructors they could still prorate and use that for most cases, but if it gets into the 45 to 52 percent range, the best estimate range, they should use IMBA, which is what they've been doing since then.

And this was discussed under PER-080, I believe, and closed out there too. I'm not sure if it was, actually, I'm not sure if there was a finding or an observation, but it was discussed during that and closed out.

Dr. Anigstein: Okay. What I would suggest is that I prepare, I don't want to take the committees time now. As earlier instructed, yes, I'll take into account what I just heard from Dave and I'll prepare a memo responding to this.

Actually Dave, would it be useful if you were to prepare a memo first summarizing what you just said?

Mr. Allen: Yes. That's in Finding 2.

Dr. Anigstein: Yes.

Mr. Allen: It says that. But it's --

Member Beach: It's already in Finding --

Mr. Allen: -- goes off one day.

Ms. Behling: Yes. I have it posted on this screen right now. And it is embedded, it is attached to Finding 2 in the BRS, Bob.

Dr. Anigstein: Finding 2 on PER-057?

Member Beach: Yes.

Ms. Behling: Correct.

Member Beach: It's in that last in Finding 2 the last box.

Dr. Anigstein: Okay. Okay.

Member Beach: But I think Kathy can probably just send it to you too --

Ms. Behling: Yes.

Member Beach: -- if that works.

Member Ziemer: Yes. The details are there. It's --

Member Beach: Yes.

Member Ziemer: -- it's posted on the Skype right now.

Dr. Anigstein: I mean, I did not look at it when now because everything was closed so I wasn't confining myself to open.

Member Beach: Yes. We can just close all of the observations and leave 6 open with you having a chance to review that. I think that's fine.

Subcommittee agree?

Member Ziemer: Yes. That's good.

Member Beach: Okay. And it'd just be a carry-over for the next meeting. Just a quick discussion, I'm sure.

Dr. Anigstein: So I --

Member Beach: Okay. Anything else on PER-057?

Dr. Anigstein: So just to confirm, I'm still supposed to prepare a memo, right?

Member Beach: Yes. Yes. Look at it and if you feel

like it warrants a memo, please do if you're not satisfied with the finding memo that NIOSH put out in February that's associated with Finding 2.

So yes, please.

Dr. Anigstein: Okay. So I'll prepare a memo in either case. Either --

Member Beach: Okay.

Dr. Anigstein: -- agree or disagree.

Member Beach: Yes.

Dr. Anigstein: Okay.

Member Beach: All right. Anything more? If not, I think we can circle back to Ron and OTIB-6.

Mr. Buchanan: Okay. I'm on.

Member Beach: Thanks for your patience, Ron. We really appreciate it.

Mr. Buchanan: That's fine. So Kathy will run the slide projector and I will try to call out the page numbers as I review this.

Let's briefly recap. This is a focus review of OTIB-6, or patient six to see if the issues were resolved we identified in Revision 5 and this is for occupational medical X-ray procedures.

And we see on page 1, we list the documents pertinent here. It's OTIB-6, Revision 5 of 2018. We did a review of that and issued that in 2019.

And then NIOSH issued Revision 6 in 2019. And this is what this document memo is, is to look at these issues and see if they are resolved by Revision 6.

Now, when we reviewed Revision 5, we did not have any findings. We had six, I mean, excuse me, seven observations with minor issues that didn't affect dose or we wanted clarification on.

And in addition, this is a very thick document, 140 pages, lots of tables, lots of references and such. So we had some documentation issues at the end that we'll talk about.

So that's on page 1, we'll start out with Observation 1. It said, need clarification for DCF units in Attachment B. Tables B, 1, 2, and 3 in Revision 5 had a very complex set of units there that didn't quite make sense.

And we commented on that and asked for clarification. See that at bottom of page 1, status of Observation 1. We find that in Revision 6 then those tables have a different heading on it and they list the simple correct units of rim per centigrade.

And so we feel that that's been resolved and recommend that that observation be closed.

Member Beach: Okay. Let's take these one at a time and any discussion on Observation 1 and SC&A's findings and recommendation to close?

Member Ziemer: I think that's very straight forward. Ron, it's helpful. I'm good for closing that.

Member Beach: Okay.

Member Valerio: I'm good for closing that, Josie.

Member Beach: Okay. I am too. Thanks. Thank you and so we're closing Observation 1 and you can go ahead and move forward, Bob.

Mr. Buchanan: Okay. So this is page 2, Observation

2 and this was the only one that remained open and it was a need clarification for changing chest thickness.

A little background to this, in Revision 5 they listed, in Revision 4, they listed chest thickness as 24 centimeters. In Revision 5 they had changed it to 24 centimeters.

And we asked for clarification on that because we looked at some of the references and they list anywhere from 20 to 25 centimeters.

And while we had no problems with using 24 centimeters, we wanted to know where that came from, the reference for it. And so in Revision 6, they provide a reference of ICRP, 110 of 2009. That's an 84-page document.

I looked it up in the ICRP files and did some searches in it and I could not find where chest or thickness or 24 centimeters was listed.

And, like I say, we had no problems really. We just need the referencing page number for that. So that's the reason we have that recommended open.

Member Beach: Okay. NIOSH have any comments on that?

Dr. Lobaugh: Hi, Josie. This is Megan Lobaugh.

Mr. Allen: This is Dave Allen -- go ahead, Megan. I didn't know you were on.

Dr. Lobaugh: Oh, yes. Sorry, Dave.

Member Beach: Hi, Megan.

Dr. Lobaugh: Hi. So I just wanted to provide an additional clarification there. So we did use ICRP 110, but specifically we were using the voxel

phantom that's described in ICRP 110.

So to come up with the 24-centimeter thickness we actually made a measurement of that voxel phantom using the MCNP visual editor.

So when we made that measurement it was approximately 23.9 centimeters so that's how we rounded up to 24 centimeters.

So the reference we have in there, I believe, is correct, you know, it is correct, but we could provide additional information as to the fact that we measured that using the phantom as described in 110.

Mr. Buchanan: Okay. That would be helpful because I couldn't find where it stated that in 110. So if you could just provide information of how you came up with that from whatever, you know, values they provide, I appreciate that.

Member Beach: Okay. Is that one we should leave open until that is addressed in the BRS?

Member Ziemer: That's so simple. I'm wondering if we can just agree to have them add that information and we can close this out?

Member Beach: Okay. Ron, you okay with that?

Mr. Buchanan: Yes.

Member Ziemer: It's just a couple sentences, right?

Member Beach: Okay.

Member Ziemer: I think Megan can provide the wording on the --

Member Beach: Okay.

Member Ziemer: I'm okay with, if that's the clarification that makes sense.

Member Beach: And Megan, I think you can probably just send an email to if that works and then when Kathy's updating the BRS. I don't know, or NISOH, whoever does that can just add that.

Ms. Marion-Moss: This is Lori --

Member Beach: Okay.

Ms. Marion-Moss: We'll get that updated.

Member Beach: Okay.

Ms. Marion-Moss: The BRS and I'll send an email to the Subcommittee.

Member Beach: Okay. That sounds great. Thanks, Lori. And Loretta, you okay with closing 2, as well?

Member Valerio: Yes. I'm fine with that. Yes. Perfect. Thank you.

Member Beach: All righty. Ron, I think we're ready for you to move forward.

Mr. Buchanan: Okay. Good. We're on page 2, we're on Observation 3 now. That's differences in source to image distance SID for various X-ray procedures.

And we found that the reference listed, well, the recommendation in Table 3-1 was 72 inches, which is 183 centimeters SID for the lateral cervical spine. And the ICRP lists 102 centimeters.

And so we was questioning why that was chosen. And we see that the status of this observation is that the revisions provided two references.

And we looked those up and they both recommend

the 72 inches, which is 183 centimeters as Revision 5 and 6 had in it. And so we consider that satisfactory and that's resolved and we recommend closure.

Member Beach: Okay. I'm agreement with that. Paul and Loretta?

Member Valerio: I'm in agreement.

Member Ziemer: Yes. I agree on that.

Member Beach: Okay. Pretty straight forward and you can keep going, Ron.

Mr. Buchanan: Okay. Page --

Member Beach: Thanks.

Mr. Buchanan: -- bottom of page 2 and top of page 3 and we look at the Observation 4.

Observation 4, we needed references and derivations to some of the KIRMA values in Table 4-3. 4-3 is a very assignments table with lots of references, lots of footnotes, and a lot of PDF files. And these are rather large files, a couple hundred pages some of them.

And so --

Member Beach: Ron, can I, did you say Table 4-3 or 4-1?

Mr. Buchanan: 4-1.

Member Beach: I thought I heard you say three.

Mr. Buchanan: If I said three that's incorrect. I might have been --

Member Beach: Okay.

Mr. Buchanan: I might have said it wrong. It's 4-1. Okay. So 4-1 --

Member Beach: Okay. Thanks.

Mr. Buchanan: 4-1 has a lot of values in it, lot of references, lot of footnotes.

And so we checked some of those and we couldn't find really where the origin was and how it was derived.

And so what we found in Revision 6, then of OTIB-6, they provided additional page numbers and references. So we went back and spot checked it some of the many values in table 4-1.

And traced them back to the origin and to the cited references and found that they were correct. And so we feel that this is been documented and the observations been resolved and recommend closure on Observation 4.

Member Beach: Okay. And I agree with that.

Member Ziemer: Yes. I agree with that and --

Member Valerio: I --

Member Ziemer: -- Ron, let me make an observation on your observations here. Top of page 3, your fourth line, look at milliroentgens. You see it?

Member Beach: Oh, yes.

Member Ziemer: Do you know what I'm asking?

Mr. Buchanan: Right, I'm going to get there.

Member Ziemer: You got a new spelling for.

Mr. Buchanan: Yes.

Member Ziemer: Okay.

Mr. Buchanan: Okay, that was in, I copied and pasted that out of the original one, right? Yes, you're correct.

Member Ziemer: I can't help picking out stuff like that. Sorry about that. I don't expect you to revise the document, I just want to make sure we're talking about the same units.

Mr. Buchanan: Yes. Yes, that might be in BRS that way. I have to go back and check.

Member Ziemer: Okay. Thanks.

Mr. Buchanan: Okay. So that brings us to Observation 5 on page 3. This was thoracic and cervical spine dose assignments after 1970 needed clarification.

And what brought this back about was table B-1, dose conversion factors for those two views were listed up through 1970, but nothing after that.

And OTIB-6 listed dose conversion factors for other exposure views after 1970. And so our question was, was any taken after 1970?

And we see that the status of that observation is that the footnote on table 4-1 of Revision 6 indicates that the procedures were not used after 1970.

And so we see that that's clarified and resolved and recommend closure on that.

Member Beach: Okay. I agree with that as well.

Member Ziemer: Yes. I agree.

Member Beach: Okay.

Member Valerio: I agree.

Member Beach: Great.

Mr. Buchanan: Okay.

Member Beach: Okay. You're moving right along, Ron.

Mr. Buchanan: Okay. Observation 6 was the dose, breast dose reference need clarification. And that was in Table B-3. The footnotes and on also Table B-13, footnote F lists several references for the derivation of the dose to the breast.

And is said derived, and then didn't really know how it got from there to the next table where it was actually used. And we see that in Revision 6 that has been removed.

There's no derivation, derived in there and they put actual numbers in. And so we agree with that and we had no issues with that in the revision.

And think that that should be closed.

Member Beach: Okay. Agreed here.

Member Ziemer: Yes --

Member Valerio: Agreed here.

Member Ziemer: -- sure.

Member Beach: Okay.

Mr. Buchanan: Okay.

Member Beach: Thank you.

Mr. Buchanan: So moves on to page 4, which is

Observation 7. Now, this is kind of overlaps with Procedure 61. And it doesn't really strictly apply to OTIB-6.

But I wanted to put it in there because they are somewhat connecting. Okay. Procedure 61 in 2010 edition of Revision 3 provides some equations and stuff in the back in Attachment C-3 and C-4.

Now, NIOSH has those in their workbooks. And so they don't have a problem with it, but when SC&A reviews cases, especially blind cases, we need some information occasionally.

Now, some sites provide all the skin dose information. This is concerning skin dose. Provides all the information. Fine. Don't need it.

Some of them don't provide any. So we use OTIB-6 as the default. However, some of them provide a little information like inter-skin dose for their particular unit and stuff, but it doesn't provide all the other information.

Such as exit dose, remote skin dose, entry near but outside the primary b and that sort of thing. So we need information in table C-3 and C-4, Procedure 61.

And the reason I bring this up in OTIB-6 review is that because Revision 4 of 2017 of Procedure 61 makes a statement, revisions initiated to ensure consistency with OTIB-6, Appendix C on the calculation of skin dose deleted.

As duplicate of OTIB-6. And so what we recommend is that Procedure 61 retain that information in Table C-3 and C-4 of Procedure 61.

And so this really wasn't directly applicable to OTIB-6, but we wanted to reiterate that.

And so the status for our review of this OTIB is that we've done that and so we wanted to emphasize that and we recommend that it would be closed for OTIB-6 at this point.

Member Beach: Okay. Thanks, Ron. Any comment from NIOSH on that?

Dr. Lobaugh: This is Megan again. I can say, so I put together actually a crosswalk of the information that was in PROC-61, Attachment C to where it's located in OTIB-6.

Specifically, for Table C-3 and C-4, those are actually copied directly from NCRP 1989, which I don't have the whole name of that NCRP, but that's the reference in OTIB-6 is NCRP 1989.

And those are discussed in section 6.4 of OTIB-6, Rev. 6 and that's where it provides the reference to these values that we're using.

So that's specifically for those tables. I can provide that to Lori and the BRS if that's helpful.

Mr. Buchanan: Right.

Member Beach: Yes. I think that would be helpful.

Mr. Buchanan: Right.

Member Beach: Agree, Ron?

Mr. Buchanan: Right. It would be great. It would be helpful if that was done in writing in the BRS so that I could review it.

Dr. Lobaugh: Great. I'll do that.

Member Beach: Oh, thanks, Megan. Appreciate it. Okay.

Mr. Buchanan: Okay.

Member Beach: Agreed to close

Member Ziemer: Would that eliminate the need for carrying this table? How does that impact on your recommendation?

Mr. Buchanan: I would have to look at it and see. I would have to, you know, I think I couldn't say right now. I'd have to look at it and see if that's resolved.

Member Ziemer: Really --

Mr. Buchanan: It's really Procedure 61.

Member Ziemer: It sounds like Megan is suggesting that everything needed is actually already there. Did I understand that correctly, Megan?

Dr. Lobaugh: Yes. That's correct, Dr. Ziemer. Yeah. So everything that was in Attachment C is discussed in OTIB-6 in certain sections and the equations and everything are copied there.

So this table that I have goes through each thing specifically, though. So that you can see, you know, where Table C-3 in Proc 61 is discussed in Section 6.4.

And, again, is just actually a copy from the NCRP 1989 reference. So that's not -- it's reference values that we happen to copy into Procedure 61.

Mr. Buchanan: Okay. Now, this is -- and this would be applicable to cases -- sites that just provide inter-skin does, but that doesn't tell you what to use for the exit-skin dose and all that.

You're saying that this information is available in OTIB-6?

Dr. Lobaugh: Yes, this is -- all of the information is available in OTIB-6 to recreate those calculations for the sites that don't have the specific information in there.

As a side note, as I review medical TBDs that are coming in, that's something I'm asking and, you know, requesting ORAU actually include all that information within the TBDs as they're getting revised.

Member Ziemer: So --

Dr. Lobaugh: The sites that --

(Simultaneous speaking.)

Member Ziemer: Josie, maybe it would be good if Ron took a close look at that and see whether or not it's necessary to carry this Attachment C along or whether it really is sufficient. As Megan has described.

Member Beach: Yeah, because I know Ron recommended closing the observation. However, SC&A performed a focused review of OTIB-6.

Do we need to do a fuller review based on this observation, or would Megan's memo capture it and we wouldn't need to do more review on this?

Mr. Buchanan: Well, the changes in Revision 6 were not -- well, that was Revision 5 that that comment was made on. And so and Revision 6 just addressed minor issues. I don't think we need to do a full comparison of 5 to 6, just the issues we've addressed so far.

Member Beach: Okay. So --

Mr. Buchanan: I just --

(Simultaneous speaking.)

Member Beach: So, Paul, I agree. If we just carry this as open and then let Megan add and then Ron can review it, and then we can simply go back and close it out making sure that it's clear. Does that make sense?

Member Ziemer: Sure. I think let Ron have a chance to review that again and taking into consideration any information Megan's provided here.

Mr. Buchanan: Okay. That works.

Member Beach: Okay. That makes sense. Loretta, you okay with that?

Member Valerio: Yes. So this will actually be held in abeyance? Or just open?

Member Ziemer: I think it's still open till something's agreed to, right?

Member Beach: Yeah. That's correct.

Member Ziemer: Abeyance implies that we've resolved it but just hasn't -- well, I'm not sure. I forget.

Member Beach: I think you're right. I think we can just leave it open until -- and carry it over to our next meeting.

Member Valerio: Okay.

Mr. Allen: Just so you all are clear, nothing is -- we're not changing anything in OTIB-6 --

Member Beach: Correct.

Mr. Allen: -- this is just Megan showing the

crosswalk of all of the information from Attachment C is already in OTIB-6.

Member Ziemer: Right. Right.

Member Beach: Correct.

Mr. Allen: Yeah.

Member Beach: Yes. Agree with that.

Ms. Marion-Moss: This is Lori. Wouldn't that status change to in-progress instead of open, remaining open?

Member Beach: Sure. Sure, that would be okay too. Yes.

Member Ziemer: Yeah. That probably is more correct.

Member Beach: You're right. Okay, so --

Member Ziemer: So the ball -- the ball is in SC&A's court then, Ron?

Member Beach: No, it's actually in Megan's and then SC&A's. NIOSH first to add that comment and then SC&A to review. Correct?

Ms. Marion-Moss: This is Lori. Again, we'll update the BRS and send an email to the Subcommittee and SC&A.

Member Beach: Perfect. Thank you. Okay. Do we want to go through the documentation issues or?

Mr. Buchanan: They're very simple. I can go through those pretty fast.

Member Beach: All right.

Mr. Buchanan: Yeah. If you don't mind.

Member Beach: I don't at all.

Mr. Buchanan: Yeah. Evaluation of the -- this is on page 5 of the memo. Evaluation of the resolution of documentation issue. Okay.

As I say, this is a very long complicated document. Lots of tables, lots of references. And so what we went through, I went through and pointed out anything that stood out that needed correcting that didn't really affect dose.

But, you know, needed corrected or addressed or commented on in Revision 5. And so I have found that in Revision 6 they addressed all those. All those were corrected except for a few.

And so Table 5, 6, 7, and 8 list those, and I don't think we need to go, as far as I'm concerned, go through each one in detail other than to say they was all addressed and corrected in Revision 6 except for a couple.

And so we see that on page 9 there I list the documentation issues that remained open. And really there was only one out of all of those that remained open. And that was on page 3 where they list the table of reference, which is called, I think, the publication record.

It seems that the table numbers from, well, actually from Revision 4 were copied into 5, and then that was copied into 6. And it would appear that those numbers should change as they revise them.

If they add a table or take away one, well then that makes the table numbers different. And so that was one documentation error that I still felt was open. I don't know if NIOSH wants to comment on that at this time?

Dr. Lobaugh: This is Megan. I don't have anything specific except that the revision summary, I think, typically uses the previous revision table numbers.

So that's why they would seem outdated. I don't know that we would normally update those, so that's where I'm not sure what to say what we will do.

Maybe Lori can speak to whether the revision summary typically gets updated to table numbers if they should get moved around.

Ms. Marion-Moss: This is Lori. It varies depending on what's going on with the revision, but we'll look into that.

Mr. Buchanan: Okay. Because Revision 6 really should have referred to Revision 5's table numbers not Revision 4 table numbers.

And so it's kind of confusing to read through and see what was changed and wasn't changed. So okay. So you'll -- page 3 you'll address that?

Ms. Marion-Moss: Yeah, is that an observation in the BRS?

Mr. Buchanan: No, that wasn't under an observation --

Ms. Marion-Moss: Oh.

Mr. Buchanan: -- that was under documentation issues. Because I wasn't sure what your policy was, but I wanted to point out that the tables seem to be carried on without updating.

And so I felt that it really should be updated for the reader to understand what you're referring to, but I wanted to point that out and see if that was correct

or incorrect.

Ms. Marion-Moss: You're right, Ron, it should be updated --

Mr. Buchanan: Okay.

Ms. Marion-Moss: -- accordingly. I don't know how the Subcommittee would like us to respond to this or the list --

Member Beach: Since it's not an official finding or an observation just -- I don't know how you -- how you would let us know if it got updated at some point?

Ms. Marion-Moss: Okay.

Member Beach: I don't think it requires an official response. Anybody else?

Member Ziemer: How are you going to keep a record of what occurs?

Ms. Marion-Moss: I don't --

Member Beach: Is that something that should be added? Well, I don't know. Because it's not really a finding. How do we keep record of that?

Mr. Buchanan: It won't be changed until we do a Revision 7. If and when they do a Revision 7, you know, it can't.

Member Beach: Right. And, NIOSH, don't you -- or, Lori, don't you guys usually keep track of that stuff for when you get into the revisions?

Ms. Marion-Moss: Yes, we do.

Member Beach: Okay. So that's kind of an action for you then, correct?

Ms. Marion-Moss: Yes. Yes, it is.

Member Beach: Okay. And I'm not sure how to --

Ms. Marion-Moss: I'll let you --

Member Beach: -- to keep track of it, so.

Ms. Marion-Moss: I'll let the Subcommittee know the next time we revise it.

Member Beach: Okay.

Mr. Buchanan: Okay.

Member Beach: Is that a note that can be made in the BRS, Kathy, when you update these other findings as to their status just to -- or that's probably not the appropriate place.

Ms. Behling: Yeah. Whatever --

Member Beach: Okay.

Ms. Behling: -- I can update. Yes, I'm not sure, but I can -- trying to think, we can add something to the BRS. I'm sure Lori and I can work together and come up with something.

Member Beach: Perfect. Okay.

Ms. Marion-Moss: Sounds good to me.

DCAS-RPT-0005 (Alternative Dissolution Models for Insoluble Pu-238)

Member Beach: Thanks, you guys. Appreciate it. All right. Are we ready to move on to the DCAS-RPT-0005? And not expecting anything from NIOSH unless you guys had a chance to look at this, but we know these were late add-ons. 5 and then 29. So.

Ms. Behling: Okay. Yeah, this is Kathy. And I

apologize for not displaying on Skype. Some reason I lost -- had a connection interruption.

So trying to get back on there. But we can discuss this DCAS Report 5. Actually, this was a carry-over. During the Subcommittee meeting two years ago, we were asked to follow-up with a memo.

And we did, SC&A, Joyce Lipsztein did submit a memo on February 26th, 2019. And in there we discussed there was one observation for Report 5 where we were questioning the justification for using Mound case number 13 for the dissolution parameters as a default for all Mound workers.

And NIOSH did revise Report 5 and SC&A reviewed that, and based on that revision we concluded that there was appropriate or adequate justification for using that case 13.

And so we agree that this issue was resolved, and we recommend that this observation be closed.

Member Beach: Okay. Comments from anyone?

Member Ziemer: I'm kind of in the dark here. This is Paul. I'm kind of in the dark as to what was the problem with that case and how, you know, they said they shouldn't use it and it says here that it was okay, but what was the issue on it?

Mr. Allen: This is Dave Allen. I can briefly describe the provision report lists and graphs several different Mound cases and then picked Mound 13 as representative with no basis described as to why that was representative.

So essentially a few -- about a paragraph was added to describe why one particular case might have had two different intakes and another one had a different incident.

That sort of thing as to eliminate a couple and describe why Mound 13 was the most representative. And SC&A apparently reviewed that and agreed that that was a sufficient explanation.

Member Ziemer: Okay. Yeah. Okay, I got you. Just wasn't sure what the -- sort of what the original problem was and let alone the resolution.

So you had several cases, some of which were more atypical, and you're saying that the one they used is a more typical one? Am I understanding that correctly?

Mr. Allen: Yes.

Member Ziemer: Thank you.

Member Beach: And on the BRS there is a document that's attached to that finding that Dave attached, I think back in 2017.

Any other comments or questions on this one? Are we in agreement to close?

Member Valerio: Josie, this is Loretta. I'm in agreement to close, and I appreciate the explanation because I was a little lost on that as well. So thank you for that, and I agree to close.

Member Beach: Okay. Paul, you okay with that as well?

Paul, we didn't hear your answer if you did answer. Sorry.

Rashaun, I think we might have lost him again.

Member Ziemer: No, I can hear you.

Member Beach: Okay.

Member Ziemer: Can you hear me?

Member Beach: Yes, we can hear you now.

Dr. Roberts: Yes. Now, we can.

Member Ziemer: Okay. I can hear. Yeah, I was -- I'm satisfied with that. I'm good. Thanks. Appreciate the explanation.

Member Beach: Okay. So thank you. And, Kathy, you'll go in to the RPT-005 and just that first finding that's in abeyance, change that status to closed I'm assuming with the write-up?

Ms. Behling: Yes. And that's Observation 1.

Member Beach: Yes. Oh, it's listed in the BRS as Finding 1. It's not listed as an observation.

Ms. Behling: Okay.

Member Beach: And that's in RPT-005 --

Ms. Behling: Five, yeah.

Member Beach: -- maybe I'm --

Ms. Behling: I'll go in and check. I had it listed on our table here as an observation. I don't know if it got changed to an observation or if that's just an error on my part.

Member Beach: Yeah. Neither one of those are actually listed as findings or observations. So there was 1 and 2 was closed. So yeah. Anyway, if you wouldn't mind checking that as you go through this.

Ms. Behling: Okay. I will do that.

Member Beach: Thanks. Thank you.

Ms. Behling: Yes.

Mr. Allen: This is Dave Allen. In the BRS it looks like Kathy made an entry July 16th of 2018 that said it was changed to an observation.

Member Beach: Okay. Okay. Thank you. Yes, it's normally right on that -- oh, you're right. She sure did. So it's normally up at the top, but it wasn't in that case.

So thanks for that, Ron. I mean Dave. I'm going to get my names straight sometime today.

Okay. Are we ready to move on to OTIB-29?

(Simultaneous speaking.)

ORAUT-OTIB-0029 (Internal Dosimetry Coworker Data for Y-12)

Member Beach: I don't know if everybody got the memo. This was a February 26th, 2019 memo that was sent out from SC&A on both of these items.

So it's -- yeah. Okay. So that was sent around?

Ms. Behling: I included it. Did I include it in this document?

Member Beach: It wasn't in the stuff that Rashaun provided.

Ms. Behling: Okay.

Member Beach: I did not --

Ms. Behling: No.

Member Beach: I do not --

Ms. Behling: No, I did not -- I did not forward this around. I think I sent it to you, Josie, and to Lori.

Member Beach: Yeah.

Ms. Behling: Okay.

Member Beach: I don't think the next one we're going to solve here because I think there's going to be an action for NIOSH. But I think we can go ahead and review it and then go from there, Kathy.

Ms. Behling: Okay. All right. We're talking about OTIB-29, and this is the Internal Dosimetry Coworker Data for Y-12. And the outstanding finding is Finding No. 4.

This was put in progress back in 2009, and it goes back to this issue of the Monday morning sampling and questioning if NIOSH is taking into account that there was a minimum of 48-hours absence from the work area.

And in 2012 at one of the meetings -- no, in 2012 OTIB-29 was cancelled, and the technical information was incorporated into the Y-12 TBD Rev 3.

SC&A was tasked to look at that, and we reviewed the Y-12 TBD, and we did not feel that this issue was adequately addressed.

Thereafter, in 2018 NIOSH said that they would prepare a White Paper on the issue, and at our last meeting in 2019, NIOSH said they -- they said what else are we supposed to say about this?

And they wanted SC&A to reiterate our question about this Monday morning sampling, and so we did that in this February 26th, 2019 memo.

And I'll just briefly summarize. What we're saying is that it was determined that NIOSH did not consider that routine urine samples were collected after a minimum of 48 hours of absence from the workplace.

In addition, NIOSH didn't show that for all time periods, 40 percent or more of the samples were not collected on Mondays.

And Joyce went on to specifically identify some paragraphs in the OTIB Rev. 3 on Section 5.3.1.2, page 23, the first paragraph states the primary urine collection method was a spot sample submitted Monday morning before entering the work area.

And the last paragraph of that same section says since 1989 routine samples have been collected over a 24-hour period, typically while the employee was on a scheduled break from the workplace.

Then in the Attachment B of the Internal Dosimetry Coworker Data for Y-12, that does not take into account Monday morning sampling schedule.

And as a result, this -- for type F compounds this would underestimate the intakes by about an order of four lower and two lower for solubility types M and F.

So what SC&A is asking NIOSH to do is to, number one, demonstrate the impact of the 48-hour absence from the work area in the intake calculations and, number two, show that 40 percent of the samples were not collected on Monday mornings.

So, as I said, this memo was submitted back in 2019, but we resurrected it for this meeting, and I don't know that NIOSH had an opportunity to follow-up.

And I don't know if we're still going to request a White Paper or just what the Subcommittee would request from NIOSH.

Mr. Allen: This is Dave Allen --

Member Beach: I think --

Mr. Allen: I'm sorry.

Member Beach: No. Go ahead. I was just going to ask you if you had a comment. So thank you.

Mr. Allen: Okay. Yeah. This is Dave Allen. I was going to respond to that. That this one is in -- on my court, on my desk, and I know that, and I think it does require a White Paper or memo or some type of written response like that.

My efforts to do that got overcome by other events over the last couple years here. But Liz Brackett will definitely not let me forget. She pings me from time to time on this one.

So I don't have a whole lot more to say. I don't have a whole lot more to say other than I -- it is an action item for NIOSH. It's in our court, and we know it.

Member Beach: Okay. So I'm going to just put this as a carryover to our next meeting, and hopefully some of this stuff we can just take -- clear off the deck for the next meeting, some of these items, based on your schedule, of course.

So is there any questions or comments from Subcommittee members? Clarifications needed?

Member Valerio: None here, Josie.

Member Ziemer: I think we got to carry it forward, I think.

Member Beach: Yes. I agree. Okay. Everybody doing okay? Need a break or are we ready to go on SC&A's presentation on Peek Street Facility?

Ms. Behling: Josie, I apologize, but I am having a connection issue here, and so I am not able to display. If you want to continue on, Rose, could you display on Skype for me, or should we take a break?

Ms. Gogliotti: Yeah. I absolutely can do it. Can you just email me what you want me to put up?

Ms. Behling: Okay. Yes.

Ms. Gogliotti: Thanks.

Ms. Behling: No, I can't, because I don't have an internet connection. Everything naturally, would happen -- everything is down. It was -- I guess you were not included in the -- Bob, can you forward that to her? Bob Barton?

Member Beach: It's all in Rashaun's meeting prep stuff that -- can Rashaun send that to Rose or?

Ms. Behling: Yes.

Member Beach: Or I can.

Dr. Roberts: Yeah --

Ms. Behling: Yeah.

Dr. Roberts: -- let me try to find it.

Ms. Behling: Thank you so much. I apologize. I don't know what's going on here.

Member Beach: Oh, not your fault. I actually have it up. So, Rose, I'll just send you what Rashaun sent out.

Ms. Gogliotti: Okay. Great. Thank you.

Ms. Behling: Thank you, Rose.

Member Beach: Okay. You should get that

momentarily.

So while we're waiting for Rose to be able to put that up, Rashaun, I have a question for you. Kathy sent us a Table 2, guidance for stuff that the Subcommittee should consider for review.

Okay. Are we limited on what we can task SC&A on this list? I don't know if you've had a chance to look at the list.

Dr. Roberts: No. I haven't gone over the list in any depth, but after this meeting, you know, I'll take a look at what's been tasked within the meeting and that table and get with you offline.

Member Beach: Okay. And maybe, Kathy, if you can maybe let us know what some of the priorities might be or what -- because I obviously marked all of them to be tasked.

So that's how I roll. So we'll have to --

Ms. Behling: Like you said.

Member Beach: Maybe between all of us we can get that in.

Ms. Behling: Okay. The other -- what I was going to suggest is there are six subtasks for review. We've already reviewed the PER, and now we need to look at one or two cases.

And I -- then we could close those PERs out --

Member Beach: Okay.

Ms. Behling: -- and so we -- I could provide, excuse me, I could provide you with the selection criteria for those six if you're willing to proceed with the subtasks for those.

Member Beach: Okay. Yeah, and we'll talk about it after this, but I think that sounds like a fair thing to move forward on. So after this -- when we get to that.

Okay. Thanks, Kathy, for that. I appreciate it.

Ms. Behling: Sure.

Member Beach: Rose, can you make that any -- well, never mind, maybe I can do it here. Ah, okay.

So it looks like, Rose, thank you so much for jumping in.

Ms. Gogliotti: No problem.

Member Beach: And I guess Doug is going to present. Is that correct?

Mr. Farver: That's correct. I'm ready whenever you are.

Member Beach: Are you ready? Okay. Go ahead.

Mr. Farver: Okay. So I'm going to talk about our report for the Dose Reconstruction Template Review for the Peek Street Facility in New York. Next page.

We did a review of the Peek Street Facility dose reconstruction template and methodology. There are no Technical Basis Documents developed by NIOSH for the Peek Street Facility.

Instead they developed a dose reconstruction methodology document, and then they have a template. and those two documents contain the facility-specific information, assumptions, and references for their calculations.

Now, I'll mention now that there is a third document. It's not a NIOSH document, but it's an

excerpt from the KAPL Radiological History Report.

And so between those three documents you can get a pretty good handle on what their protocols were at Peek Street.

In December of 2018, SC&A was tasked to review the template. At the end of January 2019, we submitted our review, and this was for the template 3.0 version.

And then in December of 2020, there was a revised template issued. This is the 4.0 version. And as near as I can tell it was really just an update of the references at the end of the document, updated to current references.

The actual technical content was not updated, and it does not affect our findings or observations from our report. Next.

So it's located in New York. It was the temporary location for Knolls Atomic Power Laboratory until the actual facilities were constructed in Niskayuna, New York.

Two purposes was to design an intermediate breeder reactor concept, which was later converted to the design of the submarine reactors for the Navy.

And number two, to design a chemical process for the recovery of uranium and plutonium from irradiated fuel. And it operated from 1947 to 1954. Next.

First finding, the assumption of 100 percent 30 to 250 keV photon energy distribution is -- it's really not supported by anything, any reference in either the template or in the DR -- or the methodology document.

The template states that there was -- and also the methodology states that there was more than one photon energy distribution, and it also talks about the Hanford -- they used the Hanford two-element film dosimeter.

So I looked at the Hanford document just to see if they had energy, what kind of energy distribution they used. They used kind of a broken-up distribution.

And in both the technical, the template and the DR Guide, or the methodology, they state that because there was more than one photon energy distribution associated with the radiation source, and that they couldn't determine a source term for the individual employee, they used the claimant-favorable 30 to 250 keV.

Now, the only statement I could find was in IG-001, it's towards the bottom of page 12, and it talks about using the 30 to 250 keV group for unknown fields.

And what it -- it specifically refers to the two-element film dosimeter, and it says if individual energy distribution information is not available for two-element film dosimeters, the open-window dose should be used as a claimant-favorable estimate of 30 to 250 keV.

So if you take the open-window dose and apply it as 30 to 250 keV that would be claimant-favorable. It is not clear if that was the process incorporated into this template because they don't discuss using the open-window dose and applying it as 30 to 250 keV photon dose.

So anyway, that's the basis for the first finding. Next.

Second finding. A dosimeter uncertainty factor of 1.3 for penetrating photon dose is also not reported and is not consistent with the Hanford TBD.

So the PSF guidelines states if there's no specific information on dosimeter limits of detection or uncertainty or bias and therefore they should follow the Hanford site information.

The Hanford TBD specifies a systematic uncertainty of two-element film dosimeter as 1.2. So unsure where the 1.3 came from.

And of course, there's much more detail in the report. This is just the highlights. Next.

Finding 3. SC&A unable to verify the neutron-to-photon ratio of 1.2 using the references.

So the template states that the neutron-to-photon ratio was determined from looking at similar facilities with similar neutron producing activities.

I believe they looked at the TBDs for eight different sites, and four of those sites had actual NP ratios. And that was Hanford, Savannah River, Oak Ridge, and Los Alamos.

Those are all tabulated in the report. And when I calculated the average it came up to 1.29. So unable to tell where they got the 1.2 from. Next, please.

Finding 4. The template does not specify a dosimeter LOD. Neither the template nor the methodology state what the LOD was used in their calculations when they're calculating the missed dose.

Based on the calculations that are in the template, where they determine the maximum number of zero

dosimeter cycles and then they calculated those, if you divide that dose by the dosimeter cycles that they determined, it comes out to be about 24 millirem, which would be the LOD over two.

To which means it looks like they're using an LOD of 50 millirem. The Hanford TBD information shows a LOD of 40 millirem. So once again, it really -- you just can't really tell where they got their values from. Next, please.

Finding 5. Unable to verify the annual maximum ambient dose of 423 millirem using the references.

So the template states that the ambient dose is based on radiation levels at sites with similar activities and cites PROC-60.

So we took a look at the tables in the back of PROC-60 for Hanford, ORNL, and Idaho. Calculated an average of 342 millirem from the three sites. And if you just use the two sites, it's 433 millirem.

So once again, I just can't really tell how they came up with their values. And it's not contained in the template, it's not contained in the methodology document. Next, please.

Finding 6. The template's occupational medical dose basis is incorrect. So it looks like they used the -- it says that the doses are based on Table 6-5 of OTIB-6 Rev. 4, except Table 6-5 is not contained in Rev. 4, it's contained in Rev. 3.

And apparently now there's even more newest one up to Rev-06, which also does not have Table 6-5. So that's incorrect.

It also states that the X-ray doses incorporate a 1.2 -- a 1.3 uncertainty factor multiplied by the dose, which was contained in PROC-61 Rev. 3, but is not

consistent with the current guidance in PROC-61 Rev. 4.

So all that would need to be changed and updated. Next, please.

Finding 7. Fission product information is not current. They used the intakes and they're tabulated in the template. The intakes from Rev. 0 PC-1 of OTIB-54. That's one of the first revisions to it or the first changes to it. And what that does is it takes, like, a single value and those values are contained in the template.

The current version OTIB-54, Rev. 04, does not contain the information that's used in the template mainly because the process has changed over the years.

They now base it on about nine different reactor configurations and it's much more complex. So all that information about the Fission product is outdated in the template. And this also pertains to the current revision 4.0 template. Next, please.

Recycled uranium activity fractions. So it contains -- the template contains the list, a table of the RU activity fractions. It doesn't provide a reference or any kind of basis for those. They are just stated.

So I took a look at the Hanford TBD, Fernald TBD, I couldn't come up with those values. The methodology document cites OTIB-54 as the basis. I did not find, I mean OTIB-53, I did not find an OTIB-53.

I don't believe OTIB-53 was issued. So anyway, I was not able to verify where those recycled uranium activity fractions came from. Next, I think we're in the observations.

Observation 1. There is a note contained, when they discussed the photon doses, it's about the less than 30 keV photon doses and to use the less than 20 keV plutonium photons that they should use DCF from Table 4.1A of IG-001.

And there's a little statement at the bottom that says, that these values have been preprogrammed into the tool that was created for the Peek Street Facility.

I didn't find any tool or workbook for the Peek Street Facility. So that's just the basis for that observation. Next, Observation 2.

The physically significant level, which is essential similar to an MDA, for their natural uranium that they state in the template is not consistent with the values that are contained in the history report from KAPL.

The template states a PSL of 5 microgram per day and it cites the reference as the KAPL Rad History Report, but when you go to that report, the KAPL Report uses 3 microgram per day for natural uranium.

So I couldn't verify their value for the natural uranium. Now, I believe there are four other PSL's that they used like for plutonium and Fission products and tritium and so forth.

And all those came straight out of a table that's contained in the KAPL report. So those were easy to check. But the natural uranium one just didn't match up. Next.

And then I believe the last one is the, oh, yes. This is the plutonium mixture information in the template. The actual mixture information in the template is correct.

The reference is incorrect and the current reference is now up to Rev. 07. And instead of Table 5-4, which I believe is what the template references, it's now a new table, it's 5-5.

So all that information would just need to be updated. And I believe that's it. If anyone has any questions?

Member Beach: Thanks Doug. NIOSH, any comments, questions?

Hearing none, how about -- oh, go ahead.

Dr. Taulbee: This is Tim. You know, we will develop a response to each of these findings.

Member Beach: Yes. Understand that. I just was wondering if there was any clarifications that needed, but if not, Subcommittee members, any questions for Doug or?

Member Valerio: Josie, I just have a quick question on page 13, the second bullet.

Member Beach: Okay.

Member Valerio: It says PLS of 3, is that supposed to be PSL? Is that a grammatical error?

Member Beach: Are you talking about the report or on the slides?

Member Valerio: It's in the Observation 2 on the slides. Sorry.

Mr. Farver: That's a typo.

Member Beach: Gotcha.

Mr. Farver: That's a typo.

Member Valerio: I missed that. Okay. Just double-checking. Thank you.

Member Beach: Okay. So the Subcommittee will wait for NIOSH's response. Kathy, will you put this into the BRS?

Ms. Behling: Yes, I will.

Member Beach: Okay. All right. Yes, I noticed that Peek Street wasn't in, but now it is but without the findings. So perfect.

Nothing else on Peek Street? Thanks, Doug.

Mr. Farver: Thank you.

Member Beach: Yes. Good reporting. So we are ready to move on to the Table 2 in the memo that Kathy sent, SC&A sent around. And that would be addressing new reviews.

And just to recap, we've tasked the first three OTIB-49, -24, and -66 already. And the OTKBS-0060, those are all four tasked for review.

And then with our previous discussion on the subtask 4. There's six of them and Kathy, any other comments or from Subcommittee members on tasking those six subtask 4 assignments?

Ms. Behling: No. I just would like to go through those. I didn't do that until we, you know, until had this discussion, but I will provide you with selection criteria for those provided you want us to continue on with the subtask 4 work.

Member Beach: Okay. So we'll talk about tasking those, but once we task them you will send us the selection criteria, correct? Or do we need the selection --

Ms. Behling: Correct.

Member Beach: -- criteria first?

Ms. Behling: I was just waiting for your permission to go ahead with the subtask 4 reporting and then I can provide you and NIOSH with the selection criteria so that we can pick out a few cases --

Member Beach: Okay.

Ms. Behling: -- to use.

Member Beach: Loretta, Paul, comments on those six? And if you don't have it right in front of you --

Member Ziemer: It's on the whole table or just on those?

Member Beach: Right now just on the subtasks 4's. That would be PER-045, 52, 59, 62, 63, and 65. Those are all subtasks 4's. Is that correct, Kathy?

Ms. Behling: That's correct. Yes.

Member Beach: Okay.

Member Ziemer: I'm good on those.

Member Valerio: I'm good on those, Josie. I was just taking some notes.

Member Beach: Nope. That's okay. So we are tasking SC&A with all six of those. Rashaun, you okay with that?

Dr. Roberts: Actually, I was just about to weigh in. And there was a suggestion earlier that I think is advisable and perhaps the Subcommittee can have some dialog via email just to prioritize these tasks since there's so many of them being tasked.

I think there needs to be some exchanges in thinking about what the priorities are.

Member Beach: Okay.

Member Ziemer: Well, Josie, were you talking about all the PERs on the list here?

Member Beach: No. At this point we've already tasked those original four that I talked about and then these are subtask 4 case reviews. And there's six of those.

Dr. Roberts: And there is --

Member Beach: And that would close out those PERs once those subtasks are complete.

Dr. Roberts: Correct.

Member Ziemer: Yes. Gotcha.

Member Beach: Okay. So Rashaun, you want to do this via email, is that was I'm hearing for the rest of these?

Dr. Roberts: Yes.

Member Beach: Kathy, can you kind of just give a brief -- I don't know if Rashaun is familiar with what's involved in the subtask 4 reviews. Unless I'm incorrect, Rashaun. Kathy, if you could just quickly give us what's required there.

Ms. Behling: Okay. Specifically, this is the last portion of the procedure that SC&A has developed for reviewing PERs. We've already gone through the process of reviewing all of the technical issues associated with the PER. If we hadn't already done analysis of, say, Norton Company, we would do that in subtasks 2 and 3.

In subtask 4 we simply say, okay, NIOSH can come in and rework so many cases and we give certain selection criteria that we think are important for that particular PER. They pull cases for us and then we look at -- we don't rework them but we review those cases and ensure that they were done appropriately based on the changes that were introduced in the PER.

It's not always a full review of the dose reconstruction. We look primarily at and we focus on those changes that were introduced as a result of issuing this PER. It's not quite as complex as a full review of a dose reconstruction. Does that help?

Dr. Roberts: Yes, thank you. Is there anything else, Josie?

Member Beach: Sorry, I was talking on mute. So would it be appropriate, and I'm asking Rashaun, if Kathy sends out a memo highlighting priorities? We have these six and then there's one, two, three -- let's see, three other recommendations for reviews. Would that start the dialogue? And, of course, copying Lori on the memo or email.

Dr. Roberts: Yeah, that sounds like a plan.

Member Beach: Okay.

Member Ziemer: I have a question.

Dr. Roberts: Sure.

Discussion regarding potential review of newly-issued guidance document and Battelle-TIB-5000

Member Ziemer: A question on Battelle TIB-5000. Who has the action on that right now? There's a note here that it's never been tasked for review. Is that correct?

Member Beach: That is correct and I brought it up, oh, I don't know, quite a while ago asking about that. I was going to ask NIOSH how much that TIB was used. I was going to go to that next. If somebody in NIOSH's court knows, is that a document we use frequently?

Mr. Allen: This is Dave Allen. I can say we never use it directly in a dose reconstruction. There are some default factors in there that are used in appendices and TBDs.

It gets to be a strange situation if those -- if you decide those default factors don't work when you decide the TBD was okay. I'm not sure how to deal with that. It ends up being a large document that not that much has ever really been used out of. Does that help you at all, Josie?

Member Beach: Not really. Maybe a little. Maybe it just needs a focus review, but I'm not sure. I guess I'll have to take that under advisement from someone who might know if that's a good resource or a use of resources.

Member Ziemer: Let me ask Dave a question. This is Paul again. Dave, since it's not used directly but some of the items in it or tables are used by other documents, does it end up if there's a problem, the problem shows up in the review of the other documents? Is that a fair statement or does that not occur?

Mr. Allen: I don't know if it's ever really been decided to be a problem but the numbers have been reviewed in other documents. These are things like default assumptions in some of these appendices of an operator and how close he is to the operation, for how long each month -- each day compared to a supervisor compared to a clerical.

Those four categories come from OTIB-5000 -- I'm sorry, TIB-5000. Also, the assumption that the standard work week is 40 hours after 1956 and 44 in the early '50s and 48 before that. That comes from OTIB-50 -- TIB-5000.

Member Ziemer: I was going to say, if SC&A was reviewing a different document that made use of those particular assumptions and they had some problem with it, they would call it out and it would trace back to that, I assume. Right?

Mr. Allen: I would assume so, yeah. They've been reviewed and discussed. I don't think they've ever been called out as a problem.

Member Beach: I don't recall anything ever being called out for that TIB-5000.

Mr. Allen: My assumption is it would be called out if there were a problem.

Dr. Taulbee: This is Tim. That is my impression, too, that in the review of another TBD that is using TIB-5000, if there was an issue or a concern with a particular site for using some of those values, that's where it would be identified is in that other TBD where it is being used. As Dave pointed out, this information isn't being used directly from -- actually, I shouldn't say it that way. In dose reconstructions, it is, but it's being used through other TBDs.

Member Beach: Yeah, that makes --

Member Ziemer: That was my point. Is there any point in reviewing it directly? If there's a problem, it will show up at some point when it's being used. It will show up in some other review.

Mr. Allen: I believe it would show up, yeah.

Member Beach: Yeah, and I don't unless SC&A. Can anyone identify if that's ever shown up? I don't recall that myself.

Dr. Barton: This is Bob Barton. I might be able to help out a little bit here. If we're talking about things like, for example, the number of work hours during the week, that would be something that we have called out in the past for individual sites in which we have claimants' statements about overtime and things like that.

I can't comment on everything that's in this TIB that has been ported to other documents, but if it's generic things like the time spent in a certain task or, again, like the length of the work day or the work week, number of hours per year, generally that would be included but with the caveat that we don't expand it to other documents necessarily to specifically review other documents to the TBD.

We might check the value stated comes from TIB-5. But, again, if it's a site-specific parameter like the number of hours worked extra, it has come up in individual TBD reviews.

Mr. Allen: Yeah, this is Dave again. I mean, that kind of thing has as far as people working overtime but this TIB-5000 is complex by default is what it amounts to. If there's site-specific information, then you don't use defaults.

It obviously would not deal with overtime unless with overtime there was some default for it, which maybe you could get for a site but I don't think you would get that complex-wide. I'm not sure what else I was going to say.

It has come up as far as how close people were and everything at other sites, how many hours a week they did a particular task. Again, that is site-specific

information. It's not a complex-wide issue.

Member Ziemer: Yeah, that takes precedence over the default values anyway.

Mr. Allen: Right. If it did come up where some of these default values were in question, then SC&A might not have reviewed TIB-5000 but NIOSH's response would have been we got that from TIB-5000.

Member Ziemer: Right, right.

Mr. Allen: We would have been the ones to bring it up if that was the situation. I don't think as a default -- you know, the defaults have never been questioned in the individual sites.

Member Beach: Okay, thanks. Good discussion. We'll just leave it on the list and leave it to Kathy when she prioritizes this list. In looking at the other two that we happened to have signed, OTIB-0088 looks like a real brief discussion just identifying if all the observations, in which there were only two of in the original document, were covered. I really didn't get to 87 to the Medina if that was a more cumbersome review or not.

Member Ziemer: There was no action recommended on that one.

Member Beach: No, not right now. I was just simply stating that those looked fairly quick. Okay. If everybody is happy, we'll just wait for SC&A to send out that memo and then we'll work offline with Rashaun to complete any tasking. Unless you're okay, Rashaun, with tasking the subtask 4s.

Dr. Roberts: Yeah, if we could just talk offline, that would be great.

Member Beach: Okay, okay. Then I had one more I wrote down, the OTIB-6, Rev. 6. I know we just covered 6, and I know that Ron went back and forth between 5 and 6 so that one does not need reviewing. Is that correct?

Ms. Behling: Ron, are you still on the line? This is Kathy.

Mr. Buchanan: Yes. Right, Rev. 6 had some changes made but I didn't see that it was a rewrite. I focused on whether our issues were answered from Rev. 5 so I don't -- I could go back and see if there's any new material but that wasn't what I was focused on when I did this focused review.

Ms. Behling: Okay.

Mr. Buchanan: Before I say whether it needs to be done, I'd have to do a quick comparison.

Member Beach: And maybe when you're answering the '06 earlier -- oh, where am I? So you're still going to review the BRS so maybe in conjunction with that review of 7 maybe you can just take a quick gander and let Kathy know if that needs to be a focused review or not, or if it's okay.

Mr. Buchanan: Yeah, okay. I can --

Member Beach: Does that work?

Mr. Buchanan: I can see if it looks like there's a lot of changes or if it's pretty much a rewrite with some corrections.

Member Beach: Okay. That sounds great.

Mr. Allen: Josie, this is Dave. I hate to interject here again.

Member Beach: Go ahead.

Mr. Allen: As far as OTIB-6, Rev. 6, I think you ought to know before you sign in to review that one that there is a planned revision that will be Rev. 7.

Member Beach: Okay, that's good information.

Mr. Allen: We're struggling finding time to get to that and get it all resolved and everything but there is a handful of issues in there we know of that we want to get it all fixed in one shot. We knew about this during Rev. 6 but we needed to get the ICD-10 codes in there published so we could continue using that when everything switched over to ICD-10.

Member Beach: Okay. Well, then we'll just leave that alone.

Mr. Allen: Okay.

Member Beach: Okay, thanks. Appreciate that.

Mr. Buchanan: Excuse me, Josie. This is Ron. So you're saying, don't do a comparison between 5 and 6 at this point?

Member Beach: I would say no, unless you see something that is based on what you've reviewed that needs to be included in their 7 but it sounds like they have a good handle on that. Does everybody agree to not do that review on 6?

Member Ziemer: Yeah.

Member Beach: Yeah, I think we should wait on that. You're still going to take care of that finding 7 in the BRS but that would be the extent of that at this point. Thank you.

Then the last item on our agenda is the preparation of reporting out to the full Board. Hopefully everybody had a chance to look at that document,

Table 3, which is quite a long list. Then on Table 4, Kathy made a recommendation to the Subcommittee on how to maybe present those to the full Board.

What I noticed was that most of the findings were -- I guess we have to determine if the matrix that she presented would be a good tool to use to be able to report out to the full Board. Maybe I'll leave it at that.

Kathy, if you want to say something on this before we get into discussion on how to move forward with these.

Ms. Behling: Okay. See, when I was putting together this Table 3, it just occurred to me that for a lot of the work groups they prepare an issues resolution matrix which is sort of a final document that is a chronology of what happened and what were the findings, how were they addressed, and what was the final resolution.

It occurred to me, at least for some of these documents that are on this Table 3 list, that are not super-complex -- and a lot of these are older documents also -- that perhaps this would be an approach. The Board Members, I think everyone on the Board, is familiar with this resolution matrix.

It just seemed to me to be a concise approach that captures what went on during these meetings and the resolution. It was just fleeting so I thought I would throw it out there to you to give you something to think about. Perhaps there are better options.

In the past what we have done, I know you Josie and Wanda, in order to get a final approval for the Board, you've actually had to make a full-blown presentation whenever there was time at the full

Board meetings. Then there would be a discussion and the Board would agree to close these documents.

I don't know if that is necessary. That's a more formal approach to presenting this information to the Board as necessary for all of these documents so that's why I suggested the matrix.

Member Beach: Yeah, and I really appreciated the matrix. Right now we have a total of 41 that are ready to be closed out basically just waiting for a presentation to the full Board. Most of these are under 10 findings.

Some of them -- actually, most of them, two or three findings with the exception of two of them that have rather large numbers of findings. So do others have thoughts on this, if this looks like a good way to present?

Member Ziemer: Are you talking about like one page per item? Forty-one items for the Board to act on is a lot.

Member Beach: No, Paul, what I'm simply stating is there are 41 procedures. I would not even say that we do all of them at one time. We choose based on, like Kathy said, the complexity and maybe create a matrix if we agree with this method.

Maybe we do a pilot to see how it works at the next Board meeting in an effort to get the information to the Board with the backup documents that go with each document and then proceed with a couple to start with and see how it goes. I'm just trying to close out some of these items that we, the Subcommittee, have already closed out.

Member Ziemer: On the matrix, it's sort of like what we had today except she's talking about dates and

so on. For example, let me go to the front end of things. On OTIB-1, would that be a slide that indicates what the document was, what the findings were, and that we've closed them or recommended closure? How much detail?

Member Beach: Paul, do you have the memo that Kathy sent out that shows the tables? Table 4 has an example of OTIB-34 and then the findings 1 and 2, and how she would lay it out.

Member Ziemer: Yeah, Table 4. I have that. For example --

Member Beach: Yeah.

Member Ziemer: That works for one issue. I mean, not one issue, one document. Right?

Member Beach: Yeah.

Member Ziemer: Right. So even if -- so out of the 41 documents, if we had like ten crucial ones, that would be plenty for the Board to absorb, I would think.

Member Beach: I wasn't even -- I wasn't even thinking ten but if you're looking at some of these older documents, yeah, you could essentially do ten if the findings are few. Or maybe even start off with five or one or whatever, you know, to see how the Board -- if they find it helpful. If we did go to the OTIB-34 as Kathy has given us an example -- Kathy, were you thinking of background documents as well made available in case Board Members have questions or would that come later? What were you thinking there?

Ms. Behling: At this point I wasn't thinking about attaching other documents but that could be done. This example that I gave you, this was one that had

already been prepared for OTIB-34. It's not even on our list. To expedite putting this together, I just selected one that we had already looked at.

I was going to suggest the same thing that you just did, Josie. If you all think that this is an option is maybe providing to you just a few examples, one or two examples, and you can look it over to feel if it's adequate, and then forward that to the full Board and have a discussion with them on one or two to see if this is something that they feel is appropriate and is enough information for them to close out these documents.

And I would do it, as I said, with those that are not as complex where they are older documents that are maybe not used as much. For those more complex ones, I would suggest that you still give a presentation to the full Board when we feel that's appropriate and necessary.

Member Beach: Okay, yeah. It would be a way to pare down this list a little bit on the less complex ones.

Loretta, what do you think?

Member Valerio: I like using the matrix. I think that it's helpful for all Board members to know where we are with each review that we're doing. I do worry, with as many as we have moving forward, how everything is going to be documented, I guess.

Member Ziemer: Let me insert one other question at this point. On Table 3 we have some pretty old documents listed. They go back to -- I'm looking here, 2006.

Member Beach: Yeah, exactly.

Member Ziemer: Now, how important is -- is there

some way we could take a look and -- we have a backlog we ought to clear out it seems to me. It's almost like old cases. We don't want to carry these along for decades. Is there a way to clear out some of the old stuff pretty fast?

Member Beach: Yeah, that's kind of what I was suggesting also moving forward, or going to suggest. Start with some of the older ones, the less complicated ones, and then maybe have time at the April Board meeting, if Kathy feels like she can be ready with a couple of these, to move forward and then just get a sense of how the full Board feels about us moving forward in this way.

Member Ziemer: Some of these older ones just have one or two findings anyway. It seems to me you might be able to go through a number of those fairly quickly and get them off the platter.

Member Beach: Yeah, I agree.

Ms. Behling: Yes, I will make sure that I can put a few of these together for you prior to the April meeting.

Member Beach: Rashaun, what do you think?

Dr. Roberts: Yeah, I like the idea of piloting this approach. I was going to ask, though, about how much time would you want on the agenda to do this? As I'm understanding it, start with older documents that are not as complicated. I don't know how many. It sounds like one or two, but it could be more depending on the level of complexity. How much time on the agenda would you want to do this?

Member Beach: I think we should start with just a

couple of the real old ones. While I'm looking through, I see 2007, 2009, 2008. Kathy, maybe you can give us a better sense, but I don't want to overwhelm the Board in this new process either, so maybe just start off with a couple and see how it's received?

Ms. Behling: That's what I would suggest, yes.

Member Beach: And how much -- I think that would -- the timing would depend on the -- I don't think they're very complex so probably no more than an hour. Don't you agree?

Ms. Behling: I would say probably 15 minutes per document. Like I said, we're going to collect ones that are not complex just to determine a feel for this and whether the Board agrees with it. I would say maybe 15, 20 minutes per document, if that.

Member Beach: Okay. And then maybe have some background stuff embedded in it in case somebody wants to click on the link and look at more or --

Ms. Behling: Okay.

Member Beach: I know there's a lot to each one of these so I'll have to -- you'll have to use your judgment on, maybe, that.

Ms. Behling: Okay. Good idea.

Member Beach: Okay. So is that something you can kind of get put together for the April meeting then?

Ms. Behling: Yes, it is. Yes, I will certainly do that.

Member Beach: Okay. That sounds great.

So Rashaun, are you okay -- I don't know how much time can we use up? Do you have a sense of -- can we have an hour?

Dr. Roberts: I think you're on there now for at least an hour but, again, that was just a guesstimate. We can certainly adjust the time.

Member Beach: Okay, that's perfect.

Member Valerio: So, Josie, this is Loretta. Does that hour include if Board Members have discussion?

Member Beach: Yes.

Member Valerio: Or just the presentation?

Member Beach: That would have to include the presentation and discussion, I would assume, depending on how tight the schedule is.

Dr. Roberts: Okay. So I currently have you on for about an hour and 15 minutes.

Member Beach: Oh, that's fine. I think that's workable. Don't you think, Kathy?

Ms. Behling: Yes, I do. The other thing, in the past I have prepared a presentation for Wanda where we had four presentations ready to go and if they got into discussions on one OTIB and we didn't get to that last presentation, it was just carried over to the next meeting. Just as long as we have enough to fill in that time frame, I would think.

Member Beach: I think, Kathy, if you would prepare a presentation on using this matrix that we just talked about and then going through however many we determine is going to be about the appropriate amount of time then go through those during that hour and 15 minutes. Would that work?

Ms. Behling: Okay, yes. We'll talk about the approach that we would like to present to the Board to determine if they feel that this is adequate for

resolving some of these documents that are on the list. There's going to be more coming. This list is going to grow.

Member Beach: Yeah, so we really do need to start moving forward on the list. I don't think we've presented since December of '18? That was our last --

Ms. Behling: Yes, I think you're right.

Member Beach: Okay.

Member Ziemer: One other point to keep in mind is that the things that we will be presenting to the Board, there's already agreement between NIOSH, SC&A, and the Work Group, or the Subcommittee basically on what we'll be presenting so I don't think we're going to get into lengthy discussions on these like we would on some of the issues like we have had on Savannah River, for example, where there's a lot of uncertainty about what direction to go.

I think the Board will be fairly comfortable with most of these anyway. We should be able to get through them in a fairly timely fashion, I would think.

Member Beach: I agree, especially if the presentation ahead of starting to go through the matrix that we've decided on, if the presentation is clear, I think that will be real helpful also.

Member Ziemer: Right.

Member Beach: Kathy, you're going to be busy the next couple months.

Ms. Behling: That's okay.

Member Beach: Okay. So any other comments or

questions? I know -- I don't think I need to go over what's going to be ready for the next meeting or carry-overs. Does everybody have their notes or do we need to recap?

Member Ziemer: I don't think we need to recap.

Member Beach: Okay.

Member Ziemer: Everybody's got their action items delineated, right?

Next Subcommittee Meeting/Plans

Member Beach: They should. Okay, thank you. Let's see. Future meetings. It's probably way too early to try to plan a future meeting. I'm hoping we don't have to go two years before we have another meeting, though.

Dr. Roberts: Yeah. So, Josie, it seems like we kind of need to determine, you know, what's happening with the tasking and when it would be appropriate to come back together, is my sense of this.

Member Beach: Yeah.

Dr. Roberts: So maybe that's something we can work out.

Member Beach: Yeah. So as far as getting ready for the April meeting, we can do that over email, correct?

Dr. Roberts: Yes, absolutely.

Member Beach: And the rest of the tasking. Okay, so we won't wait too long on the future tasking. We just need your approval, correct, for any future tasking or does the Subcommittee have to vote on that? I would say no.

Dr. Roberts: Yeah, I think we can just kind of work it out by email.

Member Beach: Okay. So any other comments, questions, or are we ready to adjourn?

Member Ziemer: Sounds like we're ready to adjourn.

Member Beach: Okay. Thank you. Thank you, Loretta, Paul, everybody. Good meeting.

Member Ziemer: Thank you, Josie.

Member Valerio: Thank you.

Member Beach: All right. Thank you.

(Whereupon, the above-entitled matter went off the record at 2:32 p.m.)