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

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ADVISORY BOARD ON RADIATION AND WORKER HEALTH

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SUBCOMMITTEE ON PROCEDURES REVIEW

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THURSDAY
FEBRUARY 13, 2014

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

PRESENT:

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

ALSO PRESENT:

TED KATZ, Designated Federal Official
NANCY ADAMS, NIOSH Contractor
MATT ARNO, ORAU Team
HANS BEHLING, SC&A
KATHY BEHLING, SC&A
LIZ BRACKETT, ORAU Team
RON BUCHANAN, SC&A
ROBERT BURNS, ORAU Team
DeKEELY HARTSFIELD, HHS
STU HINNEFELD, DCAS
TOM LaBONE, ORAU Team
LORI MARION-MOSS, DCAS
STEPHEN MARSCHKE, SC&A
JOHN MAURO, SC&A
JAMES NETON, DCAS
STEVE OSTROW, SC&A
SCOTT SIEBERT, ORAU Team
MATTHEW SMITH, ORAU Team
JOHN STIVER, SC&A

T-A-B-L-E O-F C-O-N-T-E-N-T-S

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

(11:01 a.m.)

MR. KATZ: So, Advisory Board on Radiation and Worker Health Procedures Review Subcommittee, and let’s get started. The agenda for the meeting is online on the NIOSH website under the Board's section of the DCAS website for today.

And some of the items are also posted there, although last I looked several of the documents for SC&A review and response to it and one of the TIBs is not there yet.

So not everything is there, but most of it. Let’s do roll call. We'll forego the conflict of interest and just go roll call of Board Members.

(Roll Call)

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

CHAIR MUNN: Did I hear Steve

Marschke or not?

MR. KATZ: He didn't sign in. John, are you expecting Steve?

MR. STIVER: Yes, I am. Let me give him a call and see if there's a problem here.

MR. KATZ: Okay, thanks.

CHAIR MUNN: Yes, I appreciate that because I have assumed that he may, perhaps John's prepared to talk about the BRS, but I had assumed Steve and Lori would do that.

MR. MARSCHKE: I'm here.

MEMBER ZIEMER: He is signed in on Live Meeting.

MR. MARSCHKE: I'm here.

CHAIR MUNN: Oh, good. Okay, that's good.

MR. MARSCHKE: It took me awhile to sign in on Live Meeting.

CHAIR MUNN: Yes, well I'm, my computer keeps kicking me, my government

laptop is kicking me on and off of Live Meeting, so I'm having to get back in again.

There is only one minor change in the draft agenda that's been brought to my attention that did not appear on the agenda that was published and that is shifting of the first two items after lunch in order.

That shouldn't be any problem for anyone. If it is please speak now and we'll see what we can do about that conflict. Otherwise, does anyone else have any corrections or changes to the agenda?

If not then we have several things that we need to be aware of with respect to the Board Review System and we have input from both NIOSH and from SC&A.

In that regard who would like to lead us off in that?

MR. HINNEFELD: This is Stu and I'll start the meeting by saying that we had a server crash overnight and our guys have been working since 7:00 this morning to

restore it, and that is the server that hosts the Board Review System as well as many of our activities, our applications here.

And so it's not available and it won't be available until this afternoon at the earliest. It may not be available all day.

CHAIR MUNN: Well we'll keep our fingers crossed and hope that it gets there. Since we don't have that, do we have, can we perhaps at least discuss very briefly or at least go through the changes that were made since we last saw the review system online?

We have, Lori and Steve both sent us a couple of notations about changes that had been made. If we need to touch base with those I think we should probably do so now.

Steve, would you like to give us a verbal rundown of what you've provided for us in print?

MR. MARSCHKE: Yes, I can. Mostly the reason I gave it to you this time as opposed to other times was because we had a lot of action items from the last meeting that were BRS related and I just wanted to go through, for my own, make sure that I got everything that, you know, that I committed to doing that I have done and I think I've done that.

So that's the main reason why I went through all this documentation this time.

CHAIR MUNN: Well it's appreciated because you're right, we did leave you an awful lot of things to be done offline, so we appreciate it. Thanks.

MR. MARSCHKE: Okay. The first two, OTIB-83 review and OTIB-34 review, those were not part of the last, those were not issues, the SC&A review of those two documents were not issued before the last meeting.

So what happened was after the last meeting, I think it was either later in November or in December, those two documents were, the review of those two documents were issued by SC&A and I think it was just yesterday I got around to entering the findings into the BRS for those.

In 83 we had 14 Findings and in 34 we had four new Findings on Revision 1, 83 was a new review of a, or review of a new document, it was the first time we reviewed it. Thirty-four was a focus review and we had previously reviewed Revision 0 and now we're reviewing Revision 1.

And we had four new Findings on Revision 1 and we had a recommendation to close one of the Findings that was leftover from Revision 0.

So those were kind of like the new things that didn't come out. Most of the other stuff that's in here came out of commitments that were made at the previous

meeting.

The next one is OTIB-54. We did two things on OTIB-54. I think it was, again, later in November of last year, after the last meeting, Steve Ostrow sent around a memo to Wanda and the Subcommittee saying that all the remaining open, or non-closed Findings that were associated with Revision 0 were now moot because of Revision 1 and we recommend that they all be closed.

So we added that, I think there was nine closed revisions, zero Findings, and we added Steve's recommendation that they be closed to the BRS. And then we did add the review of Revision 1, resulted in ten new Findings and so we added those ten new Findings to the BRS.

Now we come down to the next one which was IG-01, which during the last meeting there, I guess there was a Finding that came up during the Dose Reconstruction Committee during the dose reconstruction

reviews and I guess it was DR Finding 195.1 and the Reconstruction Subcommittee felt that this was, should be sent over to the Procedures Subcommittee and we thought the appropriate location of it was in IG-01.

So what I've done, what we did, or we agreed to do last time, was to add a new Finding to IG-01, which is now Finding 25, and so we have added Finding 25 to IG-01.

The next item is the, one of the overarching issues, I guess SC&A and John Mauro has been bringing this up, it says about the skin exposure findings or skin exposure pathway, and there are three of those Findings.

NIOSH has added, gave us the capability to, they set up overarching Item Number 9 and then I went in and added the three Findings for the, that had been posed by SC&A, John Mauro, under overarching Issue Number 9.

I did make a note that these are more concerns than they are Findings. I think Jim Neton expressed that at the last meeting and so when I have a Finding number I do identify it as being a concern, so that's something there.

CHAIR MUNN: I think that's appropriate and I think it's important that we make sure that distinction is called out in our final commentary, yes.

MR. MARSCHKE: The next three, PER-25, 33, and 38, we talked about these three PERs in some detail during the last meeting.

SC&A gave their reviews of these three PERs at the November 7th meeting and basically during, the SC&A reviews really didn't come up with any Findings.

And so what we had agreed to do at the last meeting was enter a Finding of no Findings and so that's what I have done with these three PERs, that's 25, 33, and

38.

Now 25 we have gone on to basically, we did an audit of one of the cases, which is the Subtask 4, and during the Subtask 4 case audit we did come up with one Finding, and so that has also been added to PER-25.

The last thing we had was PER-20. We did enter three Findings. They were Findings 4, 5, and 6, have been entered into the BRS.

Finding 4 was entered and it was closed at the last meeting and what we've done is we've entered the rationale, I guess was primarily given by Stu at the last meeting and when we went to the transcript and took a, you know, copied and pasted some of the information that is provided in the transcript, or some of the rationale for closing the Finding 4 that was provided in the transcript by Stu.

And so we have that -- rationale

has now been captured in the BRS. And so those are all the updates and changes that we made, that SC&A has made to the BRS since the last meeting.

CHAIR MUNN: Thank you very much, Steve, I sure appreciate it. Sorry we can't look at those in real time because a couple of them I think we'd like to see very much, but perhaps we can keep our fingers crossed that sometime this afternoon we can get the system up. If it's up then we can check it.

Not having verified these one by one in the transcript my vague memory and scanty notes from last time indicated to me that these were covered, all of the notations that I had made. I hope that's correct. Thanks again.

MR. MARSCHKE: You're welcome.

CHAIR MUNN: And, Lori? Or someone at NIOSH --

MS. MARION-MOSS: I'm here.

CHAIR MUNN: Oh, good, okay. I

didn't know for sure. I thought I had heard you before.

MS. MARION-MOSS: Yes. First of all I'd like to thank Steve, thank you for your patience with getting the BRS, getting the Findings and responses in, letting me know what you guys were experiencing over there in terms of working with the system. I appreciate your patience.

MR. MARSCHKE: No problem.

MS. MARION-MOSS: Okay, just basically to reiterate what Steve discussed in his presentation here, we were able to go in and actually add an item, and overarching item, for the localized skin issue.

And basically what we did was we've used John Mauro's memo as the document. So you'll see once you go in and actually get to the overarching section of the BRS you can click on the title of the overarching issue and you will find John Mauro's memo.

And from there, like Steve mentioned, he has listed the concerns. So we do have that in the BRS as you instructed us to work toward, Wanda.

In addition to that we actually provided responses to OTIB-34, which I believe that's the internal coworker for X-10. We were able to provide responses to that, to SC&A's review for Findings 1 through 3 relative to Revision 1.

CHAIR MUNN: Thank you.

MS. MARION-MOSS: Pardon me?

CHAIR MUNN: I was just muttering approval, sorry.

MS. MARION-MOSS: And for Finding 4 we, I've uploaded to BRS to indicate that we need additional time to do further investigation for that particular Finding.

Relative to OTIB-54, we actually went in, provided responses to the ten Findings that were wrote up against Revision 1 of that document, so we did upload

responses.

We actually went in for PER-14, which is the construction tradeworker PER, we provided a response to Finding 14, which is relative to the Subtask 4 Finding for that particular PER.

We do have responses to Findings 1 and 3, but they were based off of Hans's memo that he wrote in his efforts to review the current responses that are in the BRS for Findings 1 and 3.

But because Hans's memo had not been added to the BRS we did not provide a response, but we do have that information that can be discussed if need be.

Relative to PER-11, we had an action item to respond to Findings 3 and 5, to get an update, and I actually went in and updated those Findings to indicate that we need additional time as well to prepare a response.

CHAIR MUNN: All right.

MS. MARION-MOSS: I didn't get the opportunity to add to our list that we do have a response for PER-25 for the one Finding that was issued here recently.

So right now, Wanda, those are the changes that have been made since the last meeting.

CHAIR MUNN: That's great. So when we come to PER-25 on our agenda we'll have something to respond to, right?

MS. MARION-MOSS: Right.

CHAIR MUNN: Good. All right. I appreciate that, Lori?

MEMBER ZIEMER: Wanda?

CHAIR MUNN: Yes?

MEMBER ZIEMER: Question here, Ziemer speaking. So Lori just mentioned that on PER-11 that NIOSH needs additional time. I noticed that on the agenda that's one of the agenda items, so does that mean we will not have anything to discuss on that afternoon item, PER-11?

CHAIR MUNN: It sounds that way. Are we hearing that right, Stu?

MR. HINNEFELD: I think I'll leave that to Lori. Lori, is that --

MS. MARION-MOSS: Yes, that's correct.

CHAIR MUNN: Okay. So we essentially won't have any time committed to PER-11 tonight, this afternoon.

MS. MARION-MOSS: Correct.

MEMBER ZIEMER: And then on PER-14, are those responses going to show up on Live Meeting or will we be able to consider them this morning?

CHAIR MUNN: I don't think. I think that depends on whether or not we're going to have the BRS up, isn't that correct? If we don't have that up then, unless someone has them in printed form that can control the screen for us?

Actually I can't get back into the meeting right now, personally, on my

screen. I don't know what that's about.

MEMBER ZIEMER: Well I guess we face that when we get to that point, it's coming soon though.

CHAIR MUNN: Yes, it will come up on us very quickly. I guess I might call upon folks who are the originators, or at least the most immediate handlers of the new responses and comments.

If you have them in some format other than, some printed format that is amenable to being used in Live Meeting so that we all can see them, assuming Live Meeting's working for us.

MS. MARION-MOSS: Wanda, this is Lori. Since I received word that the system was down I'm working right now to put together a PowerPoint for our responses that we've done, hopefully I can use those.

CHAIR MUNN: That would be most helpful, Lori, yes. Thank you very much. We'll just, I don't know whether we have any

written items from SC&A which we will have in a format other than just on the BRS or not.

We'll keep our fingers crossed and hope that it works well.

MR. MARSCHKE: Wanda, a couple of things. I do have for the skin exposures, the first one up here, I do have the John Mauro memo which we can put on the Live Meeting.

And I also have for OTIB-83, I have the reports where we can basically look at the, you know, we have the Findings as they are listed in the report itself that we prepared.

And, similarly, I guess, well OTIB-83, Joyce prepared that report, and OTIB-34, we also have the report that Hans prepared so we can put that up on Live Meeting, so those we can look at.

CHAIR MUNN: Good.

MR. MARSCHKE: And as far as

OTIB-54 goes, it so happens I printed out all of the Findings, including the NIOSH responses yesterday for my own purposes.

CHAIR MUNN: Oh, what serendipity.

MR. MARSCHKE: And it's not very elegant, but, I mean, we can put that up. It includes the SC&A findings and the NIOSH responses for the ten that are in question.

CHAIR MUNN: Well elegant is secondary, legible is primary, so that's great. Thanks, Steve.

COURT REPORTER: This is the Court Reporter. Could the previous speaker please identify himself?

MR. MARSCHKE: Steve Marschke.

COURT REPORTER: Thank you.

MEMBER ZIEMER: Wanda, this is Ziemer again. I think the other document that Steve just mentioned, we already have I think all of those. The memo responses from John and the other documents from Hans

Behling and Ron Buchanan, we have all of those I believe.

CHAIR MUNN: Yes, we all have them, but whether or not we have them out in front of us is something else again. So, yes, that's good to know. Thank you all.

We were going to hear from SC&A on the localized skin exposures follow up, is that correct?

DR. MAURO: This is John. I'm prepared to discuss that if that's what you'd like. I am not looking at Live Meeting, but, you know, I could speak conceptually about the issues, and I guess Jim is there to respond?

CHAIR MUNN: I assume so. Jim or Stu?

DR. MAURO: Or Stu, yes. Should I begin?

CHAIR MUNN: Yes, would you please, John. Thank you.

DR. MAURO: Okay. And, Steve, I

guess you have, you may have to help me a little because I don't have Live Meeting and I don't have my report. I guess I could open my report and look at that. I'd have to go run that down.

But I seem to recall the basics of it, and as I'm speaking, Steve, if you could sort of steer me, make sure I'm moving in the right direction that might be helpful and help me not go over things that we've already gone over and closed out.

I'm speaking from memory because I didn't prepare that too long ago. So I'll just kick this off and then we'll make sure I stay on track.

MEMBER ZIEMER: John or Wanda?

DR. MAURO: Yes?

MEMBER ZIEMER: Ziemer again here. I think his paper is showing on Live Meeting now, but whoever has put it up could you reduce it from 130 percent to 100 because it's bigger than the screen?

MR. MARSCHKE: Okay. This is Steve.

CHAIR MUNN: While we're struggling with not being able to, some of us, I personally am having trouble getting back onto Live Meeting. I was kicked off for some reason and now it tells me that that domain is not available to me.

But, yes, I hope that's been, has the size been accommodated now so that it's legible for people?

MR. MARSCHKE: Yes.

MEMBER ZIEMER: Yes, it looks better now.

CHAIR MUNN: Okay, that's good, because I can't see it. All right, fine. Go ahead, please.

DR. MAURO: Okay. I guess I'll pick it up as best I can, and as I said, Steve, help me out a little bit as I go forward.

CHAIR MUNN: Thanks, John.

DR. MAURO: The skin dose has some history as you know, and it really came down to three issues, conceptually, and as we're speaking I think they should map back onto the material you're looking at.

The first has to do with the fine dust. Historically it was not standard practice for NIOSH to calculate the dose of the skin because fine airborne particulates might have settled on peoples skin and clothing.

I believe it has been agreed, and we have recommended closeout of issues related to that particular exposure scenario. I think that it's agreed that NIOSH will be, under the circumstances when it's plausible, for there to be airborne dust, fine dust of uranium oxide settling out on skin.

There is a protocol that we've all reviewed and we all agree with. That is a good way to do it and it includes the

deposition directly on skin where there's no attenuation by clothing and also provisions for attenuation by clothing.

So I think that aspect of the skin dose scenario for airborne uranium dust and the beta exposure to skin, it has been resolved, but there are a couple of areas for discussion, and maybe that's the commentary that I believe Steve is referring to.

And we are generally, what we have here is, you know, once the dust settles on skin and you calculate the dose, the way it's going to be as I understand is that you calculate the deposition, the accumulation, you get a certain number of becquerels per centimeter squared, and you calculate the dose to the skin over an 8-hour period during the work time, as in the accumulation, and then the person showers and it goes away.

Then you go back to work the next

day and you're staring all the cleaning again. And the only thing that we raise, and Hans was talking about this is that, you know, there was some discussion made I believe by Stu and Jim that well, our experience, SC&A's experience is mainly, well heavily at least in my case, with regard to Marshall Islands, and the material didn't come off so easy, you know, especially in the hair and things like that.

But as in NIOSH's experience no, it comes off pretty good, because in one case we're dealing with fresh fallout or aged fallout and the other case is dealing with uranium.

And so I think one of the items that was sort of left of concern that I guess we were hoping to hear a little bit more about is justification for why yes, at the end of the day the guy, we certainly agree the guy's going to take a shower and change his clothes and, you know, and if

there's some type of evidence that it goes away that'll be great.

By the way, Steve, am I on track so far?

MR. MARSCHKE: Yes, that's correct.

DR. MAURO: Okay, good. And now I now, at this point maybe I could turn it back over to Stu. Have you folks looked at that particular area of concern?

MR. HINNEFELD: Well Jim's looked at it a little bit and there's not a lot of documentation of that because, you know, people were surveyed and were, after a shower.

When they are surveying discard after showers, people surveying were clean and, you know, nobody thought to write up a, and I don't know of any studies that were written up along that effect or if someone was found to be contaminated and you washed them with, you know, soap and water, that

you'd clean it up and you were done.

So I don't know of any particular studies were written up that would document that.

DR. MAURO: Well, you know, in a way it's sort of a common sense argument. The only reason we brought it up was that, and the same story you just told, when they did that with Marshall Islanders they couldn't get the stuff off, especially out of the hair.

MR. HINNEFELD: Yes, I understand that.

DR. MAURO: And that was like a, maybe that was a, you know, and that's the only reason we brought it up. I am not the, you know, if there are records that show yes, the de-con works and we can't detect anything after a couple of washings then maybe that's all we really need with regard to skin.

That was the only reason we

brought it up.

DR. H. BEHLING: Well, John -- This is Hans.

DR. MAURO: Sure, go ahead.

DR. H. BEHLING: I'm not so sure I'm quick to dismiss it. My experience goes beyond the Marshall Island issue, but having spent multiple years at the Three Mile Island facility, and we did have these decontamination events on a routine basis, and anytime a person is perspiring heavily, and there are often times involving the people who are left out in inside contamination, but there's always exposed tissue, and hair, and facial areas that are frequently contaminated.

And basically my experience is that it is a very real effort to decontaminate and that is a focused decontamination. We're not talking about a casual shower where a guy goes in, grabs his bar of soap without having any knowledge

that he might be removing some of the contamination he came home with.

Even when that issue is a focused issue, where a guy walks through a contamination or a frisker and finds out that he is contaminated. A focused attempt, meaning that you're scrubbing that area where there is an obvious sign of contamination.

It's not easy to decontaminate it, and so I will differ with you on the issue that a casual shower will take care of the problem because not --

DR. MAURO: Yes, and let me add, and, Hans, I think you sort of refreshed my memory, too. We're talking about a scenario where, we're going back, with the genesis of all this, of course, as you know, is that you have old AWE scenarios where there was a lot of airborne dust generated.

And the first, and it's not that the person was detected that has

contamination and they sent him off to a shower and they scrubbed him the way Hans just described, now this is more along the lines of listen, the guy probably did get some surface contamination because of all of the dust and dust loadings that we're, of course, all familiar with, probably did, you know, accumulate some on his clothing and his skin.

But then, of course, he would shower at some point along the way, whether at work or at home, but not a concerted effort to decontaminate. It would just be the normal showering.

And I guess that's a little different, Stu, than the idea that well, when we saw, when you saw contamination at Fernald, for example, you know, we would go in and de-con the guy and he didn't leave until we cleaned him up. So it's a little bit different scenario.

DR. H. BEHLING: And also the

other issue is clothing, John. We know for a fact, even in our own laundry system that we had at Three Mile Island, where people would obviously come out of the contaminated area and disrobe and remove their anti-Cs.

And we had a laundry and we had, obviously, monitored after the anti-Cs were properly washed and actively tried to decontaminate and we always realized we had to actually monitor those clothing.

So that a very intense washing, and now let’s also go back to the timeframe. We're talking about back in the late '40s and '50s that we're talking about when washing machines were the old-style thing that had a wringer to it and, again, you know, people didn't necessarily wash their clothing every 24 hours, so they showed up at work with brand new clothing that had been previously washed.

People would probably routinely, because, I think it'd be the case, wear the

clothing from Monday through Friday without even attempting to wash it and let alone assume that every washing removes all of the contamination.

So those are the issues that I think that I had raised on behalf of this whole issue.

DR. MAURO: And one last statement I'd like to make for perspective, the reason we're making a bit of a fuss over this is these skin exposures are probably, and the way in which in they're done, are probably the only way in which a site that has an SEC where you have workers that aren't covered, includes the skin folks with skin cancers.

And I guess we're looking to make sure that everything's, that we bend over backwards to make sure we give them every millirem we can and not, you know, to be as claim to favorable as possible and I think you can see why.

And this may be a difficult thing to come to grips with, I agree, I mean how do you come to grips with this? But therein lies our concern.

MR. HINNEFELD: Well I know Jim's done some, quite a lot more thinking about this than I have and he might have some more comments he wants to make.

I think we want to be a little careful when we start thinking it's our job to bend over backwards to give people in an SEC Class who don't have SEC cancers as much dose as possible.

The regulation and the preamble of regulation, it just says that, you know, if it's in response to a question about the proposed rules is what are you going to do about these people who aren't, don't have SEC cancers, but who are in the SEC area and you can't reconstruct their dose.

You determine that dose is infeasible. And we said well, we'll

reconstruct what we can.

DR. MAURO: Yes.

MR. HINNEFELD: And so I think when we said that we didn't go out of our way to say well, we'll do it, you know, we said if there's something that reconstructable we'll reconstruct it.

DR. MAURO: Yes.

MR. HINNEFELD: So while I'm not necessarily arguing against what you said, I think we need to guard against that mindset that we're, it's our responsibility to do as much as we can.

We should reconstruct, you know, what we're able to reconstruct in a reasonable fashion.

DR. MAURO: Yes, fair enough. Fair enough.

DR. NETON: This is Jim. I have looked at this a little more and I have a couple thoughts on this. The first thing is we need to be careful as to how we're

reconstructing the dose.

If we're using TBD-6000 for example, it's a very generous exposure model. In fact we're assigning 25 rem skin dose to hands and arms of workers on an annual basis and something, a little less than that, at a foot distance.

The point where we're assuming a 20 mR per hour exposure to all skin for the whole entire duration of the year. I think, no, 10 mR per hour. These are pretty generous exposure numbers.

I mean the first one assumes that a person's in direct contact with the uranium 50 percent of the time. So I think I, right now it seems to me that TBD-6000, which covers a large number of sites that don't have personnel monitoring, I think that it's adequate.

I think it's built in there, maybe not intentionally built in there, but I think it's a bounding exposure scenario.

DR. MAURO: Yes, Jim, let me say this. I have to, without jumping the gun for the decision-making process, I understand what you're saying and TBD-6000, especially this 50 percent, contact, I mean when you think in terms of it, contact is to a uranium slab is a lot worse than a fine dust that might accumulate and I could, intuitively and heuristically, your argument is very sound regarding TBD-6000.

I guess my, our commentary went more toward the film badge readings, you know.

DR. NETON: Exactly, and that's where we have to do some work yet. I've looked at the film badge readings and they're, as you can imagine, they're variable depending on the site.

One thing, I'll take some exception to Hans's concern is that I think when you're dealing with low specific activity material like uranium where your

measuring in terms of milligrams, I think the washing and cleaning is a lot more efficacious than the very high specific activity things like you would see in a power plant, fission activation products.

I think there's a big difference between those two types of exposures. So I don't think it is as tenaciously bound to the skin and clothing as Hans's experience has been.

Nonetheless, I do think that there is some room for addressing strict contamination levels. And aside from the deposition model I've done some research and there are some data out there related to clothing contamination and some skin contamination I've been looking at.

And I'm working towards maybe putting together a more unified approach here recognizing though that it would have to be graded some how in relation to the amount of material and contamination that

was present at the site.

I'm somewhat reluctant to develop a universal value and apply it to all these sites, because, as you know, some of these AWEs processed a few rods, some did a lot more work.

So we need to be careful how we assign these, but I'm working towards that and, you know, we'll have something to address this in the near term. That's all I really have to say on that.

CHAIR MUNN: How near term do you think is near term, Jim? Should we continue to carry this for next time?

DR. NETON: Oh, yes. Yes, absolutely. This is going to be a little while on. I think this is, as John acknowledged, it's a fairly thorny issue and it's hard because there aren't a lot of data and in fact you're almost developing scenarios and you want to make sure that the scenario you develop has some basis in

reality not, you know, just to throw a high number or something because these people are not in the SEC.

I think that's inappropriate as Stu suggested. So, it's going to take a little while, but we're working on it.

CHAIR MUNN: All right, good. Thank you. We'll continue to carry it and further the discussion next time.

MEMBER ZIEMER: Question.

CHAIR MUNN: Yes?

MEMBER ZIEMER: This is Ziemer, and I'll ask Jim and John both, so what we just talked about with the fine particles, is the answer basically the same for the flakes the same, Jim, do you have the same idea that you'll cover both of these issues and --

DR. NETON: Well with the flakes it's a slightly different issue and the concept of --

MEMBER ZIEMER: That's what I'm

asking.

DR. NETON: It would have a much more dose, you know, per deposition and I've looked into that a bit and it turns out there is some data available.

Julian Apostoaei and David Kocher actually did some work for DTRA where they generated a lot of work on skin dose for the DTRA people.

And there's some data out there that indicates that the larger particles have a much shorter residence time on skin than fine particles and, in fact, there's some other data in HASL-58 I've been looking at that talks about how, you know, the large particles just don't stick around very long.

So I'm looking into that and we're going to address that as a separate issue though because it is in a separate category in my opinion.

MEMBER ZIEMER: Yes, agreed, but you're looking at both of them is what I was

getting at, so both parts of it have to be extended then?

DR. NETON: Right, correct.

DR. MAURO: Paul, there is a sort of a brain teaser issue that I also brought up that's related to the subject we just talked about and I think Jim will know exactly what I'm referring to.

Let’s say you get to the point where we agree yes, there are circumstances where fine, well particles, larger particles of uranium, that is a plausible scenario, remember one of the things we talked about, one of the issues was really was it plausible that you could get these large flakes.

And I think that issue is still before us, whether or not, I think there was a, the sentiment went both ways. Some folks felt that well, you know, like snowflakes falling from the sky landing on your skin, whether or not that's a plausible scenario.

And if it is, let's say just for, I'm not sure where we are on that because there was some sense that, you know, maybe it does occur, but Jim just pointed out well, if it does, you know, it's not going to hang around that long, I mean that that would be important.

So wherever that ends up, that's going to fall out on the process it sounds like that Jim's working on, the degree to which it might occur and if it does occur, you know, really how long does a particle, and this will be a large part, millimeters, you know, in that order as opposed to microns.

The first subject was five micron particles settling as invisible dust virtually on skin. Now we're talking about micron, not micron, but millimeter sized particles falling on the skin.

And when you start to get into that range, that size, the theoretical dose

underneath the particle to the skin could be as high as, you know, a couple of hundred millirem per hour.

So all of a sudden it's not insignificant, but it's only underneath the skin where the particle fell. And here's where the brain teaser comes in that I think I'm comfortable with and I think Jim has explained it to me in a way that makes sense to me.

And that is when you do a PoC, and you have skin dose, let’s say we have a record of skin dose from an open window film badge and it says certain number of millirem, you know, from the darkening of the film badge.

Well that's treated as if the whole body was uniformly exposed to this beta field, the beta radiation, from at a distance. So it's a whole body deal, all of the skin, and when you do a Probability of Causation what you're saying is well, you

need to know what the baseline is.

Well if the person didn't get the exposure, what's a person's normal background risk of getting a cancer anyway. And, again, that's a whole body deal. So in a way everything is working real well.

That is the exposure scenario, you're basically incrementally increasing the amount of entire body skin exposure over and above, in such a way that you're, you know, you're looking at your excess relative risk within the context of IREP.

But now we're talking about something a little different. We're talking about a little particle, maybe a few millimeters that falls on the skin, and I was struggling with the idea that well, you would dilute that dose, now there's, whatever that, let’s say it's 230 millirem per hour underneath the particle, this little tiny dot on the skin.

Well if you're going to

calculate, let’s say you agree that's a scenario that could occur and now let's say, you know, it happens only one hour, that's it, you know, so you get 230 millirem per hour, you got one hour's worth and it's gone.

I'm just making this up so we can sort of visualize it. And then so you say all right, we're going to throw that in as part of the PoC calculation. I say I'm able to withhold the presence of what are you going to throw in?

Do you take the 230 and then you dilute it over the entire body, because remember the baseline risk that you're working from is the whole body skin.

So you take that little, that dose to the localized skin and dilute it over the, I forget how many thousands of square centimeters the body skin is, and Jim explained to me no, and I think it's important that what I'm about to say that

there is general agreement that I got it right.

I think I do and Jim certainly, correct me if I got it wrong and then, because I think this is important, the way of thinking about it.

Just know the way to deal with this problem is, and I believe this, the general agreement at SC&A is that if we have a person that we know was contaminated on the neck, on the ear, because he was, he had to go through some decontamination process and it's on his record, so we got legitimate reason to believe yes, this guy was in fact contaminated because it says so, and his CATI and on his record and they had to decontaminate him, and it was on the head and face, or neck or ear, or whatever.

And we also have that boomph, this guy happens to have a skin cancer on the face, head, neck, ear, whatever. Well then what happens is when you run IREP you

put in, let’s say we assume that the localized dose from that incident is 240 millirem right under the spot.

Well that's the number you put in when you run IREP, you don't dilute it, and because, in effect, for all intents and purposes and here's where the brain teaser comes in, it might as well have been on his whole body, I mean the flake that fell, because effectively it's working out the same way.

Because you do know that that's where he got his cancer and it's a very good chance that the cancer occurred underneath that flake and if that's the case then that's how you run IREP.

Now if you don't believe that scenario occurred, that is there's no evidence that the person did experience these large flake falling where they had to decontaminate, then that scenario doesn't happen.

In other words it's not considered to be a plausible one. You don't just automatically assume some guy that happened to work at Bethlehem Steel or Simonds Saw or one of these other old-time AWEs, did in fact have, let’s say he had a skin cancer on the neck, and a lot of these folks do.

Unless there's something in the record that shows that yes, we've detected it, we had to remove it, that scenario is not going to be applied.

And my sense, and we didn't talk about it too much at SC&A, but I think it's important we talk about it now, is that we agree that you're not going to just automatically assume everybody that worked Simonds Saw or Bethlehem Steel or any of these old-time places where there was a considerable amount of dust, all of them got one of these flakes, and we delivered, we calculate that dose, no.

My sense is that we have to strike a balance of reasonableness here and you only do that when there is some evidence that the person was in fact, did in fact experience such a flake type exposure based on his records.

That's my sense and this might be the very first time where we actually talked about it, you know, from cradle to grave, so to speak, the whole story, and my sense is if that's the way NIOSH plans to do, to approach this problem I'm okay with it.

DR. NETON: Yeah, John, this is Jim. I mean you got it exactly right, that's what we do and that's the process that's actually outlined in TIB-17.

If you know it was there, if you know the contamination is there and a skin cancer happened there then you use the dose exactly as you calculated it and if it, it's a result of the fact that the baseline incidence is proportional, you know.

Your baseline incidence is dependent upon the size of the area, so they kind of canceled out in the calculation. I actually went and requested SENES to review this logic and I've got a report that I'll load into the, as our response into the database, and they agree with us that this is appropriate to do.

With one caveat, which is interesting, and there's nothing we can really do about it and I think we talked about this at the last meeting that the baseline incidence of cancer is uniform throughout over the body and, in fact, it's probably not.

We have no, and SENES could not come up with any data, of any good data to address that issue. For example, the baseline incidence of cancer is typically higher when you, for the areas of the skin that are routinely exposed to sunlight.

DR. MAURO: Yes.

DR. NETON: So, you know, your hands and your neck and your face and such. It's probably lower in areas that aren't exposed to sunlight, but there are no good data for us to use to adjust those models so we are, we have to assume at this point that the baseline incidence of skin cancer is uniform over the body.

DR. MAURO: Right.

DR. NETON: That's the only caveat.

DR. MAURO: Yes, and there's nothing that can be done about that, I understand. I was aware of that when I was looking into this and I was reading IREP and thinking about it, to parse it out. It's a fundamental structural change, now you've come out to the skin problem for this IREP and I don't know if you have the wherewithal that you'd even be able to do that if you wanted to.

DR. NETON: Well SENES looked at

it and they say that at this time we can't, you know, there don't seem to be enough data, but, you know, we'll continue to look at it.

At some point if the data become available we can start to refine the model, but right now it's not possible.

DR. MAURO: Okay.

DR. NETON: That's it.

MR. HINNEFELD: This is Stu Hinnefeld, if I can just interrupt here. I got an email from our server guys that the server's back up, so I opened another, a new window in Explorer and found it, the applications, and it did open for me.

So if you, I think we, Steve, should be able to get on BRS to show us all, but what you want to do is be careful when you close or you might close yourself out of Live Meeting, so open an additional window in Outlook or whatever you use and then you can go to our applications page and pick BRS

the way you normally would.

CHAIR MUNN: Okay, that's good, because your Chair is trying to get back on on my private computer and in all sense I'm having all kinds of difficult with the CDC one.

We'll just see what we can do and it's great to have it back up. For those who have it there that's wonderful.

MR. HINNEFELD: Yes, Steve has it on the screen and it's showing it on Live Meeting, so anybody on Live Meeting can see it now.

CHAIR MUNN: That's great. I'll continue to try to get on one way or the other. Do we have anything else to say with respect to PER-31? If not then let’s move on to PER-30 and notes from John Stiver regarding PER-30.

And I think that we'll go ahead and start with that. NIOSH, I have you charted as being the status maker on this.

MS. MARION-MOSS: Hi, Wanda, this is Lori. If I recall, PER-30 is Savannah River and I believe we were addressing case selection?

CHAIR MUNN: No, Subtask 4 was the topic I believe.

MS. MARION-MOSS: And I believe there was an email traffic where there was some discussion where I informed Ron that there was no case existing that met all four criteria that was spelled out in the PER.

CHAIR MUNN: Oh, okay. Well I had a note from Ron earlier today saying that he was going to be on. I don't remember if I heard him. Ron? Is Ron on?

DR. BUCHANAN: Yes, I'm here. Yes, Wanda, on PER-30 the question was we had selected two cases would meet the criteria that we could review for Subtask 4.

However, Wanda, you had mentioned that since the TBD Revision 1 was used, it came out several weeks after Revision 0 was

issued, and so the cases were all based on using Revision 01.

CHAIR MUNN: Right.

DR. BUCHANAN: Should we go ahead and go through the formality of auditing these two cases, and so that was delayed. We had the cases selected and I was ready to work on them, but we delayed that until the Work Group decided whether we wanted to go through the formality of that or not.

CHAIR MUNN: And perhaps that's the reason I had expected a, I don't know what further discussion we can have other than what we had last time.

I guess my only question would be if whether we had a possibility to consider that in the meantime and whether there are any new thoughts in that regard?

It seems logical that we should work from Rev 1 since anything we do with the prior Revision is going to require a second look anyway. Is there any negative

thinking about that position? Josie?

MEMBER BEACH: No, I don't have any negatives there. That sounds reasonable, Wanda.

CHAIR MUNN: Rev 1, Paul, what are your thoughts?

MEMBER ZIEMER: Yes, I'm okay on that.

CHAIR MUNN: Then it appears to me that we have consensus among the Board Members anyway that the logical thing is to begin with Rev 1.

DR. BUCHANAN: Okay. So if NIOSH will send the two case numbers and the associated material I will review those and do Subtask 4 for those.

CHAIR MUNN: Okay.

MEMBER BEACH: Sure.

CHAIR MUNN: Action NIOSH, send the case numbers and we'll have a look at those next time hopefully.

DR. BUCHANAN: Yes, and this Ron

again. We skipped the PER-31 I think on Y-12. NIOSH is going to have some information on thorium test counts, isn't that right?

CHAIR MUNN: I hope so.

DR. BUCHANAN: That was supposed to take place before PER-30. Did we get it? Did I miss something?

MR. HINNEFELD: Yes, I think we said earlier, Lori, didn't we, that we don't have anything ready for that yet?

MS. MARION-MOSS: Yes, we don't. We don't have anything. I didn't list that on my list.

DR. BUCHANAN: You don't, okay. All right.

MS. MARION-MOSS: But we need further time to investigate a path for it there.

CHAIR MUNN: Yes, that was the last word that I had.

DR. BUCHANAN: Okay. I missed that, sorry.

CHAIR MUNN: Okay. Next time for 31 as well I believe. Then that brings us to PER-14 and the three Findings that were outstanding there. I believe it's NIOSH's ball.

MR. SMITH: Well this is Matt Smith with ORAU Team and I'll be happy to talk to this one. I'll also share that I'm having issues with getting on the Live Meeting myself due to the security setting, so --

CHAIR MUNN: If it's not one thing it's another. Sorry about that, Matt.

MR. SMITH: Yes. I'll go ahead and read what was put in, I'm not sure what's up on the screen right now, but I'll just go ahead and read the submission.

Basically I'll just preface this by saying the response is basically the same. "The Rocky Flats data was analyzed by adjusting for employment periods of less than one year for both the construction

trade workers and the all-monitored worker groups."

"The partial year employment data reviewed in the SC&A memo was specifically used in Column AA of the respective yearly data sheets," so I'll stop right there for a minute and just note that in the SC&A memo they took a look at the partial year data.

If you jump into the Excel file that's attached to this finding, and just for the purposes of showing something, if you go to the year 1977, in other words the datasheet in the workbook for 1977, in Column L you will see the fraction of year employed data that's also shown in the SC&A memo.

What happens with that data, it's further used in Column AA, and I think we mentioned this last time that we then take the dose for this construction worker and adjust it based on the fact that they worked only nine-tenths of the year or seven-tenths

of the year and prorate that so that we can compare it to the all-monitored worker data, which was also prorated.

The data for all the workers was originally analyzed for OTIB-58 and then the contents of OTIB-58 were then just absorbed into the Rocky Flats TBD, but the data is the same.

So the comparison of these two groups at Rocky Flats, both adjusted for partial year exposures, illustrated that the overall recommended construction trade worker factor of 1.4 was claimant-favorable.

And, again, what we're saying there is of all the different sites that were looked at Rocky Flats was one where both the construction trade workers and the all-monitored worker population, we have the ability to adjust for partial year exposure and we did that.

And the results reflect the same trend that we saw with the other sites in

that a factor of 1.4 is bounding as a factor to use for construction trade workers as an adjustment.

We certainly weren't arguing that there wasn't potential for a partial year of working, the argument here is that Rocky Flats took that into account and we showed with Rocky Flats that 1.4 is certainly a bounding factor. Any questions?

DR. H. BEHLING: Yes. I get that, I'm not sure I've seen that data. What I did in my memo was to simply assess the fraction of year that construction trade workers were actually monitored.

MR. SMITH: True.

DR. H. BEHLING: And like I said in my memo I identified the year as 1970, which for 1970 does in fact show that construction trade workers were actually employed there for 90.8 percent of the time, meaning that you could easily conclude that that was very similar to all-monitored

workers, in-house workers.

But for the years, and I only did it for years '77 and '78, the percentage of fraction of time that construction trade workers were employed were obviously much reduced, especially when you realize that those particular years, in addition to the fraction, the number of construction trade workers skyrocketed.

For 1970 there were only 60 construction trade workers employed for that year. For the 1977 there were 665, so that it's much like a situation in the utility where you have an outage where you bring in huge numbers of people, but they're not there for the whole year unlike in-house employees who would be there for, essentially, the entire year.

And the same thing I observed for 1978. Again, for 1978 the total number of construction trade workers were 855, and there the weighted average employment for

those individuals was less than 50 percent, or 47.4 percent.

Now I did not do the same thing for all-monitored workers to know what fraction of the year they were. I just assumed that they would've been oddly more likely to be there for most of the year if not all the year for all-monitored workers.

Unless, of course, and this is one of the other issues that I had some criticism about, for some of that variation that was in PER-14, or OTIB-52, the construction trade workers were included in the all-monitored workers, which in itself becomes a liability when you have a huge number of construction trade workers flowing into all-monitored work, they were not segregated.

So, as I said, I did not assess the fraction of year for all-monitored workers for 1977 and '78, so I really don't know what that fraction would've been, but

you're telling me that they're identical to the construction trade workers, is that correct?

MR. SMITH: Identical in the sense that both sets of data have been prorated and we pointed this out last time that if you scan over to Column AA of any of the yearly worksheets in this Rocky Flats workbook you'll see that on an individual worker basis their prorated time for the year is taken into account.

So if they didn't work the whole year their dose gets boosted up. The prorating that occurred for all-monitored workers is probably described in the text that carried forward to the Rocky Flats workbook when OTIB-58 was removed.

The bottom line here is what we're saying is we're comparing likewise populations in terms of how they were treated with respect to prorating in terms of partial year exposure.

And certainly even among the all-monitored workers there were folks that didn't work a complete year and those adjustments were made. And when we do a coworker study we certainly try to do that at all times when the data is available.

If we have the beginning and ending date for the dosimetry periods we certainly take that into account and prorate it in order to normalize things to what would it have been for the year.

Again, the point here is that we looked at the construction workers, prorated that in order to compare it to all-monitored workers who were also prorated, and we saw this same trend with respect to 1.4 being a bounding value with respect to the trade workers.

DR. H. BEHLING: I guess I'm really not sure what, I was not privy to what you've done here, but it's just, to me, it's not intuitive that all-monitored

workers have the same amount of employment periods as construction trade workers.

DR. NETON: Hans, that's not relevant.

MR. SMITH: That's not what we're saying. We're saying we've adjusted for it on an individual basis in fact.

DR. NETON: Annualize the doses, Hans, to annual employment. If a guy worked a month he's going to get 12 months' worth of exposure and then they annualize them all and then you can compare annual exposure to annual exposure between the two populations.

MR. SMITH: I don't know if it's possible to bring the Excel file up onto the Live Meeting screen?

MR. MARSCHKE: Isn't it on there?

MR. HINNEFELD: It's on there.

MR. SMITH: Okay. Go ahead and just choose 1977 as an example.

MR. MARSCHKE: It's up there. This is Steve Marschke.

MR. SMITH: All right. And just take a look, scan it so it's showing Column L and you'll see the fractional numbers, you know, for those workers there.

And as we look at Hans's memo you'll see that he's, you know, done a good summary of how many people fell into the category of having a fraction of year of 0.9178.

Where does that fraction of a year get used? If you would scan over to Column AA and just click on any one of those cells in Column AA and you'll see at the very end of the formula bar there that we're taking a value from cells, I'm sorry, Column 3 for any particular role, which is the dose that was recorded, and we're dividing it by the value for that row in Column L.

In other words, the fraction of the year that they worked. This was the same process used for the all-monitored workers for Rocky Flats.

So, again, we're prorating the dose in the same way for both populations. That wasn't always possible for all the different data sets looked at in OTIB-52, but we've, it was possible for Rocky Flats.

The results again from Rocky Flats were in line with what we saw with everybody else.

DR. H. BEHLING: Okay. I'm going to have to look at it, but at this point if that was done then I guess 1.4 seems to be appropriate.

I was just under the impression that when we looked at all-monitored workers that it really represented people who were mostly monitored 12 months out of the year, meaning that they would have a yearly dose that truly represents a full year as opposed to a partial year.

MR. SMITH: Well, fortunately with Rocky Flats we were able, like I said, again, to adjust it per the actual

employee's time on dosimetry.

MS. K. BEHLING: This is Kathy Behling, if I could interrupt for just one second. Can someone send me a link for Live Meeting because I didn't get that link?

I am on the BRS right now and we are looking at the same information as Matt's talking about, but I would appreciate being able to get on BRS, or get on Live Meeting, I'm sorry.

DR. BUCHANAN: This is Ron Buchanan, same here. I didn't get an invitation to join the meeting.

MR. HINNEFELD: This is Stu. I can do that.

MS. K. BEHLING: Thank you.

DR. BUCHANAN: Thanks.

CHAIR MUNN: Yes, thank you, Stu.

DR. H. BEHLING: And I guess I do have a quick question here with regard to, and I'm talking about OTIB-52 and you had in OTIB-52 a Figure 5-2 as well as Table 5-1.

Are those data normalized?

MR. SMITH: I don't have OTIB-52 up in front of me. Are they -- if those are tables and graphs --

DR. H. BEHLING: Yes.

MR. SMITH: -- for Rocky Flats the answer would be yes, normalized --

DR. H. BEHLING: Actually this is for Savannah River Site.

MR. SMITH: For Savannah River Site I, at this point, couldn't speak to if those are normalized to one year or not.

DR. H. BEHLING: I mean those are yearly dates obviously starting for Savannah River Site in 1963 through 1997 and you have two curves, one involves construction trade workers and the other were all-monitored workers, and I just assumed that those were data that represent yearly exposures to both of those groups.

And also in Table 5-1 again these were tabulated numbers for construction

trade workers and all-monitored workers on a yearly basis and I just came to the conclusion that they were probably not normalized with the assumption that construction trade workers were there for the same time period, 12 months out of the year, as all-monitored.

MR. SMITH: I'm a little bit off the top of my head on this for Savannah River coworker data, in other words the data that was published in the coworker OTIB --

DR. H. BEHLING: Yes.

MR. SMITH: -- those would have been prorated and normalized to an annual exposure. For the construction trade worker I am not sure that we had begin and end dates for the dosimetry.

I know we did have it for Rocky Flats and that's why I used that as a comparison, it was kind of the keystone to see if it was making sense.

And also, more work has been done

with Savannah River in terms of construction trade worker population and that data's being looked at right now.

But the quick answer would be yes for all-monitored workers, yes, in terms of being prorated to an annual exposure.

DR. H. BEHLING: Yes. I guess what I would, before I fully concur or concede to the issue, I would like to look at the data just to be sure that I'm not giving away the farm here.

And as I said I would've agreed with the data if, for instance, one can start out with the assumption that these two groups are comparable in terms of employment period.

MR. SMITH: And I think we've shown that for Rocky Flats.

DR. H. BEHLING: Pardon?

MR. SMITH: I believe we've shown that for Rocky Flats.

DR. H. BEHLING: Okay, for Rocky

Flats.

MR. SMITH: We may not always have the begin and end date data for dosimetry for the other construction trade worker subgroups at the other sites that were analyzed in OTIB-52.

But given that Rocky Flats, again, has a pretty long history to it in terms of things going on through the history of the site and as you noted in the groups of construction trade workers going up and down, it seemed like a pretty good test of whether or not the prorating on the impactful issue with respect to the 1.4 factor, 1.4 seems like a very favorable bounding number.

DR. H. BEHLING: Okay. Well let’s let it go. I want to take a look at the data, which as I said I didn't really have access to at the time I wrote my memo and depending on some time that I'll spend on this I will get back to you and let you

know whether I concur with it.

MEMBER BEACH: Wanda, this is Josie. I think it's appropriate to give Hans that time to look at that response.

CHAIR MUNN: I can see no reason why not. We can address this next time if that's what's required. Is there any objection to that?

MEMBER ZIEMER: No, it's fine with me. It appears that we're okay on this, but just to make sure that SC&A is comfortable with it then why not.

CHAIR MUNN: Very good. We'll expect SC&A to report to us next time on PER-4 factor. Response, all right. Next, that was, we were on Finding, I'm sorry, working blind without the Live Meeting is a little difficult.

MEMBER BEACH: Finding 1, Wanda.

CHAIR MUNN: That was Finding 1 was it not?

MEMBER BEACH: Yes.

CHAIR MUNN: And so we are now ready to move to Finding 3?

DR. H. BEHLING: That's identical, Wanda, so whatever applies to 1 applies to 3, it's just a --

CHAIR MUNN: I'm sorry I can't quite hear you.

DR. H. BEHLING: Finding Number 3 is identical to Finding 1. It's basically just the --

CHAIR MUNN: So essentially we've just covered the same material?

DR. H. BEHLING: Yes.

CHAIR MUNN: Finding 14?

DR. H. BEHLING: There wasn't any 14.

CHAIR MUNN: No?

DR. H. BEHLING: No.

CHAIR MUNN: There was a notation that I had to myself and I didn't check it. That's my fault.

DR. H. BEHLING: No, there were -

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MR. MARSCHKE: This is Steve Marschke. There's a Finding 14.

CHAIR MUNN: I think there's a Finding 14 and I think a response to it was entered by NIOSH just this last period. Am I incorrect?

MS. MARION-MOSS: You're correct. The response we put in Scott can lead you through this response.

CHAIR MUNN: Very good.

MR. SIEBERT: Scott Siebert, I'll be happy to walk through it. It's a relatively lengthy response if you open up the attachment, but I can just walk you through it.

The background is, unfortunately I was not on the last call in November, I was in Africa. Sorry, we could've probably gotten this cleared up back then.

MS. MARION-MOSS: Steve, that's not the attachment. We should be further

down in the BRS with Scott's --

MR. MARSCHKE: Oh, there it is.

MR. SIEBERT: Thanks, Lori.

MS. MARION-MOSS: Yes.

MR. SIEBERT: Wait for that to come up. Okay. And basically issue, we all agreed at the last call that the Finding itself and the issue has been resolved.

We agreed with the fact that the DCF not being applied to the coworker for a short amount of time. The question that came up at the last meeting was a question of quality assurance of how can we ensure this didn't affect other claims.

Was it the dose reconstructor's fault? Was it a tool issue? So I've gone back and dug a little further into all that information and here's what I found.

The first portion of it is the fact that at that time, this is for LANL, the LANL external tool did not have the coworker, external coworker values directly

in the tool at that time so the dose reconstructor had to do the calculations off to the side.

That's since been updated. Most of our tools with verified and approved coworker studies now include dose so the dose reconstructor can just pull it right up in the tools, but at that time it did not.

Looking at it, since the tool wasn't used to pull in the information that obviously was not a tool issue, so from a systemic point of view we at least know it was not a tool issue for that, which was good to know. So that's the first portion of it.

The next question was the dose reconstructor themself, is this an issue that the dose reconstructor may have been making this same mistake other places, in other words a training issue of some sort.

I went back and pulled all the dose reconstructions that were done by this

DR, there were eight of them, one of them was obviously this claim that generated the response, six of them were done around the same timeframe in 2008, one was in 2006 and one was in 2010.

Five of the claims used the same external organ, which is the bladder, and that's important because the bladder is one of the few where the DCF is greater than one.

So if it had been left out on other organs it would've been claimed in favorable, still an error, but it would've been claimed in favorable.

So luckily there were a bunch of them that I could look at, yet the bladder was the organ of interest to determine if this was an issue. For most of them, six out of eight, there was no coworker used.

The person was fully monitored, but there was one additional, one left over other than this single one that started the

Findings, so there was something that I could compare to.

In that case there was a longer period of time where coworker was needed, so what the dose reconstructor did, and it was about a month after the first claim was done, they put those coworker values into the tool itself along with later monitoring they had and allowed the tool to apply the dose conversion factors themselves.

So after looking at all of the LANL claims that this individual did it doesn't seem to be a repeatable issue for not applying the dose conversion factors for the dose reconstructor.

The final point was looking into peer review. That was the final QA question that we talked about at the last one. So I also pulled for the peer reviewer all the claims that that individual had peer reviewed.

Interestingly enough they also

peer reviewed the one that I just talked about where they took the tool, the information and put it into the tool as well, so they not only reviewed the one that had the error but they also reviewed the one that was done correctly as well.

I also looked at any other peer reviews that that individual did for LANL during that same year, there were 17 of them, and I looked through all of them and everything was done appropriately for all 17 of those as well.

So I think the bottom line is, with a lot of digging to ensure, it seems it was a one off issue where the dose reconstructor did not apply it in a spreadsheet off to the side and the peer reviewer didn't catch it.

CHAIR MUNN: Any comments?

MS. K. BEHLING: This is Kathy Behling. This, I have to say I wasn't quite prepared for this. Rose actually did this

portion of the review, the Subtask 4, and she's not with us this morning.

CHAIR MUNN: You're sounding very distant to me, Kathy.

MS. K. BEHLING: Okay. I'm sorry. Is that any better?

CHAIR MUNN: Much better here.

MS. K. BEHLING: Okay. I'll start over. Like I said I did this review and Rose actually did the Subtask 4 report. I reviewed her work. Everything that Scott's saying sounds reasonable.

I'm just hoping that maybe we could look at his response a little bit closer. I didn't have time to do that and perhaps Rose and I can look that over, but it sounds reasonable but, again, could we just get a little bit of time to read through the report that they're showing on the Live Meeting?

CHAIR MUNN: Any problem with that from anyone?

MEMBER BEACH: No.

MEMBER ZIEMER: That seems reasonable to me.

CHAIR MUNN: All right. Then we'll address that Item 14 next time when Kathy's had an opportunity to look at it, right?

MS. K. BEHLING: Yes. Thank you.

CHAIR MUNN: Very good.

MEMBER BEACH: Wanda, this is Josie. I also noted from our last meeting that Finding 17, that NIOSH and SC&A needed to do some review on that Finding. Unfortunately I can't pull it up so I was wondering if Steve could look at that one?

CHAIR MUNN: I can't. I'm not on Live Meeting and --

MEMBER BEACH: No, no, I said Steve, Steve's on.

CHAIR MUNN: I can't get on my CDC computer, but --

MEMBER BEACH: And that one was

closed. It looks like it was closed, I'm not sure why I noted that, so thank you.

CHAIR MUNN: Can someone verify for us, someone who has access to the BRS, it is closed?

MEMBER BEACH: Yes, it --

MS. MARION-MOSS: Yes, Wanda, it is closed. We just --

CHAIR MUNN: Okay. Okay, very good. So informative note, but wrong. I do that quite frequently, Josie.

MS. MARION-MOSS: Wanda, this is Lori.

CHAIR MUNN: Yes, Lori?

MS. MARION-MOSS: Kathy, I would like to remind you and the Committee that with Finding 14 that that was a particular issue that John Mauro asked that we look, it was a QA issue associated with leaving off the DCF for this particular LANL claim.

So that might be why it doesn't ring a bell to you as well, but John did ask

that we go and take a look at some of the claims that were performed by the particular --

CHAIR MUNN: Yes, that same reviewer.

MS. MARION-MOSS: -- reviewers.

CHAIR MUNN: Yes.

MS. MARION-MOSS: So that might be why it doesn't ring a bell to you.

CHAIR MUNN: Which is what Scott tells us he did.

MS. K. BEHLING: Okay, very good. Thank you. And like I said, Scott's explanation seems very reasonable. I would guess, in fact I can get back to you after lunch if you'd like.

CHAIR MUNN: Yes. I think the key for this is it was a one off and so, yes, if it doesn't take more study than that then that would be great.

Anything that we can close out now is wonderful, Kathy. Thank you. I

appreciate your looking at that.

MS. K. BEHLING: Okay.

CHAIR MUNN: And lunch is not too very far away. So any further comments on PER-14?

DR. H. BEHLING: This is Hans again. I just wanted to apologize for when I said there was no Finding 14 because I was the person who reviewed PER-14 and mine stopped at Finding Number 6 and I wasn't aware that dose reconstructions had been audited and they were simply added to those Findings that starts with Number 7 and so forth, so I apologize for that comment.

CHAIR MUNN: No apology necessary, Hans. We want to be as thorough as we possibly can, better to look at it in extreme detail than to miss something, thanks.

Next item is IG-1, new Finding 25, the wording is it appropriate and the status of the other Findings? I have NIOSH

as being responsible for that, am I correct?

MR. MARSCHKE: I think I was, I put in the Finding. This is Steve Marschke.

CHAIR MUNN: Yes.

MR. MARSCHKE: I entered the Finding and I basically, and it's up on the Live Meeting now, which you can't see, Wanda.

CHAIR MUNN: No, I can't.

MR. MARSCHKE: But the other maybe, the other, what we did was we took from the transcript some of the words that you said and entered it into as the basis for the Finding.

And like I mentioned earlier today it's basically just a transfer of Finding 195.1 from the DR Subcommittee over to this Subcommittee.

CHAIR MUNN: For the sake of the few of us who are not on Live Meeting could you read it? It's not that lengthy is it, Steve?

MR. MARSCHKE: No, it's up on the screen. The DR has a, let’s see, "the Dose Reconstruction Subcommittee transferred Finding 195.1 to the Procedures Review Subcommittee during the November 7, 2013, Procedures Review Subcommittee meeting."

"Chair Munn read the following into the record. And the original Finding," and then I put in brackets "Dose Reconstruction 195.1" read, "the rotational geometry organ dose conversion factors are higher than the anterior posterior geometry for the red bone marrow."

"And additional corrections are required when the dosimeter is worn on the chest. It is not clear if the anterior posterior rotational or isotopic geometry is the most applicable based on the employees duties and work location."

"However, since the reconstructed dose results in a compensable decision it was appropriate to apply the dose conversion

factor that gives a lower dose."

"For this claim that is the dose conversion factor for anterior posterior exposure. The use of the anterior posterior dose conversion factor may have been inadvertent for this claim and its use as an underestimating assumption should have been noted in the report for clarity."

"And SC&A said they accepted NIOSH's response since the case was compensated, but the geometry issue was to be addressed again in other Findings."

"It was considered to be a QA issue saying NIOSH should have used a DCF that gives a higher dose even when underestimating and refers to Table 4.1(a) of IG-001, Rev 3 addressing this issue."

"NIOSH will consider whether a PER is needed and then in March of this year NIOSH agreed to review the situation and determine if a PER is required."

"In May, NIOSH to follow up on

whether they implemented Section 4.4 of IG-001, and in August, NIOSH to follow up in implementation transferred to Procedures Subcommittee to determine if IG-001, Section 4.4 is correctly worded."

And that's the end of the quote. And then it continues on, the Finding continues on. "Finding 195.1 was discussed in some detail during the Dose Reconstruction Subcommittee meeting of February 4, 2013, see transcript pages 228 through 236."

"During the November 7, 2013, Procedures Subcommittee meeting it was decided that DR Finding 195.1 should be incorporated into the BRS as Finding IG-001-025 as an open item until we have some information from NIOSH to begin the process." And that's Page 170 of the November 7th transcript.

CHAIR MUNN: Thank you, Steve, and my apologies, my lack of having the data

in front of me made it necessary for you to read the same thing I read last time. I'm sorry about that.

But my note, therefore, impinges on what you just read, which was I was under the impression that we were going to get some response from NIOSH to that Finding. No, not this time?

MS. MARION-MOSS: Jim, do you have any?

CHAIR MUNN: We had said earlier that we might have a new response --

DR. NETON: The first, I think IG-1 has been revised, I believe.

CHAIR MUNN: I think so, too.

DR. NETON: I don't know why it's not been transferred over here for review because I know that we're doing dose reconstruction -- the wording was changed basically to indicate that the rotational was not the default or you'd have to, you would use AP as the default unless you felt

otherwise there was indications that rotational should be used.

CHAIR MUNN: It was my, in my memory, which is not all that reliable I suppose, but nevertheless, I had thought IG-1 had at least three revisions, I thought the third revision was --

DR. NETON: Yes.

CHAIR MUNN: But in any case --

DR. NETON: Well, unfortunately, I don't know any more than that.

CHAIR MUNN: I'm quite sure it is, I'm sure it has been revised. So the question becomes, can we have a report from NIOSH next time?

DR. NETON: If it's been revised, sure.

CHAIR MUNN: Okay.

DR. NETON: But I think we can either way.

CHAIR MUNN: I'll say check revision and carry over. All right, very

good. We're about ten minutes early, but it's approaching lunchtime.

Is there any objection to our breaking for lunch now? If not, can we take exactly one hour and be back here?

DR. NETON: Wanda, this is Jim. I had a question.

CHAIR MUNN: Yes?

DR. NETON: At the beginning you indicated that we were going to swap a couple sessions --

CHAIR MUNN: Yes.

DR. NETON: Which were those?

CHAIR MUNN: OTIB-83 and PER-20.

DR. NETON: Okay. I just got an email while we were talking that due to weather in other parts of the Country my conflict has been resolved. I'm available now at 1:45 if we want to keep the same schedule.

CHAIR MUNN: All right. Let’s --

DR. NETON: I was the only one

causing that.

MS. MARION-MOSS: Oh, there's one other person, Jim. This is Lori.

DR. NETON: Okay.

MS. MARION-MOSS: So he can't make it in until 2:00 and that's LaBone.

DR. NETON: Okay, then let’s just keep it that way because Tom is obviously, or Tom is definitely relevant for this discussion.

CHAIR MUNN: Very good. All right then we will address PER-20 an hour from now and following that we'll do --

MR. HINNEFELD: Just a minute. Jim, does Tom -- you talked to Tom and his power was off, does he expect to be able to get on today?

DR. NETON: I have not talked to him today, but Lori must have because --

MR. HINNEFELD: Lori, did you talk to him today or yesterday?

MS. MARION-MOSS: No, not today

or yesterday. Scott --

MR. HINNEFELD: Scott, do you have any, or anybody from ORAU have you heard anything about Tom's situation.

MS. BRACKETT: No. This is Liz Brackett. I'll try getting in touch with him to see what's going on.

MR. HINNEFELD: I was just concerned because Jim apparently talked to him yesterday and he was --

DR. NETON: I had an email conversation with him yesterday and his power was out at the time.

MS. BRACKETT: Right.

DR. NETON: That's all I know. That's the last I've heard from Tom.

MS. MARION-MOSS: Oh, okay.

DR. NETON: Okay.

CHAIR MUNN: Well we hope that's either been resolved or that there's a very powerful battery involved.

DR. NETON: Why don't we still

leave it at 2:30 if it's not a problem to change that and if Tom's available fine, if not, you know, we'll proceed anyway.

CHAIR MUNN: All right. Very good. Then we'll see what the situation is when we come back.

DR. NETON: Okay.

CHAIR MUNN: And in the meantime I trust someone will attempt to contact Tom and see if he's going to be with us or not. That'll have some bearing on what do.

In any case, 20 minutes to the hour, is that correct? We'll see you 20 minutes to the next hour, all right? Thanks. Have a good lunch.

(Whereupon, the foregoing matter went off the record at 12:37 p.m. and went back on the record at 1:42 p.m.)

A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

(1:42 p.m.)

CHAIR MUNN: Very good. Do we have the folks we need for OTIB-83, the findings report for SC&A?

DR. NETON: This is Jim Neton, I'm on.

CHAIR MUNN: Okay. Do we need to

start with PER-20? Or can we start with OTIB-83?

DR. NETON: I don't know. Tom LaBone was trying to get on. But I don't know if he's going to be here or not.

MS. BRACKETT: Yes, this is Liz Brackett. His power's still out. And it's also out at his office. But he did text me and said he would try to be on at 2 o'clock, because that's when you had said you wanted him.

CHAIR MUNN: Okay. That's very good. Then let's, then we need to start with OTIB-83, correct? I mean, PER-20.

MS. BRACKETT: Correct.

CHAIR MUNN: Right. All right.

DR. NETON: Wanda, this is Jim. Before we get started I want to correct something that we talked about earlier.

CHAIR MUNN: All right.

DR. NETON: It turns out that IG-001 has not been revised.

CHAIR MUNN: Oh, it hasn't?

DR. NETON: No. But, and the reason, and this is why I shouldn't talk without checking first. The reason was, I think there were some fixes put in place that would accomplish the same thing without revising the procedure, or the guide.

Because the guide really wasn't wrong. It was, we were not following the strict interpretation of the guide. And I think there's been some other fixes put in place.

And we'll note that in our response, and talk about it the next time. But I just wanted to let you know that IG-001 has not been revised.

CHAIR MUNN: I did not remember that resolution. I know we worked with IG-001 for a number of meetings.

DR. NETON: Right.

CHAIR MUNN: But, until you said that it was, I had in mind that we had made

revisions to the --

DR. NETON: There are reasons to revise IG-001, but you responded in --

CHAIR MUNN: Yes, yes. I remember now that we decided to close the findings, simply because they were cared for in another document.

DR. NETON: Right.

CHAIR MUNN: Yes. Thank you, Jim. I appreciate that very much.

DR. NETON: Okay.

CHAIR MUNN: Then who's taking the lead on PER-20?

MS. K. BEHLING: This is Kathy Behling. I can start with PER-20 if you'd like. But before we do that I want to make just a few other comments. Can you hear me all right?

CHAIR MUNN: You're very soft, Kathy. But I can hear you, barely.

MS. K. BEHLING: All right. First of all, you know, let me also add a

comment that we've talked about so many times with the IG-001.

Again, one of the issues that we want to be sure of is, there's a table in there, as we've talked about, 4A I believe it is, that is not being used by the dose reconstructors. And we see it routinely in the dose reconstructions.

And one of the things we were wondering is if you needed to go back and perhaps to a PER for cases associated with bone marrow, bone surface, esophagus and lungs, since this guidance has been put into IG-001.

So just to be sure that NIOSH realizes all aspects to the IG-001 issue. And I think Stu's been part of all of this. And we've mentioned it many times.

But I think one of the questions we really have is whether a PER needs to be issued for previously completed cases. Now also, before lunch I was asked, I said, I

promised I would look at Finding 14 for PER --

CHAIR MUNN: Right.

MS. K. BEHLING: PER-14, yes. And I did read through again Scott's write up. And as he usually does, he has done a very thorough job of going back and looking at all of the previous cases.

And not only did he look at the previous cases associated with LANL, he also looked at, he probably mentioned, I was sort of scrambling at the time, that he looked at the PER, the peer review process. And I think he's done a thorough job.

And I think what John Mauro's comment had to do with is, as he had mentioned, as Scott mentioned that we wanted to be sure that there was no tool issue, PER tool issue. And also that this didn't affect other cases.

And based on what Scott wrote up there I feel confident that that issue has

been resolved and there is nothing else that needs to be done. And there were no other cases impacted. So I think we could, I would recommend we could close that finding.

CHAIR MUNN: Board Members, any comment or any concern with closing Item 14 on PER-14 at this time?

MEMBER ZIEMER: This is Ziemer. I have no problem with that. I think we had only delayed it so Kathy could review it. And if she's comfortable with it, I think we should close it.

CHAIR MUNN: Josie?

MEMBER BEACH: Yes, I agree with that also, Wanda.

CHAIR MUNN: Very good. Steve, can you close Finding 14 on PER-14? Indicate that the Subcommittee found that it was resolved and could be closed.

MS. K. BEHLING: And one more issue before I start with PER-20 is, Hans and I made this a working lunch. And we did

look at the spreadsheet that Matt Smith had pointed out. And I'll let Hans --

DR. H. BEHLING: Yes. We looked at a sufficient number of all monitored working data. And we obviously concur now that those data have been standardized.

That takes into account the period and given year during which the person was monitored. And as far as I'm concerned, this issue should now be closed out.

CHAIR MUNN: Is that one finding or two?

DR. H. BEHLING: Well, it is Finding 1 and 3.

CHAIR MUNN: One and 3, is it not?

DR. H. BEHLING: Yes.

CHAIR MUNN: And so --

DR. H. BEHLING: I will say this, had that issue been acknowledged in the write up of PER-14 this would have never

come up. It was just my intuitive assumption that construction trade workers usually do not work a full year.

And under that circumstances my assumption was that data that had been presented in OTIB-52 were in fact just any old doses, without the standardization or normalization that would have been taken into account, both to be all monitors as well as construction trade workers, that their data would have had to been mobilized in order to make a fair comparison.

As it turns out, Matt obviously told us what to look for. And as far as I'm concerned that was done. So the issue goes away.

CHAIR MUNN: Understood. So I believe I'm hearing that SC&A is recommending all three of the currently outstanding findings on PER-14, that is Numbers 1, 3 and 14, can now be closed. Is that what I'm hearing, Hans?

DR. H. BEHLING: That's, you're hearing correctly.

CHAIR MUNN: All right. Very good. Steve, can we do that?

MR. MARSCHKE: Yes. Actually I was, actually I jumped the gun, Wanda, and I started closing it out.

CHAIR MUNN: Well, that's fine. That's just dandy. You're ahead of me. And that's a good place to be as far as I'm concerned. I can follow you. That's good. Any objection from Board Members? Josie?

MEMBER BEACH: No. I don't have any objections, Wanda.

CHAIR MUNN: Okay. Paul?

MEMBER ZIEMER: No. I agree.

CHAIR MUNN: All right. Then the statement should read in all three cases that SC&A is recommending, considers these issues resolved. And the Subcommittee concurs. Close them as of today. Thank you, Steve. Now, PER-20. I believe it's

yours, Kathy?

MS. K. BEHLING: Yes. Even though we have NIOSH written there, I think I can address these issues. We initially had four findings, I'm sorry, three findings associated with our case review for the Blockson TBD.

And just to give you a very brief background, the first finding, which was Finding Number 4, and as Steve mentioned earlier today we did close out. And that had to do with the fact that the cancer type was a stomach cancer.

And they used the inhalation pathway dose to calculate dose, rather than the ingestion pathway, which is specified in the Blockson TBD. And so Stu had indicated during our last meeting that they were able to go back and look at all the cases.

And they, in fact, I said, I guess found several other cases that were done improperly. The base, that had been

corrected. So we closed this Finding 4.

CHAIR MUNN: Right.

MS. K. BEHLING: And in Finding 5, even though we realized that this -- I felt that this stomach cancer should have been calculated using the ingestion dose, we did go in and calculate the dose based on the inhalation pathway, as had been done.

And we realized that they only considered intakes from three of the radionuclides that are listed in the table. I guess it's at Table 4A and 12A on the Blockson TBD. So we were questioning why that had happened. And we realized there may be a problem with the inhalation tool.

And our Finding 6 also has to do with, we dug even deeper in that Building 55 inhalation tool, and realized that there were some DCFs that weren't included. And so since then Lori has sent me the updated, the revised Blockson Building 55 inhalation and ingestion tool.

In fact, during my review of this case I didn't even have access to that ingestion tool. I couldn't find it. And she did send me both of those, along with the tool instructions file.

And both Rose and myself went through the tool, looked at everything, compared it to the TBD, the Blockson TBD. And we feel that it is, it looks, it reflects what was stated in the Blockson TBD. So we don't have any issues with that, with the two new tools that we were sent.

The only thing I did take notice to is, in the instructions that were sent along with the tools it still does give, and let me see here. It gives in Table 1 of those instructions the dose reconstructor the option to use either the inhalation or ingestion for issues of the GI tract.

And that's inconsistent with what's stated in the TBD. So my only recommendation would be, is that that table

be revised to instruct the dose reconstructors to only use ingestion for the GI tract issues. And otherwise, I think Finding 5 and Finding 6 can be closed.

And I believe that I can say, and maybe Stu or someone from NIOSH can confirm this. The fact that you did look back at all of the other cases under our initial Finding 4, I assume I can feel confident that there's no cases that were, that slipped through the cracks, that weren't looked at after this revision to the inhalation and ingestion tool was published.

Am I correct? Is it safe to say that all of the previous cases that were done were looked at, that were, that they used previous versions of the inhalation and ingestion tool?

MS. MARION-MOSS: Correct.

MS. K. BEHLING: Okay.

MS. MARION-MOSS: This is Lori.

MS. K. BEHLING: Okay. Thank

you, Lori. With that being said then, I feel we, I'm suggesting that we can close Finding 5 and Finding 6. Because the tool does accurately reflect everything that the Blockson TBD indicates it should.

CHAIR MUNN: Does NIOSH have a response to the expectation of revision of this tool language?

MR. HINNEFELD: I guess I'm not familiar with the language. So we'll have to take a look and work it out. I would expect we would change it if it sounds the way that, if everything is as straightforward as it seems. Let us have a chance to go talk it around, see what it makes for --

CHAIR MUNN: Okay. So next time we will need only to check for your response to the wording change in the tool. And assuming that that's agreeable with you, we can then close Items 5 and 6 at our next meeting. Am I understanding that position

correctly, Kathy?

MS. K. BEHLING: Yes. And what I was referring to is, there was a file called the Blockson Tool Instructions TBD Rev 3. And as I indicated, there's a Table 1 in there that to me was misleading, and is giving the dose reconstructor an option for inhalation or ingestion for the GI tract issues.

CHAIR MUNN: Okay. Use ingestion. Very good. So, closed. Any comment? Any questions?

MEMBER ZIEMER: This is Ziemer. I agree with that. It wouldn't occur to me, and I haven't seen the tool. But of course, in inhalation you do have some clearance through the GI tract directly, where there's nasal deposition and subsequent swallowing.

So I don't know if that's part of this. Or whether it's as clear cut as Kathy had indicated. And it's not, because I don't have any idea what the tool looks

like.

CHAIR MUNN: No idea.

MR. HINNEFELD: Yes, Paul, that was why I hesitated. Because what should be done is the intake avenue that originally leads to the highest dose is the one you should choose. And so I think that's what should be done.

Of course in Blockson there's always this discussion too about was Class Y even feasible there. So I'm not, I don't know enough about it today to really say anything more definitive. But we'll look into it and see if there's a reasons why that --

CHAIR MUNN: Hopefully, it will be a simple --

MR. HINNEFELD: -- should not be changed --

CHAIR MUNN: -- suggestion and change.

MR. HINNEFELD: -- as the way

Kathy described it.

CHAIR MUNN: Yes. Any other comments?

MEMBER BEACH: So this is Josie, Wanda. We're going to leave those open until the next meeting. And those can be verified. Is that okay?

CHAIR MUNN: Yes. The intent is leave 5 and 6 open, to verify what, NIOSH's response to the suggested wording change. If there's no concern about that then we will close them next time, both 5 and 6.

MEMBER BEACH: Thank you.

CHAIR MUNN: Item 4 is officially closed, yes. Any other comments with respect to PER-20? If not, it's almost 2 o'clock. Are we okay to begin OTIB-83? Has Tom joined us? Don't hear a response.

MR. ARNO: Well this is Matt Arno.

CHAIR MUNN: Do we need to wait further? Or are we --

MR. KATZ: I missed it if you guys were chatting before the start time. Did someone get a hold of Tom over lunch break?

MS. BRACKETT: Yes. This is Liz Brackett. I talked to him, and his power is still out. But he said that he thought he'd be able to call in at 2 o'clock.

MR. KATZ: Oh, okay. Okay, good. Thanks, Liz.

MS. BRACKETT: There's still a couple of minutes. I just texted him to see if --

MR. LABONE: I'm here.

MS. BRACKETT: Okay.

CHAIR MUNN: Oh, very good. Talk about the nick of time. Sorry about your power, Tom.

MR. LABONE: Yes. You don't know what you're missing till it ain't there.

CHAIR MUNN: That makes it a little difficult, doesn't it?

MR. LABONE: Yes.

CHAIR MUNN: Are you on deck and ready to address OTIB-83?

DR. NETON: Wanda, this is Jim. I'm going to do the heavy lifting here. I'm just relying on Tom for some moral support.

CHAIR MUNN: Very good. All right. And, Jim, you have the floor.

DR. NETON: Well, I thought, this is a new item that's been added. And I didn't know whether SC&A would want to first go through and point out the issues that they've --

CHAIR MUNN: It might be expedient to do that.

DR. NETON: Well, there are a number of findings. Although in my mind it really comes down to a couple of issues. So either way, I mean, I'm --

CHAIR MUNN: How many findings did we have total?

MR. MARSCHKE: Wanda, this is

Steve Marschke. There's 14 findings total. Actually, Joyce Lipsztein did the review. But Joyce is unable to be with us today. I don't believe she's with us. And so I was going to try and pinch hit for her.

CHAIR MUNN: Oh, that's great.

MR. MARSCHKE: But I'm not sure how, you know, I can't get into the level of detail that of course Joyce could if she was here. But I kind of agree with Jim that there are 14 issues. But it kind of boils down to a couple of really little points.

DR. NETON: Yes. And maybe I could just do that. And maybe SC&A can chime in if I'm not covering the main bases.

CHAIR MUNN: That would be wonderful. I'm pleased to report that I have been --

DR. NETON: It might speed things up.

CHAIR MUNN: -- successful in getting Live Meeting on a screen. Not the

screen I intended, but a screen. So if we can follow the findings point by point as you go through them, Jim, it would be very helpful. Thank you both. Go right ahead, Jim.

DR. NETON: I'll do them point by point. I didn't know that, well --

CHAIR MUNN: Well, no --

DR. NETON: See, I thought they were better.

CHAIR MUNN: I'm not instructing you to do so. I'm just asking Steve that we be able to see the finding as you're talking about them.

DR. NETON: Oh, all right.

CHAIR MUNN: That's all.

DR. NETON: Okay. Well, I can go through these. I mean, the first one is simple. It's the applicability of target audience is not well defined. And I think that's sort of a, not a cosmetic, but an administrative finding that we can address.

And I think it is fairly clear. But that's not a big issue for us. And we'll be happy to address these administrative findings, you know, as appropriate.

The key ones though, when we get into Finding 2, which is this issue about not demonstrating that Type A plutonium would rarely be encountered in the workplace.

I'll start by refreshing people's memories that, or maybe not refreshing them, but letting you know that this TIB is actually a fallout, or a re-assemblage of the discussion that took place at the Mound Site Profile review. Mound worked with plutonium 238 to a large, to some degree. And there were various exposures there.

And SC&A correctly pointed out that plutonium 238 does not decay, has been demonstrated in certain instances to not behave according to typical clearance

classifications that are identified in ICRP-66.

There is a non-monotonically, or actually the exposure tends to increase, or the solubility increases over time after exposure. And then clear off with a monotonically decrease from the exposure, or clearance rate. And that has more, has something to do with the high specific activity of plutonium.

I won't get into specifics. But at any rate, NIOSH does acknowledge that there is a unique type of plutonium 238 clearance pattern at facilities like Mound. And that's what TIB-83 is intended to address.

The Type J plutonium that is referred to in this finding though, has really, to your knowledge, only been observed at Los Alamos. And in particular has to do with a clearance of a material known as a cermet.

It's a composite of plutonium. It was specifically made into this composite material. To my understanding it was to withstand burn up from the atmosphere. Because these plutonium 238 sources are used in, as power generators for satellites.

CHAIR MUNN: That explains my lack of understanding of Type J.

DR. NETON: Right. And so Type J is, when you incorporate plutonium into this ceramic matrix material it behaves quite differently than regular plutonium.

In fact, there was an incident that was observed at Los Alamos, that exhibited some fairly lengthy, a fairly protracted period of increasing solubility over time, and then it decreased.

And SC&A's comment here was, well, we didn't demonstrate that Type J actually occurred at Mound. And to our knowledge, even though we acknowledge that cermet type material was present at Mound,

we know of no instances where there were inhalation exposures.

The incident that happened at Los Alamos was under some very rigorous, or very violent type test procedures, to try to get the material to sort of simulate the re-entry of a satellite in the atmosphere. And it ended up disintegrating the source.

And when they opened it up it exposed the workers. We're not aware of any situation like that, that happened at the Mound facility. That's more than likely going to be our re-statement of the issue at, for TIB-83.

I mean, we're happy to include it in dose reconstructions as appropriate. But it's not certainly going to be a default, which is sort of the implication of the finding.

CHAIR MUNN: Yes.

DR. NETON: This next finding is not on the screen right now.

MR. MARSCHKE: I messed up.

DR. NETON: I know you're trying to get a hold of some pictures for me.

MR. MARSCHKE: I was trying to get a hold of what we were writing.

DR. NETON: So that's Finding 2. Finding 3, it gets down to the issue of this, what we call Type L. NIOSH, Tom LaBone specifically and Lynn had modeled, developed a model for some plutonium exposures at Mound, based on a very discrete incident that occurred of exposure to plutonium dioxide.

And when they developed that model it was based on five individuals that were exposed, and followed over time with bioassay. And indeed, this model exhibited that type of behavior that I just talked about, which is a increase in solubility over time, to about 100, 150 days.

And then it decreased, an exponential type decrease, like you'd

observe for most materials. SC&A's issue with this model was that it was based on a single incident at Mound.

And it didn't cover the waterfront of all potential exposure scenarios that could have existed there. And evidence, graphs were presented of other cases that exhibited similar type clearance.

And in fact, they identified one particular case that appeared to have a longer clearance time than the five cases, or a longer buildup and then clearance. Sort of in between a Type L and Type J exposure.

It seemed to be the case that it basically indicated that the Type L model was not necessarily sufficiently claimant-favorable and conservative. We've looked at that particular case in some detail. And there's some issues with that.

Well, first of all I would, we have to understand that these models that

are developed on individual cases have variability in and of themselves. And in fact, the five cases that were used to construct the Type L model had individual bio-variability.

And so, you know, that does happen. To pick one case sort of out of the pool and say, this one does not fit your model exactly, I think is not exactly a definitive finding that the model's inappropriate.

The other issue with the, and they don't call it a model, but the exposure clearance pattern that they observed, which they called I think Type L1 maybe, or something like that.

That worker was not taken out of the workplace for like over six, almost six months or more after his original exposure occurred. And you can't rule out in this particular case that there wasn't a chronic exposure scenario ongoing at the time.

So we're not comfortable with SC&A's assertion that that model demonstrates that the Type L model is not appropriate, and does not appropriately bound exposures. And we'll be working that up and describing our response in writing, you know, as we develop it. But that's sort of it in a nutshell at this point.

Finding 4 is very similar, did not demonstrate that Type L was commonly found in the workplace at Mound or any other facility. I'm not sure what the issue here is.

The TIB actually instructs the dose reconstructor to use Type L under certain circumstances where it was identified that Type L would be, would actually have a higher, increase the dose to the workers. So I'm not exactly sure where that finding is coming from.

MR. MARSCHKE: Jim, this is Steve again. I think some of it has to go back to

the first finding where basically we said, you know, we didn't know exactly, identified who the audience, the target audience for this was.

If it's, we're looking for, if the target audience is just for dose reconstructors who are doing the Mound facility, then it's one thing.

The other thing is, but is this a generic OTIB, which is going to be applied to different types of facilities across the DOE, you know, landscape?

And, you know, if so, you know, we don't know that this, that's why we say that it's not demonstrated that this Type L is common across, you know, at other places, other than Mound. So I think that's what we're --

DR. NETON: We can address that. I understand what you're saying. It certainly was plutonium dioxide, this particular exposure case. And I would be

surprised if it wasn't applicable to plutonium dioxide exposures. But understood. We'll make sure we address that issue.

CHAIR MUNN: Okay. You'll respond?

DR. NETON: Yes, we'll respond.

CHAIR MUNN: Good.

DR. NETON: This 5 is, NIOSH does not demonstrate exposures to Mound plutonium 238 that show non-monotonic absorption to the lungs may be well characterized. Again, at all times and at all areas. Again, this has to do with model development and how many cases you need, and what's appropriate.

And we're going to respond to that. I think, we feel like we have done that to, we've accomplished that. And we'll address that finding.

CHAIR MUNN: Okay.

DR. NETON: This Finding 6 is similar to what Steve just mentioned. Does

not state whether the technical --

MR. MARSCHKE: Sorry.

DR. NETON: I don't know where to go. Yes, whether the technical calculations are derived or limiting this solution type, which the standard examples or similar calculations can be referred to other facilities. We'll have to address that, how --

To me it's implied in 83 that it's at other facilities. But I would agree that we haven't done a good job describing a basis for its use in other facilities. So we'll address that issue.

NIOSH has not compared organ, this is Finding 7, organ doses from acute intakes of L with chronic intakes of Type M and S materials, plutonium 238 materials. I believe we've done that. I'm not sure why that's a finding.

I mean, there's a lot of work done in 83 to demonstrate under the chronic

and acute intake scenarios which was a limiting dose, based on an organ by organ basis. Should discuss limiting solution types for acute intakes of Type L versus chronic. Yes, again, I think, I would argue that we've done that.

MR. MARSCHKE: There is more -- again, the findings themselves are kind of a synopsis of the bigger discussion which is in the report. So there may be more information in the report itself to help you better discern what the concern is, than just --

DR. NETON: I've read the report several times. I guess I'm just cutting it a little short here maybe. But we will certainly address the findings that are identified in the report, and in the context in which they were made.

Finding 8, in Section 4 we defined, NIOSH defined the parameters for Type L exposure amount, compared to the

solution curves with Type J and S, but does not demonstrate that Type L is typical of Mound exposures. Again, it's a similar type thing.

It gets to the point, well how do we know Type J didn't occur at Mound? And how do we know that the Type L model is adequately bounding. And again, that will, we'll have to discuss that and demonstrate that in our response.

Finding 9 is, the purpose of Section 4 is not well defined in relation to other exposures. At plutonium 238 they show non-monotonic behaviors at Mound and at other sites. Again, I'd have to go back again and rehash my memory on this.

But it seems to be a similar finding to the other ones. How do you know that Type L is representative of these other sites, other exposure scenarios?

And Finding 10, there is no guidance in the TIB, actually the Site

Profile or TIB-83, on which areas of Mound and in which time period Tables 2-1 and 2-2 should be used. The lack of such guidance indicates the table should be used at all areas, at all times to interpret Mound --

Well that's true. That's how they're going to be used. It is not NIOSH's intent, either then -- if this was not NIOSH's intent, then it should be modified to specify when tables are to be used.

It's pretty specific in there, when the dose reconstructor is doing the dose reconstruction, that they would use the guidance in those tables.

MR. MARSCHKE: So really the answer is, basically it is for all areas and all times.

DR. NETON: It's for all plutonium intakes, yes.

MR. MARSCHKE: Yes.

CHAIR MUNN: I believe that's what I heard.

MR. MARSCHKE: Yes.

CHAIR MUNN: So if that's the case, then it is NIOSH's intent. And I've seen the statement to that end will be a part of your responses to it.

DR. NETON: Well, I'll have to rephrase that. I mean, I guess I need to go back and make sure, at all areas and all times when these plutonium materials were being used at Mound. I mean, we certainly wouldn't use them if there was, if the profile indicates that they weren't on site.

CHAIR MUNN: Right.

DR. NETON: You know what I'm saying?

MR. MARSCHKE: Right.

CHAIR MUNN: Right.

DR. NETON: I'll give it that caveat.

CHAIR MUNN: Okay.

DR. NETON: But as long as they were there, and they were working with this

material, it would be used. Okay, Finding 11, for sites other than Mound were non-monotonic lung dissolution of plutonium is observed, plutonium 238. There is no assurance that the 238 at the site will correspond to Type L, plutonium 238.

Okay. This goes back to that same finding that we just talked about, which is, how do we know that this would apply to other sites, other sites than Mound. And again, we're going to have to address that in our response.

TIB-83 is difficult to follow and understand. The sections do not follow a natural order. NIOSH's Type J and Type L plutonium 238 compounds are only introduced in Section 4. And my screen just timed out. Bear with me here.

Type L compounds, plutonium 238 compounds are only under Section 4, although they're used in Section 1, 2 and 3. I acknowledge that it could undergo some

better organization. And we'll take that under consideration as we're providing these responses.

And 13 is, TIB-38 is essentially the same document as the White Paper modeling intakes of plutonium 238 at Mound. That is true. ORAU TIB-83 is only clear for those that participated in discussion regarding Mound plutonium 238 exposures at Mound.

Again, the same, essentially the same finding as the one a couple of times ago, which is how do we know that this applies, this Type L material could apply at facilities other than Mound?

MR. MARSCHKE: No, this is not that. This is basically saying that the, this is more editorial I think, and the clarity of the way the document is written. It says --

DR. NETON: Oh, I see, yes, yes. It's only clear for those that participated.

Well, I'm not sure about that. That is an editorial comment. You're right.

CHAIR MUNN: That's not really a finding. That's an observation.

DR. NETON: I would call that an observation.

CHAIR MUNN: I would as well.

DR. NETON: I mean, I don't know how to address that other. We'll try to take that into consideration, and we'll respond. But I had really not thought this one out yet. But again, it's really not a technical issue.

CHAIR MUNN: Right.

DR. NETON: It's an administrative, editorial type issue.

MR. MARSCHKE: Okay.

DR. NETON: And then 14, the last one is, 83 does not discuss existence of other non-monotonic forms of plutonium at Mound. Nor present any research done. L is the only appropriate form of plutonium 238

to be included in the calculation.

Well, this kind of gets into that proving a negative issue that we run up against a lot. I think that the 83 does a pretty good job demonstrating in one of the sections, I forget which one it is, where it discusses the Los Alamos incident, why this is not a, not considered to be a reasonable type of incident that could have happened at the Mound facility.

And we'll just have to reiterate that, and maybe do a better job of convincing SC&A at least that these cermet materials that were handled in a such a manner at Los Alamos to generate airborne, did not occur that way at Mound.

I mean, cermets themselves are inert, not inert, but they're very hard to break apart by the nature of their design. So unless you go to great length to try to do that, like they did at Los Alamos, we don't see a reasonable exposure scenario for

this at the Mound facility.

Although, we're going to take a re-look at that, and make sure that that statement is true. I'm pretty sure it is. I've gone through a lot of documents. I've not seen any evidence that such a campaign, or such an experimental protocol was followed at Mound with these cermets. So we'll try to address that last one as well.

CHAIR MUNN: Okay.

DR. NETON: But that's it in a nutshell. These really boil down to this, you know, Type L, and its universal applicability to plutonium 238. And then the Type J and Y, that's not universally applicable across the site. To me those are the two huge issues that were identified here, that we need to deal with.

MR. MARSCHKE: I agree with Jim on that. I mean, I participated with Joyce on at least doing the review of this. John Stiver and myself were involved in reviewing

this. And so I think -

But that's really the, I mean, my impression of this, of Joyce's concerns is very much the same as Jim's. Is the universality of Type L and, you know, at other facilities.

DR. NETON: Right. And, you know, we may actually respond in a couple of sections like that. And then point to the fact that this addresses these four or five findings, you know, or something like that. It will make it easier than just restating the same thing several times.

MR. MARSCHKE: Yes, I --

MR. STIVER: This is Stiver. I agree with Steve on this. Personally I didn't remember seeing anything in my review with Joyce about the destructive testing of the cermet material at Los Alamos. But certainly a good point to make that it may be --

DR. NETON: That's covered in 83.

MR. STIVER: Yes, yes. Okay. I have to go back to the review and refresh my memory on that.

DR. NETON: Okay. But, you know, we'll put together our responses, and get them on the database here. And, you know, It's just going to be a little while. It's going to take some time. It probably won't be the next Working Group Meeting, or Subcommittee meeting. But it won't be until the next, maybe couple of months, we'll have something out on this.

CHAIR MUNN: Okay. Well, no staff. And I think your stated approach with respect to perhaps responding in a block manner may be more advantageous than trying to address one at a time. It seems logical, given what we've seen today. All right. I don't believe that this has been seen by anyone other than NIOSH and SC&A, has it? I don't believe I've seen it.

MR. MARSCHKE: The, yes --

CHAIR MUNN: Did that report go out to us?

MR. MARSCHKE: Yes, it went out.

MEMBER ZIEMER: Yes, we got the SC&A report fairly recently.

CHAIR MUNN: I must have somehow missed OTIB-83. I thought I --

MEMBER ZIEMER: Jim's comments were very helpful I think. So we have a pretty good idea of what the responses are going to look like. And I think they'll be satisfactory to both SC&A and to the Work Group. But we'll just have to wait until they come.

CHAIR MUNN: That's good.

DR. NETON: Yes. The review by SC&A was issued in December of 2013. So just a couple of months ago.

MR. MARSCHKE: Yes, I think it went out actually -- Yes, here it is on the -- If I recall it went out on the 24th.

DR. NETON: Right. During the

end of, you know, almost during the holiday period.

CHAIR MUNN: All right.

MEMBER ZIEMER: Right, right. That's the date on mine, 12/24.

CHAIR MUNN: That may be what happened in my file.

MEMBER ZIEMER: Yes, you were thinking holiday, you were on holiday.

CHAIR MUNN: Yes, there it is. All right. Well, I'll pull that up and take a look at it myself. Thank you. And we'll anticipate the NIOSH report, not next time, but probably the meeting following that.

DR. NETON: I hope we'll have something.

CHAIR MUNN: Very good. We'll take that for the agenda at that time. And do we have any other comments, thoughts with respect to OTIB-83? If not, the only comment that occurs here is with respect to the finding that appears to be an

observation rather than a finding.

I'm not sure we've encountered this particular situation before. We've encountered the other finding, the other situation where we've decided to keep track of observations, because of their impact on other aspects of what we were looking at for some particular document.

But I don't think we've come across an item before which was shown in the SC&A report as a finding, which is not by definition truly a finding, it's an observation.

I hope that when we address these findings for closure that we can agree to simply make that statement at the time of closure. And not have to beat that horse to death, particularly.

MR. MARSCHKE: Wanda --

CHAIR MUNN: I don't know how others feel about that. Yes.

MR. MARSCHKE: I added the word

observation after the OTIB-83-13 number. And what I will do is, you know, when we get off line here I will add a little bit of discussion that, you know, that you, that the Subcommittee has instructed us that this is really, that they consider this, as well as NIOSH considers this to be more of an observation than it is a finding.

CHAIR MUNN: Well, I think mine was the only voice that's been raised in that regard. We probably should hear from Josie and Paul before we make that --

MR. MARSCHKE: Okay.

CHAIR MUNN: -- concrete statement. Paul?

MEMBER ZIEMER: Well, I think it's probably an observation. I don't object to it being carried for the time being as a finding, just so we formalize what we're doing. But if everybody's agreeable to call it an observation now, that's fine.

CHAIR MUNN: It certainly seems so to me. Thank you, Paul. Josie?

MEMBER BEACH: I see no reason why we shouldn't leave it as a finding until we get NIOSH's report. But --

CHAIR MUNN: Fine. And at that time, Steve, we'll do exactly what you suggest here, hopefully. Thank you all. Now, can we move to OTIB-34?

DR. H. BEHLING: Yes, we can. I'm going to ask you, do you have my report that's dated November of 2013 available for the screen?

MR. MARSCHKE: Yes. We have the, hold on here.

DR. H. BEHLING: Yes. I'm just going to be referring to a bunch of pages, so that --

MR. MARSCHKE: We have the report. And we also have the findings on the BRS.

DR. H. BEHLING: Okay. Okay, are

you, can I start then?

MR. MARSCHKE: Yes.

CHAIR MUNN: Please do.

DR. H. BEHLING: Okay. Well, as Steve already mentioned earlier, this is a focus review of ORAU OTIB-34, with the title of "Internal Dosimetry Coworker Data for X-10". And this focus review of OTIB-34 essentially addresses those changes that were introduced under Revision 1.

And let me just briefly identify what the three revisions were. The first revision is that the intakes of plutonium 239 Type S, in Table 5-5, were revised and expanded to include bioassay data for all years.

And if you go to, Steve, if you go to Page 8 of the report you will see Table 1 and Table 2. And what Table 1 has was that in the original version of OTIB-34, they had by and large a single value for all years between 1951 and 1988. And only the

50th percentile value of the GSD for dpms per day intake.

And of course that was one of the findings in our first audit of OTIB-34 under Revision 0. And what you see in Table 2 below, by now the revised values for the 50th percentile, as well as the 95th percentile that's used has also been included.

And you see, of course, the major difference for the years 1951 and '52. You go from 4.15 dpm per day to 1,489. You're talking about a 350 fold increase. For other years, obviously, you see in Table 2, the significant higher values that are defined as dpm per day for those years.

And obviously we have a total of five time periods from the first one. After '51, 52, you have '53, '59, and so on. So we by and large agreed with all the dose values. And we concur with the numbers.

But one of the things that I also

looked at, in ORAU's TKBS-0012-5 we also, we don't expect, there's no reference to plutonium Type Super S. And if you look at the TKBS-0012-5 you find that -- no, actually it's OCAS' PER-12 that identifies that X-10 should have also included Super Type S.

And so that was Finding Number 1. We agree with the changes in, from Table 1 to 2. But what we also realize is that the acknowledgment of plutonium Type Super S was not considered in OTIB-34 as part of the coworker model.

And of course, the inclusion of Super Type S would certainly increase the dose associated with any consideration that the plutonium might have been Super S. So that's Finding 1.

The second change that occurred in Revision 1 was the addition of the 95th percentile for all radionuclides. And on Page 10 of my write up you will see,

obviously, how the 95th percentile is defined under Equation 4.

And what I did in review of all these tables, Table 5-1 through 5-6, I tried to identify the 50th percentile value with what the 95th percentile value was. And I was able to match every one of them, except in Table 5-5 that there were three out of six values that I would devise different, higher numbers, as you see in that particular table.

I don't have a number for that table. But it's on top of Page 11. You see the NIOSH data on the second column, and SC&A data. And for 1951 to '52, NIOSH has devised the value of 7,178 dpm per day. And according to my equations, and use of Equation 4, I came out with a value of 9,073.

And also, for the other two values mine turned out to be slightly higher than those that were identified by NIOSH.

And so that is Finding Number 2, that someone may want to look at those three numbers and see if they were in error, or if there's another explanation.

As I go on, mid page of Page 11, I stated the following, "Of greater concern to SC&A is why the 95th percentile values were added, since OTIB-34, Rev 1 offers no guidance for their use." And I'm not going to go through the entire citation that I quoted from other documents.

But it seems to me that when you have a 95th percentile value, that's usually reserved for the high exposure groups, such as operators, or anyone else who would be considered a maximally exposed individual.

And yet, when you read the quotation, as I stated here in OTIB-35, you see the following, "For each radionuclide the 50th and 95th percentile intakes and GSDs are provided in the tables." And then it says, "In most cases doses for the

individuals who were potentially exposed routinely should be calculated from the 50th percentile intake.

To me that phrase, individuals who were potentially exposed routinely. It's usually for other NIOSH documents, reserved for those individuals who are generally considered high end exposed individuals, who, under different circumstances, and different documents that NIOSH has published, are usually given the 84th or the 95th percentile value.

So the question is, how do you make that differentiation when the dose reconstructor looks at that and says, for most people who were potentially exposed routinely? That to me would suggest every day when they show up for work they may be exposed. That pretty much is a high end exposure person.

And in the absence of any official guidance, when does the person take

the liberty to make a judgment call to say, do I give that individual the 50th and the 95th percentile? And I think it goes back to one of the issues that I've raised on a number of previous instances.

I'd like to see a very prescriptive process, so that the dose reconstructor is not necessarily tasked with a situation where he has to make a judgment call that may or may not be shared by other dose reconstructors who might end up encountering the same situation, and lets you use the 50th, while the other person may elect the 95th percentile.

And so, what it comes down to, I'll skip all of the additional information I've provided, and I'll go to Page 13. And so under Finding Number 3 I said, "For the X-10 internal coworker model, as well as other internal", because I quoted other internal models, "guidance for the assignment of 95th percentile intake values

to unmonitored workers is currently inadequate in this particular document, and possible in others."

Because I quoted other documents that said there may be unusual circumstance of it. But those are very, very subjective statements. And again, for consistency purposes I would like to see a more either defined or prescriptive approach as to when you use the 95th percentile, versus the 50th percentile. So that's Finding 3.

The third edition to this particular revision of OTIB-34 involves the expansion of statistical summary tables in Attachment A. And one of the things that -- I'm on Page 13 for those who are following me on the screen.

In Section 2 of OTIB-34 I quote the database that was cited there. Results are in units of disintegrations per dpm for 24 hours. And then it says, all results were assumed, and I underlined the word

assumed, to be representative of a full day, 24 hour urinary excretion.

When you look at Example 1, not Example, Exhibit 1, which I have enclosed on Page 16. So, Steve, if you can possibly identify Exhibit 1 on the screen? You will see obviously, a page here that has multiple columns of the, one, two, three, four, five, six -- Column Number 6 shows dpm per sample.

And then there's next to it also dpm per, I believe it's sample, but I'm not sure what SMGL stands for. And then in the very far right hand column you see dpm per 24. And I assume that's 24 hours.

And when you look at the numbers, the difference between dpm per sample and dpm per 24 is a factor of 10 difference. And so my question that I had, what were the original, these are obviously not original data that were obviously --

Exhibit 1 represents a compilation of all data by NIOSH. And I'm

starting to, or I wanted to sort of have a couple of open ended questions for NIOSH as to what these data in Exhibit 1 really represent?

If you assume that the dpm per sample and dpm per 24 hours, which vary by a factor of 10, which one of these data points was in fact the original data? And to what extent would you have both of them?

Because if you have a dpm per sample, a dpm per 24 hours, and they vary by a factor of 10, and you assume that a dpm per 24 hours represents 1,400 ml of urine per day excretion, then dpm per sample would presumably then represent a constant sample value of 140 ml for analysis.

And I was just questioning to what extent, when you use the word it was assumed, as I stated on Page 13, all samples were assumed to be representative of a full day, 24 hours, I'm not sure I know what that means.

And I'm asking NIOSH to offer some clarification as to what that statement represents. And also perhaps get some clarification on what the numbers in Exhibit 1 represent, when we talk about dpm per sample, and dpm per 24 hours.

And that basically defines my Finding Number 4, which is stated on Page 14. It says, "Pending answers to the aforementioned questions, NIOSH's assumption of when and how bioassay data is represented with full day, 24 hour units is subject to question."

Those, by and large, are my questions. If there is a clarification for what the data on Exhibit 1 shows, it might answer the finding.

MR. MARSCHKE: Hans, this is Steve.

DR. H. BEHLING: Yes.

MR. MARSCHKE: There's one other thing I think we should mention to the

Subcommittee, that you mentioned early on, when you talked about the Rev 0 findings.

And you made a recommendation back on Page 7 regarding Finding Number 3, which I think is probably based upon, you know, some of the stuff you just talked about. But basically you say, you make a recommendation that the Finding 3, the status be changed from in abeyance to closed.

DR. H. BEHLING: Let me see. Where are we, Steve, here?

MR. MARSCHKE: The top of Page 7.

DR. H. BEHLING: Top of Page 7, okay. Oh, yes, okay. I see it. Yes. I would assume, if everyone agrees, that the bioassay data that defines the change, as I have mentioned to you in Table 1 and 2 on Page 8, seem to obviously address that issue.

In other words, in Table 1 that was in Rev 0, they had a single dpm per day

value at the 50th percentile for years 1951 through 1988. And those were changed to a total of seven time, no six time frames as defined in Table 2.

And I just briefly had mentioned that that change involves a 350 fold increase for years '51, and clearly something like a 30 to 40 fold increase for other years.

So the issue that was identified in the first review, and is now, was in abeyance, should really be closed, given what I believe was the proper response to that finding. What it comes down to, Steve, is that Finding Number 3 was addressed as one of the changes that --

MR. MARSCHKE: Well, I agree with you, Hans. I just wanted to make sure that the --

DR. H. BEHLING: Yes, yes.

MR. MARSCHKE: That the Subcommittee is aware that we are now making

the recommendation --

DR. H. BEHLING: Yes.

MR. MARSCHKE: -- to change the status of that one finding.

DR. H. BEHLING: Okay.

CHAIR MUNN: Thank you for getting the items up on the screen, Steve. I appreciate that. There's certainly no objection here to closing that item, that recommendation of SC&A. Josie?

MEMBER BEACH: I have no objection to that either, Wanda. Thank you.

CHAIR MUNN: Paul?

MEMBER ZIEMER: Yes, I agree that should be closed. They've provided what was needed there.

CHAIR MUNN: Very good. Steve, you can identify that the Subcommittee accepts SC&A's recommendation. The item is now closed.

DR. H. BEHLING: I'm not sure if we were waiting for a response from NIOSH on

some of the other findings.

CHAIR MUNN: No, I don't believe so. I think they will need some time to respond to those. I --

MS. MARION-MOSS: Wanda --

CHAIR MUNN: -- don't think I'm speaking out of turn. Yes.

MS. MARION-MOSS: We do have some responses to a couple of Hans' findings.

CHAIR MUNN: That's very good.

MS. MARION-MOSS: But before we do that I would like to ask Hans and/or maybe Steve, what's the status of Finding 2 in this document, for this document, for Rev 0? I see that NIOSH and/or at the time OCAS had provided a response to Finding Number 2 for Rev 0.

MR. MARSCHKE: I'm sorry, Lori, I was trying to, I've messed up things here. I'm trying to get this finding changed, and I changed it the wrong way. So now I'm trying to get it closed.

CHAIR MUNN: All right. Let's have a two minute hiatus here, while Steve types, so that we can close this one item appropriately. And then we'll go on to the question that Lori's raised.

DR. H. BEHLING: Wanda, this is Hans. While we're waiting on Steve --

CHAIR MUNN: Yes.

DR. H. BEHLING: This is supposed to be a focus review. So I did not really choose to address the issues, other than Finding 3. Because it became one of the issues that was evaluated under the revised OTIB-34.

But I did not attempt to really deal with anything, other than to state, as we have just mentioned a few minutes ago, that the change in terms of the different time frames for the Type S intakes satisfies the Finding Number 3 that was identified in the first part.

But as far as the other findings,

I did not want to address it. Because as we were told, this is a focus review. And I was not going to address those things --

CHAIR MUNN: Right. Understand. Thank you, Hans. I think that's appropriate. And now Steve has finished his entry for us. And we'll go back to -- Lori, do you want to repeat your question for Steve?

MS. MARION-MOSS: Well, Hans basically answered my question with his comment he just made.

CHAIR MUNN: Okay.

MS. MARION-MOSS: That --

CHAIR MUNN: Just wanted to make sure that it was covered.

MS. MARION-MOSS: Yes. That this was predominantly a focus review for Rev 1.

CHAIR MUNN: Right.

MS. MARION-MOSS: So --

MR. MARSCHKE: Let me, I mean, it looks like the last entry into Finding

Number 2 was a NIOSH entry. And so from that point of view it looks like Finding Number 2 is now in, should be in SC&A's court, I guess.

And we should probably evaluate the NIOSH response, and determine whether or not, and make a recommendation as to whether or not we accept it or not. The thing is, this has happened so long ago, in 2009, I'm not sure.

And the status, usually when we have a NIOSH response and we've talked about it at the meetings here, we usually change the status to in progress. And it's still showing it's open. So I'm not sure whether or not we've ever talked about the fact that NIOSH has provided us a response in here. And so I think --

CHAIR MUNN: It may be a clerical error that we're just now catching.

MR. MARSCHKE: It may be a clerical error that we're just now catching.

But anyway, I think it's basically, SC&A should take a look at the NIOSH response here for Finding Number 2, which again, it wasn't -- And Hans is chartered to do that.

CHAIR MUNN: Correct.

MR. MARSCHKE: Basically, Hans was looking at the Rev 1 and seeing what the impact of Rev 1 had.

And probably the same thing is true for Finding Number 4. So again, we have a response here, again, in August of 2009 from NIOSH we have a response to the finding. It's in the BRS. I don't know if we've ever talked about it in meetings, or what.

But I think maybe we should, SC&A should take an action item to look at those two responses, and see whether or not -- or, I guess we could, I don't know if you want to do it on the fly today. Or if we just want to take our time and look at it kind of off line, and get back to what our

recommendation is for the next meeting.

CHAIR MUNN: Because whatever has happened has been in a time frame which is outside our recent memories. It appears wise to take the action to look at it carefully, and ascertain that more than likely what has happened here is that we've failed to change a category appropriately, so that we sort of lost track of what was going on.

We would, it would be my request for SC&A to check both these items for their status, to make sure that it is in fact time, past time for us to be reviewing those on an up to date basis. Let's do our best to try to clear these if possible. And it would be beneficial for us if you take that action please, Steve.

MR. MARSCHKE: Okay.

CHAIR MUNN: We'll see what we can do to obtain a response for those two. And it will change the status as it should

be changed. Perhaps we can change this status today. That seems to be in order. Is there any objection to that?

MEMBER BEACH: None here, Wanda.

MEMBER ZIEMER: What is it? You want to change the status?

CHAIR MUNN: We're changing the status, because it's shown as open, and it already has a NIOSH response.

MEMBER ZIEMER: Oh, I see. Then change it to in progress.

CHAIR MUNN: Correct.

MEMBER ZIEMER: Yes, yes. Oh sure. That's fine.

CHAIR MUNN: And have SC&A check on it --

MEMBER ZIEMER: Right.

CHAIR MUNN: -- another time to see if they have a response available next time for Findings 2 and 9.

MR. MARSCHKE: Can you see the response on the --

CHAIR MUNN: Yes. It looks fine to me.

MR. MARSCHKE: -- screen?

CHAIR MUNN: Not hearing any objections.

MEMBER ZIEMER: No objections.

MR. KATZ: Well, is anyone having trouble listening, hearing?

CHAIR MUNN: I'm having trouble hearing Hans and Kathy. I don't know whether it's their line or mine. I'm hearing other people all right.

DR. H. BEHLING: Let me ask you now, can you hear me now, Wanda?

CHAIR MUNN: Yes, I can hear you now, Hans.

MR. KATZ: Okay, yes.

DR. H. BEHLING: I mean, I'll just have to speak louder.

CHAIR MUNN: These soft spoken people.

DR. H. BEHLING: No, I'm normally

not all that soft spoken, Wanda. I think you should talk to Kathy on that one.

CHAIR MUNN: All right, good. Do we have anything else that needs to be covered on OTIB-34 at this time?

DR. H. BEHLING: Well, I guess we were still thinking that Lori may have some responses to the other findings that I had. I'm not sure.

MS. MARION-MOSS: Yes. This is Lori. Thanks again for clearing the other issue up for me, Steve and Wanda. Finding Number 1 for Rev 1, we have Matt Arno on the line. Matt, are you there?

MR. ARNO: Yes, I am.

MS. MARION-MOSS: And he's going to facilitate our response.

CHAIR MUNN: Very good. Matt.

MR. ARNO: I guess with regard to Finding Number 1, since this review of Revision 1 there has been a Revision 2 of this document issued.

And in the Revision 2 we did add some explanation and instruction to the dose reconstructors, that they do need to consider Type S solubility for plutonium. That is in Section 5.2 of Revision 2 of OTIB-34. I guess --

MR. MARSCHKE: We can get a copy, can we, is that up on the website that we can get a copy of Revision 2? I don't know that we have a copy of Revision 2.

MR. ARNO: That would be --

MR. MARSCHKE: And then we can basically, you know, just look at Section 5.2 and, you know, see what we think.

CHAIR MUNN: And that has all the answers --

MR. MARSCHKE: -- use by dose reconstructors --

CHAIR MUNN: Is it up? It is easily accessible?

MR. ARNO: I don't know what documents you all have access to. These are

accessible to the dose reconstructors.

MR. SIEBERT: This is Scott Siebert. Yes, it's up on the NIOSH website, Rev 2. I'm sorry --

MR. MARSCHKE: I see it. I see it. So we can get that and, I guess, you know, Hans can look at it and, you know, make a recommendation.

DR. H. BEHLING: Well, you know, I will look at it. But if it acknowledges that issue, then obviously we may resolved the issue here.

MR. ARNO: The language used is the same as the language that was used for OTIB-80 and 81. So it's standard language that you should have seen on, with other documents.

CHAIR MUNN: Well, it's nothing new that requires real analysis there.

MR. ARNO: No. It's just another statement to the dose reconstructor, don't forget Type Super S.

CHAIR MUNN: Right. All right.

MR. ARNO: For Finding Number 2 Hans' observations were correct. What happened in that instance was that the 95th percentile values in Revision 1 were based on geometric standard deviations of less than three in those three particular instances.

In Revision 2 we recalculated those based upon a minimum geometric standard deviation of three. And our values agree with the values calculated by Hans. So, you know, subject to their review, that finding should be readily closable.

DR. H. BEHLING: Okay. And I guess finding, I was really struggling with the idea of whether or not to make Finding Number 3 a finding or a recommendation. And this is obviously something that has been on my mind for a while.

And I always feel badly for the dose reconstructor when he is put into that

uncomfortable position to make a judgment call as to which to use. And you can understand where the need for consistency is really imperative in dose reconstruction.

You don't want to, as I'd always pointed out, rely on a method that's flawed for getting a dose reconstruction that identifies a PoC value that may in fact be governed by a objective decision.

And so when I look at the issue here, and I quote on Page 11 a couple of instances where NIOSH has made reference to the use of the 95th percentile. But in a very subjective manner that really puts the onus on the dose reconstructor, that I believe should not be.

MR. ARNO: I guess, in addressing Finding Number 3 we have added additional guidance in Revision 2 on how the dose reconstructor should go about, or when they should assign the 95th percentile.

DR. H. BEHLING: Okay.

MR. ARNO: The language we inserted was the language that is present in many of the other coworker studies. That language is still qualitative. And does still leave some of, most of the judgment up to the dose reconstructor, in terms of ensuring consistency and approach.

We do have to recall that it's not a single person making this judgment in a vacuum. The report is subject to a peer reviewer, and then also subject to review by a DCAS reviewer. So you have three people basically agreeing that, you know, the appropriate percentile has been assigned.

And the multiplicity of people at various levels within the dose reconstruction preparation process will also serve to increase the amount of consistency between individual dose reconstructions.

DR. H. BEHLING: Yes. One of the things that I just wanted to make aware of. When you look at coworker models that

involved external dose as opposed to internal, the use of when, you know, you read things, that a person who was potentially exposed routinely for external usually defaults to the very higher percentile value, other than the 50th. It's either the 84th or the 95th.

And I was just questioning why there would be a difference between internal and external coworker models, and the recommendation for the percentile value that should be assigned.

Because if you look at some of the other documents for external, you usually see a use of a higher percentile value for people who were routinely exposed.

MR. ARNO: There are a lot of differences between how the internal and external coworker studies are created. The external coworker studies are typically based upon a far larger number of workers, and far larger amounts of independent data

for each of those workers. Each badge cycle being an independent data point.

And that does not apply to the internal coworker studies. And that same greater amount of data for the external allows them to do additional analysis in terms of looking at job descriptions, and things of that nature, to define the guidance a little bit better about 50th, 84th and 95th.

For internal dose estimates we don't have that data to break things down as finely. So we have established the 50th percentile, and then the 95th percentile, basically skipping over the 84th.

DR. H. BEHLING: Yes.

MR. ARNO: And where, perhaps an external study might assign the 84th, internal coworker study, we jumped to assigning the 95th percentile.

DR. H. BEHLING: On the other hand, when I recall, for instance, for the

Ames Site Profile, we do segregate or stratify exposures based on whether or not you're an operator, supervisor or some other assigned task.

And so the stratification does exist that it would allow you to say, well, what is your job function? And on that basis you assign the higher values for an operator as opposed to a supervisor, as opposed to a clerical type person. And that was my point here.

I said I would like to see a less subjective need for assigning the 95th percentile value that would eliminate some of the difficulty for dose reconstructors to make a decision based upon whatever he may have available to himself.

MS. K. BEHLING: He or she.

DR. H. BEHLING: He or she, okay.

CHAIR MUNN: Well, I can't hear that at all, whoever spoke.

DR. H. BEHLING: Oh, that was my

wife correcting me.

CHAIR MUNN: Oh.

DR. H. BEHLING: Because dose reconstructors do involve --

MS. K. BEHLING: I said he or she. This is Kathy.

CHAIR MUNN: Thank you, Kathy.

MS. K. BEHLING: Referring to dose reconstructors as he.

CHAIR MUNN: Appreciate that.

DR. H. BEHLING: I'm just --

MR. SIEBERT: This is Scott Siebert.

DR. H. BEHLING: -- an old fashioned guy.

MR. SIEBERT: I want to make one slight clarification there. It's minor. But we don't use the 84th percentile to assign anything, either external or external.

That's only used for generating the GSDs in the internal dosimetry coworker

study. So I just wanted to clarify that, since we were throwing it around.

DR. NETON: Thanks for clarifying, Scott. This is Jim. I was frantically looking through the documents to see where we ever did that. Thanks.

DR. H. BEHLING: Okay. I guess that leaves us with Finding Number 4, if there's any feedback on that issue about the 25 urinary excretion data.

MS. MARION-MOSS: At this point, after talking with some of our HPs, we would like to have the opportunity to look further in that, at the data for this particular site. So we would like to carry that one over, Wanda.

CHAIR MUNN: All right. Very good. You're carried over until next time on Rev 1, Finding 4. Okay, very good. Anything else on OTIB-34?

MEMBER ZIEMER: This is Ziemer. Just for clarification, are we carrying 3

over then, as well?

CHAIR MUNN: I believe --

MEMBER ZIEMER: I mean, it sounds like NIOSH believes that they have clarified the issue. I wasn't sure. Originally, I thought that Hans' question had to do with whether a higher exposure, or whether a regular sort of what we would call a high exposure person was in the 50th or 95th percentile.

But now it seems like the judgment has to do more with whether or not, or what their job actually is. Not whether it's a continually exposed versus a higher exposed, but what job description fits them in one of those groups. But it wasn't clear to me whether we've resolved Hans' question.

MR. ARNO: Well, there's been some additional guidance added. I guess there's a need for SC&A to look at that guidance and --

MEMBER ZIEMER: So that one's

still open then.

CHAIR MUNN: Well --

MR. MARSCHKE: We can either --

CHAIR MUNN: -- I guess it's in progress.

MEMBER ZIEMER: In progress.

MR. MARSCHKE: Five, six and seven can either be left in, they should probably be changed to, all three of these, which NIOSH has responded to, five --

Well, Rev 1, Finding 1, 2 and 3, which I'm following, you know, they can, we can probably change the status of these to in progress. And basically, if that's, you know, if that's the desire of the Subcommittee.

CHAIR MUNN: Well, I think that's appropriate as long as you have an actual response. When the response is, we need more time, then that's a different thing. And it's still open. But any time we have a response that seems acceptable, then it's in

progress.

DR. H. BEHLING: Just another couple of statements here. Because one of the things that triggered my concern about this whole issue of the 50th for most people, and if there's some unusual circumstance that might cause that dose reconstructor to give it, assign the 95th, was really driven by the huge value of the geometric standard deviation.

As I stated on top of Page 12, I looked at those. And when you realize that for some of the tables the GSD values are up to 10, suggested very definitely a fairly heterogeneous population of workers.

And given that high value, GSD value of ten or greater, you would realize that perhaps you need to stratify the workers to some degree. And then make use of the 95th percentile value under those circumstances, when you realize that this person is at the very, very high end of that

spectrum.

CHAIR MUNN: Okay. I'm following Steve's work here on the screen. But fortunately he's moving rapidly enough that I'm not following very well. Thank you, Steve. It's very helpful for us to be able to get those moved forward as we do them.

MR. MARSCHKE: We just basically added a statement that NIOSH has provided a response to the findings. And the status has been changed to in progress. And SC&A has been asked to review the NIOSH response.

CHAIR MUNN: Yes, we said that.

MR. MARSCHKE: Essentially the same blurb that we have put in for 2 and 4.

CHAIR MUNN: Yes. And we have the status change. That's the --

MR. MARSCHKE: And we have the status change.

CHAIR MUNN: -- key for us. We don't want to repeat our mistakes of earlier. Anything else now on OTIB-34? If

not, then as I recall earlier today we were told that NIOSH needed more time for PER-11. Is that correct?

MS. MARION-MOSS: That's correct.

CHAIR MUNN: So we will mark that off of our agendas today. And we'll see that next time. RPRT-53 status report. Oh, this is one of those things that I'm carrying primarily to remind us that we're waiting for somebody else to do something.

Do we have any further information with respect of whether or not there's going to be, how, what Work Group is going to take 53, and how it's going to be handled?

MR. STIVER: Wanda, this is John Stiver. Joyce was working on a number. I think it was back in the July 18th meeting, we determined in that discussion that there's some big, kind of overarching meta issues, if you will --

CHAIR MUNN: Right.

MR. STIVER: -- better addressed in the SEC Work Group. And in the meeting we had in the SEC Work Group, I believe towards the end of September, both NIOSH and SC&A were tasked to look at two different aspects of RPRT-53.

We were tasked to look at the OPOS approach. And then NIOSH, I believe, was tasked to look at a lot of the comments that we had about the statistical methodologies that were used. And at this point I can tell you that our report has been sent off to DOE for review.

And so it should be back to the Work Group as soon as that's done. And any last minutes edits are made. I can't speak for NIOSH's point. Maybe Jim or Stu could weigh in on where they stand.

CHAIR MUNN: So why --

DR. NETON: Yes, this is Jim.

CHAIR MUNN: -- can't directly, the SEC Work Group is working on it?

DR. NETON: Yes. The SEC Issues Work Group has --

CHAIR MUNN: I thought I had reported that at our Board meeting. And something that was said at the time made me think that perhaps I was in error.

DR. NETON: No.

CHAIR MUNN: But it was an offhand comment.

DR. NETON: Unless something happened that I don't know about.

CHAIR MUNN: Okay. Very good.

DR. NETON: We pretty much stand where I reported, as to what I reported at the Board meeting, which is, I gave that brief summary of our review of what we call practically significant dose.

CHAIR MUNN: Right.

DR. NETON: That original analysis is done. I have a draft report in my computer. And we hope to get that out in the next week or two.

CHAIR MUNN: All right.

DR. NETON: With some recommendations of how we're going to move forward to further evaluate that.

CHAIR MUNN: Should I continue, is it your feeling that we should continue to carry this on our agenda as a heads up, this is supposed to be working somewhere else?

Or shall put it aside and anticipate that the Work Group is likely to give us a report back? Do you have any feeling about that one way or the other? If there's direction that's involved here, please do pass it along.

MR. KATZ: This is Ted. Yes, I don't see any reason to carry that on an agenda until they report back. It's not, it's definitely more than one meeting away that that's going to happen.

And you're talking more too, because we'll get reports at the full Board

meeting. We can put it back on the agenda if there's anything left for the Procedures Subcommittee to wrestle with, after the SEC Issues Work Group has finished.

CHAIR MUNN: Okay. That's very good. I'll anticipate doing that.

MR. MARSCHKE: Wanda, this is Steve again. We have eight findings on RPRT-53 in the BRS. And they're being identified as open. Now, since the SEC Work Group is actually working this document, if not these findings, I mean, do we want to change the status of these to transferred, or --

CHAIR MUNN: It appears that we should do that, so that the BRS carries the appropriate notation on it. Any other thoughts in that regard?

MEMBER ZIEMER: Well, this is Ziemer. If they're not working the site --

CHAIR MUNN: We lost you, Paul.

MEMBER ZIEMER: My mute went on.

If they're not working the findings, then I don't know why we would not keep it here, in terms of tracking.

MR. MARSCHKE: I'm not privy to what's going on in the SEC Work Group. So I don't know if they're working these exact findings, or if they're working, how they're working RPRT-53.

MEMBER ZIEMER: Well, I'm not aware that they're working findings. We're looking, we've been looking at significant, you know, significant dose and things like that. Jim, you can add to that. But I don't think that we've looked at any findings.

DR. NETON: Well, I think that these findings are sort of a subset of the arms length issue that we're looking at right now. Because a number of these findings have to do with the power of the analysis, and that sort of thing.

And that's what spawned this

practically significant dose. Because several of the findings commented that, well, you can't see very large, you know, you have to have large differences to be able to have any statistical significance. And that's true.

So, you're right that we're not exactly -- we did go over these findings. But at this point we're not exactly addressing these on an individual basis. I think we're taking a more open --

So I don't know the answer. That's sort of a wishy-washy answer. But that's where we are.

CHAIR MUNN: Well, no, it's not really wishy-washy, it's the way things are. And this raises another one of the clerical issues that we encounter when we're building something like the Board Reporting System. We keep encountering these situations that we haven't encountered before.

This is another one of those

where we cannot appropriately proceed until other groups have completed their work. But it's not a true transfer of our responsibility. So we haven't truly transferred the question of the findings. We simply must withhold those.

And at this moment, unless there's some facility involved in the BRS with which I'm not familiar, then we have a situation where we have these open items hanging out in left field. And the only real record that we have, the only written record that we have where they go is in the minutes and transcripts of this Subcommittee's work.

So that essentially this is on hold for us. I hesitate to say in abeyance, it's not. But it's on hold for us until someone else completes their work. The place that that's being kept track of is in your Chair's agenda list. And that may or may not be an adequate spot to put it.

I think that's the real question with respect to this type of group of findings. So I guess for the time being we probably, the suggestion is taken that it must be open for us, because it truly is open.

MEMBER BEACH: But you do -- Wanda, this is Josie. You do raise an interesting point. That status filter, there's really not a place there either.

CHAIR MUNN: No, there isn't. And it's one of the reasons why I carry, continue to carry this one. And things like 30, you know, there are things that I carry, and keep asking about every time, even though I don't really anticipate a report. Somebody else is doing it.

But I hesitate to completely take it off my agenda. I guess perhaps we could institute a new process of making a note at the bottom of our agenda, with respect to things that fall into this category of

activities that we have findings for, but for which other groups must complete work before we can address the findings properly.

Yes. We might try that. Let me try that next time, before we let this fall completely by the wayside. In that way we will at least touch those, so that if there's any report that needs to be gleaned from someone else, that we've failed to make contact with, it will alert us to the fact that we still have something hanging. I'll try that next time, without objection. Any objection?

MEMBER ZIEMER: No. That makes sense.

CHAIR MUNN: All right. We'll try that. And we'll move on from there. We have scheduled a break for 15 minutes. Are we amenable to that now? Or would you like to press on?

MEMBER ZIEMER: I'd just as soon press on.

CHAIR MUNN: Anyone need a break?

MEMBER BEACH: No. I'm fine with pressing on if everybody else is. This is Josie.

CHAIR MUNN: If we don't need a break, I'm not hearing from anyone else. If we don't need it then let's move on, see if we can get through this agenda and get everybody out into the cold and the wet. Status on the PERs 33, 25 and 38, and whether there are findings entered. Who has the --

MR. MARSCHKE: No, it's just basically, those three PERs were discussed at the last --

CHAIR MUNN: Yes.

MR. MARSCHKE: -- meeting.

CHAIR MUNN: We talked about them. And you were going to deal with them.

MR. MARSCHKE: And I was going to enter a finding of No Finding. And you can see on the screen now, this is what I did

for PER-25. I added this finding of No Findings. And you can see the wording that's there.

CHAIR MUNN: Acknowledged.

MR. MARSCHKE: And now, for 25 there's, basically we have made a little progress. As I mentioned first thing this morning we made some progress. I think Ron has gone through and reviewed the Subtask 4, and review audited the case, one case I guess it was.

And there was a finding that came up. And so basically that has been added in here as well as, and I think that was very recently added.

CHAIR MUNN: And I think so --

MR. MARSCHKE: Ron's already --

CHAIR MUNN: We had your reports on both 25 and 33. And, yes.

DR. BUCHANAN: And it looks like NIOSH has replied.

MR. MARSCHKE: Right. NIOSH has

replied --

CHAIR MUNN: Yes.

MR. MARSCHKE: -- already.

CHAIR MUNN: Yes.

MR. MARSCHKE: So I guess we're in agreement. We agree with NIOSH and NIOSH agrees with us. And so I guess it's, what did we recommend here?

CHAIR MUNN: The Subcommittee on that basis should direct these findings to be closed. Any discussion? Any Board Members have a problem with any of that? I trust you've had a chance to look at the reviews that were done.

MEMBER ZIEMER: Yes. I agree.

MEMBER BEACH: This is Josie. I agree also.

CHAIR MUNN: All right. Then we can make the statement that the most recent report has resolved the issues. And the Subcommittee has directed that these findings be closed.

MR. MARSCHKE: Okay. That's it for PER-25. PER-33, basically it has the same finding of No Finding, same wording.

CHAIR MUNN: Yes.

MR. MARSCHKE: And PER-38, the same thing again.

MS. K. BEHLING: Wanda, this is Kathy Behling.

CHAIR MUNN: Yes, Kathy.

MS. K. BEHLING: The one thing I believe that we still needed to resolve with the PER-38, it was discussed last time. And we did indicate that there were no findings.

But at the time I believe John Mauro was presenting on behalf of Bill Thurber. And he wasn't sure if Bill had looked at some representative cases for PER-38.

And since the last meeting Bill Thurber has indicated that he has not looked at any cases. So it may be something we want to consider for the Subtask 4 portion

of this report, in selecting maybe some cases.

CHAIR MUNN: That is something we do need to clear up.

MR. STIVER: Yes, this is John Stiver. Bill had sent an email highlighting some basic aspects of the PER-38. And he did suggest that there are 20 cases that had been worked on within the criteria of interest.

And he recommended selecting about three. And I put this in, this is kind of jumping ahead, but the PER update tables that we sent around earlier --

CHAIR MUNN: Right.

MR. STIVER: -- a couple of days ago. Table 3 has a list of all those PERs for which Subtask 4 has not been completed yet. And that's with, PER-38 is part of that grouping.

CHAIR MUNN: Since we're, since with this action I believe we are completing

33 and 25, that leaves for this item only PER-38 that hasn't been addressed, that Task 4 hasn't addressed, I believe.

I can see there appears to be no reason why we shouldn't proceed with -- you've selected three of the available findings, of cases, correct?

MR. STIVER: We haven't selected them. We just, Bill recommended that NIOSH just take three of those 20 that were, you know, basically within the PoC that was close to 50, like 45 to 50 percent.

But other than that he didn't recommend any particular criteria, other than just to randomly select a couple of cases among those 20.

CHAIR MUNN: Can the Subcommittee request that NIOSH do that?

MEMBER BEACH: Yes.

MEMBER ZIEMER: Yes.

CHAIR MUNN: All right, please select three. Josie?

MEMBER BEACH: Yes, I agree with that also.

CHAIR MUNN: All right. Please, and we'll continue to carry PER-38 as awaiting Task 3, I mean 4. Very good. Are we good with 33 and 25? I assume that we're completely closed now. I didn't check that before we left that screen. I'll have to do that later.

We'll just assume that's been done. And that 38 now carries the request to NIOSH to provide the three selections for case review for Task 4, for SC&A next time. Anything else on PER-38? Since there were no findings, there really shouldn't be.

Move on to PER-37. This is another one that falls in that category we were discussing earlier, about where shall we track it. If it is amendable to other Members of the Subcommittee, I would suggest that I incorporate that one in the same category as RPRT-53. And that it be carried

on our agenda at the bottom, as awaiting action by others, or by some other Work Group.

So far as I know, there has been no action with respect to appointment of a Work Group for Ames. That's the most recent information I have.

And if that's the case then this can't continue under our current circumstances until Ames has some attention from a Work Group, or other resolutions are made of that issue. Am I correct? Does anyone know of any other material information that might apply to PER-37's status?

DR. NETON: No, that's correct.

MEMBER ZIEMER: Yes. That's fine. I don't think anything's happened since our last meeting.

CHAIR MUNN: All right. I will continue to carry that and RPRT-53 on our list only.

MS. K. BEHLING: Wanda --

CHAIR MUNN: Now --

MS. K. BEHLING: Excuse me, Wanda, this is Kathy Behling again.

CHAIR MUNN: Yes, Kathy.

MS. K. BEHLING: Since we're talking about the Ames Work Group, I'm wondering if it's appropriate at this point in time to also discuss, Hans just recently reviewed the PPG, the Pacific Proving Grounds Site Profile. And we also have an upcoming dose reconstruction associated with that.

And in preparation for the Dose Reconstruction Subcommittee meeting we had wondered if it wouldn't be best to hopefully discuss this PPG Site Profile review, prior to discussing the dose reconstruction audit.

And I guess a question came up as to whether that should be, a review should be done under the Procedures Subcommittee, or should there be a Work Group established?

CHAIR MUNN: That's a particularly good question. And, as a matter of fact, I have a note to myself listed under the administrative detail here to bring up the question of whether or not we're going to have a PPG Work Group.

That's another one of those unanswered questions that I don't think we can do anything about in Subcommittee. But your concern is certainly well founded. I'd welcome any information from any source that would shed any light on that.

MR. HINNEFELD: Well, this is Stu. I don't have any information on that. But I think the chances of a PPG Work Group are relatively small. Because the site is an SEC for the entirety of the testing period.

So the only issues are going to be the dose reconstructions for non-presumptive cancers being done appropriately, which is the focus of the

review of the Site Profile that we got. So I would suggest that there will be little emphasis in the Board for creating a PPG Work Group, which may mean that lands here with this Subcommittee.

CHAIR MUNN: Yes, well, and I, just right off hand nothing comes to mind as an appropriate other spot for it to land.

DR. H. BEHLING: Wanda, I just want to make a comment here. Because I personally reviewed the PPG Site Profile.

CHAIR MUNN: And I can hardly hear you.

DR. H. BEHLING: And I also, I'm the person who audited the PPG Site Profile.

CHAIR MUNN: Okay.

DR. H. BEHLING: And one of the concerns I have is that there are quite a few people that, unexpectedly, I looked at the number of people who might have filed claims with skin cancers. And there are quite a few of those.

And one of the major issues that I identified with my review was that the beta dose was potentially grossly underestimated, based on what may have been assumed as the way to calculate the beta dose from gamma dose, based on NTS guidance.

Anyway, it is something that is going to involve quite a few claimants, much more than I would have thought. And so, I think it would be extremely helpful to at least have some understanding of where we stand on the issues that surround the Site Profile, before dose reconstruction audits of PPG claimants takes place.

MR. KATZ: Wanda, this is Ted. Can I make a suggestion?

CHAIR MUNN: Yes. I'd certainly appreciate one.

MR. KATZ: I mean, since, well I don't know if Hans is ready now, or it needs to be at next meeting. But if Hans is ready now, that's fine. I don't see any reason

why a discussion can't be started now with the Procedures Subcommittee.

You guys can report to the Board that we've opened up this discussion, because there is no Work Group right now. If the Board wants to establish a Work Group it can. But in the meantime I don't see any problem with getting the ball rolling.

DR. H. BEHLING: Well, Ted, there are some very, very complex issues, as Stu had mentioned. We're talking about a very long time period, and the evolution of radiation safety protocols that define 1946 through the late '50s or early '60s. There's some really complex issues.

And specifically, I'm not really in a position to address the complexity of those issues now. But I did want to mention that in spite of the SEC, there are quite a few number of claimants with skin cancers.

And one of the key issues that I identified was the beta to gamma conversion

values that are defined in the Site Profile. And are doses that reflect the NTS site, where we had conversion values of one to one under select circumstances.

In other words, defining your beta dose from a gamma exposure, a documented gamma exposure that can range from, everything from one to one, all the way to 60 to one, or even higher.

And given the fact that these skin cancers are obviously the prominent ones that may require evaluation, based on the fact that they're not included in the SEC, this is a very important issue.

MR. KATZ: That's fine. This is Ted. That's fine, Hans, if it's complex, and it's not something that's, you know, addressed now, then we can raise it.

We'll have a Board teleconference in March, which will probably precede the next Procedures Subcommittee meeting. And we can raise it there, and the Board can

decide whether it's to occur with the Procedures or with a Work Group, either way.

DR. H. BEHLING: I'm sorry. I would appreciate it we could postpone it.

MR. KATZ: Yes, yes. That's fine. And we'll raise this at the next Board teleconference. And get this settled as to what are the results.

CHAIR MUNN: And our plan will be for us to include in our report, in our standard report at the teleconference a request for instructions and direction regarding the Pacific Proving Grounds.

And how to proceed with the findings that are likely to be fallout from this, especially in view of the fact that so many of these cases will not be included in the SEC. Am I hearing that correctly?

MR. KATZ: That sounds good. I mean, I think it's fine, Wanda, for you to report and raise it there. And then the Board can decide.

CHAIR MUNN: That's what we'll do. And the question then comes to mind of whether -- Hans, do you have a document from your review that is available for the Board Members to see?

DR. H. BEHLING: Yes. My review of the PPG Site Profile was submitted, I believe -- I'd have to look. Because usually when I get finished with it, it goes through a whole series of reviews in-house.

And then also to one of our people who make sure that there's no Privacy Act issues that need to be addressed. So I'm not sure exactly when it was forwarded for a review by NIOSH. And --

CHAIR MUNN: That's all right. It was just a request on my part, not necessarily to you, but to the great world out there, whether your review is now available for others to review.

MEMBER BEACH: Wanda?

CHAIR MUNN: Yes.

MEMBER BEACH: It was actually released on October of 2013.

CHAIR MUNN: Okay.

MR. STIVER: This is John Stiver. There was also a Revision 1. And that was released the following month on November 20th.

MR. KATZ: Right. No, the only other thing I would add, that it's another nice piece of information to have, other than Wanda's report. But if this issue needs a home, it would be good to get this from NIOSH for the teleconference. Just the information as to where and at what point will they be ready to address.

Because they have the report. And they, of course, have to make priorities. And they're under sort of a constrained contract situation right now still. So we'll need some information from NIOSH as to when they're ready address this.

Because if we wanted a Work Group

there's no point in hurrying about a Work Group if NIOSH is six months away from being able to address it.

CHAIR MUNN: May I ask Stu or Jim to think about that, and let me know well in advance of our next teleconference, so that I can incorporate that? Or have one of them available to comment on that at the time I make my report. Either would be fine.

MR. HINNEFELD: Well I'm, this is Stu. And I'll speak to the Board if you want me to. But I can almost say with some certainty that it's going to be difficult to slot this in the near future.

CHAIR MUNN: I understand.

MR. HINNEFELD: It's going to be, probably going to be out a ways. I read Hans' review. I think there are a lot of things that need to be addressed. And it's going to take some effort to do that.

So it's probably going, you know, probably going to have to be a contractor

effort, rather than an in house effort. And it's going to be, it's got to be slotted into all the other things we're trying to accomplish.

CHAIR MUNN: Right. I understand.

MR. HINNEFELD: I don't think we're going to be ready in the near term in all likelihood.

CHAIR MUNN: I'll just incorporate in that in comments when we're making the report, if that's okay with you?

MR. HINNEFELD: Fine by me.

CHAIR MUNN: That's very good. Anything else with respect to PPG? If not, then -- now, OTIB-54. Do we have a response to those findings?

MS. MARION-MOSS: Yes, we do, Wanda. Is Bob Burns on the line?

MR. BURNS: Yes.

MS. MARION-MOSS: Bob is going to facilitate our responses for OTIB-54-1.

CHAIR MUNN: Very good. Thanks. It's all yours, Bob.

MR. BURNS: Okay. Are we going to go through these one at a time?

CHAIR MUNN: I think that's probably the logical thing to do.

MR. BURNS: Okay.

CHAIR MUNN: Is there anything that's open?

MR. BURNS: Okay. Well, I believe there is, I've forgotten actually. I think there's nine that are open right now.

CHAIR MUNN: Oh, when I say open I mean open in progress. You know what I mean. I mean, anything that isn't closed.

MR. BURNS: Right. The first four comments essentially, as far as I'm concerned, pretty much have the same response. Again, I don't know.

In the past when I've been on these meetings we would read through the

comment, and then read through the other response, and there would be discussion. I don't know if that's still the protocol, or --

CHAIR MUNN: That's pretty much the way we operate. We try to keep it as low key as possible. Because --

MR. BURNS: Okay.

CHAIR MUNN: -- it gets sticky.

MR. BURNS: Sticky? Is that what I heard?

CHAIR MUNN: I said, go for it.

MR. BURNS: Oh, you want me, okay, so you want me to read the comments and the responses?

CHAIR MUNN: Just, I think we can, Steve will have the comments, will have the finding on the board, right? It's up for us to read, those of us who have Live Meeting. And if you just simply refer to the finding, make sure we have the correct finding on the screen, and then give us the

response.

MR. BURNS: Okay. I'll start with, these are all pertaining to Rev 1. So it's Rev 1, Finding 1, which was a comment on the -- well, again, I won't read through the comment. But like it says, the response to the first four is essentially the same.

There's a document that's in progress that I think presents all the reactor modeling that was done, not only for OTIB-54, but also for some modeling that was done for another site, for Savannah River Site, that's the subject of another document.

So the original OTIB-54, the discussion of the ORIGEN modeling that was done, that led to the selection of the four representative reactors. That's simply going to appear in this other document. But the point being, there's been no change to that.

You're saying that original

modeling was not changed in any way in the revision. So it's simply a list and laying into this, which now is going to be a separate document.

And we didn't want to encumber OTIB-54 with a bunch of reactor modeling discussions. So it just made sense to remove that information, and put it in this other document. Again, the point is, that hasn't changed.

DR. OSTROW: Excuse me.

CHAIR MUNN: Do we have any expectations of when that document will be available?

MR. BURNS: It's in progress. We have a tentative date, which I believe is for early April.

CHAIR MUNN: Okay. So some, later this year. That will do it. Okay, thanks.

DR. OSTROW: This is Steve Ostrow. I have a question on this, Bob.

MR. BURNS: Okay.

DR. OSTROW: I've made the comment that, you know, Rev 0 of the OTIB had all the reactor modeling information, which you took out in Rev 1. Did you do anything different for Rev 1 than you did for Rev 0, you know, with your reactor modeling?

MR. BURNS: Yes and no. For the initial reactor modeling, the modeling that was done, the ORIGEN2 modeling that was done, where we took the original 11 cases.

And then based on the vision activation product inventory data from those, that led to the selection of the four representative reactors. There is no change to that modeling whatsoever.

DR. OSTROW: Okay. Then I see you also ran, this time you ran ORIGEN as also the scale model.

MR. BURNS: That's correct.

DR. OSTROW: And that would be

new, right?

MR. BURNS: That is new. And that's also, and that's what led to the original modeling being pulled out. Because that's going to be the subject of this other document. And it's going to be rather voluminous. And we just didn't want to encumber OTIB-54 with that information.

DR. OSTROW: Okay. So I understand, from looking at your responses, and from my original findings, the first four findings all have to do with reactor modeling. So basically, you're going to address this in your report that you're working on.

MR. BURNS: That's correct. It's probably, you've made one comment about the cladding selected for the trigger reactor. And I, so that will just, I'll have that, I forget what the table number was. But we'll add that to OTIB-54.

DR. OSTROW: Yes, okay. It's

either aluminum or stainless steel?

MR. BURNS: Right.

DR. OSTROW: Right.

MR. BURNS: Yes, it's stainless is the answer.

DR. OSTROW: Okay.

MR. BURNS: And we'll reflect that in the table.

DR. OSTROW: Okay. Very good.

MR. SIEBERT: This is Scott Siebert. That's Table 5-2.

MR. BURNS: Okay. Thanks, Scott. Okay. So I believe that addresses 1 through 4. Comment 5 pertains to the fission and activation project modeling addressing the fuel as a whole, as pertaining to what might appear in the clad gap, or something, or in filtration systems, or something along that line.

But as the responses, you know, my view was that, you know, limiting the radionuclides produced. In doing that you

would limit yourself to the volatiles or the semi-volatiles. And I think you would be, overall you would be understating doses if you did so.

And plus, given the nature of operations with the separations plant, it seemed to make more sense to consider the fuel as a whole.

DR. OSTROW: Okay. We have to think about this a little bit. John Mauro, are you on the line? No, apparently not. That was John's comment to this. Well, okay, we'll have to respond, look at this and respond to it separately.

MR. BURNS: Okay. All right, Finding 6 pertained to the use of the effective dose conversion factor. And getting from the intake fractions in Table D-1 to Table E-1, which is, the point of that was to reduce the number of radionuclides considered from 36 in Table D-1, down to I believe 17 in E-1, just to

reduce the calculational burden, if you will, on the dose reconstructors.

DR. OSTROW: Is it, does it actually reduce the burden significantly? I assume it's all computerized, or spreadsheet, or something that you have this on.

MR. BURNS: I think, the tool I believe, the current version of the tool I believe is more functional than it was in the past, without --

There's two issues there. One is validating. If you have, you know, the process of validating that tool, doing the hand calculations that are required to do so, that is highly cumbersome.

So it's beneficial from that standpoint to have, to reduce the number of nuclides. But also just the calculations and everything the tool does is computationally intensive, to the point where it's really resource loading.

So if we went with 36 nuclides, for instance, you know, we might end up having to have, you know, 64 bit operating systems, and 32 gig of RAM to run the tool. So there's value in reducing the number of nuclides.

DR. OSTROW: Okay.

MR. BURNS: And there's, you know, continuing that point, the reason the effective dose was used was that was a comment we received from, I guess from the Subcommittee, on the original version of OTIB-54.

DR. OSTROW: Okay. We'll have to look at that, and comment on that later.

MR. BURNS: Okay. And then Finding 7 I guess is really continuing on the same themes.

DR. OSTROW: Yes, I saw you reduced the number of nuclides from 36 to 17.

MR. BURNS: Right. Moving on to

Finding 8. I guess there's two issues there. One pertaining to the radioiodines. And then the other pertaining to just the radiochemistry in general and chemical recovery.

There might have been some misunderstanding what the OTIB said about the radioiodines that we -- The reason we, you know, we assumed the radioiodines were not reflected in the excretion results as a claimant favorable assumption is because of the short decay times.

If you include the iodines, and because everything is normalized, what you end up doing is squeezing out the, you really reduce the strontium 90 and the cesium 137, the indicator of radionuclides. So by including the iodines it certainly, or by excluding iodines it's claimant favorable to do that.

DR. OSTROW: Okay. We'll have to look at this and get back to you also.

MR. BURNS: Okay. Finding 9 pertains to the tool. Just, I believe the comment was that the tool needed to be revised. And that has been done. That was put into use in November of 2013.

DR. OSTROW: All right, that's good. I assume that since we took at look at the tools for, that you had before. We commented it wasn't the up to date version. We should, well, we note that you updated it now.

But we should also take a look at the tool to check it out. We're running a sample problem just to check it out. So I think we'll re-run it to make sure that it's functioning okay.

CHAIR MUNN: So that means I'll expect a response from you next time, right?

DR. OSTROW: Right.

CHAIR MUNN: Good.

MR. MARSCHKE: Well, does that mean --

DR. OSTROW: There's a couple of issues here that SC&A has to look at. So I think what we'll do is like, you know, after this meeting, the next couple of days we'll take a look at some of them and, you know, write you a memo, or something, of what we think about it.

MR. MARSCHKE: Steve, this is Steve Marschke. Do we have the tool we need, or do we need NIOSH to give us a copy of the tool?

DR. OSTROW: I'm not sure how we got it last time. I think we found it, just used it on line last time. I think NIOSH gave it to us.

MR. MARSCHKE: Okay.

DR. OSTROW: Well, we'll look for it. If we can't find it, we'll ask NIOSH, you know, how to access it.

CHAIR MUNN: The revised one, yes.

MR. BURNS: Okay. And then

Finding 10 pertains to this question that's come up in the past about the, I guess the representatives, if you will, of the fine radionuclide mixtures, with respect to specific workplace scenarios.

So our response to that is, you know, what it's always been, you know. We never intended OTIB-54 to be, you know, this precise list. Rather, it was just, you know, the intent was to cast a wide net, and assign doses that we believe to be, believe to always be favorable to the claimant.

DR. OSTROW: I agree. Generally we, SC&A agrees that the methodology you're using ends up with claimant favorable results. But, and I know we've discussed this in other forums related to other documents and methods.

And this is the whole business about how realistic are these doses? I mean, it's sort of easy to make the doses such that they're guaranteed to be claimant

favorable. But then they're not, you know, representative or reasonable anymore.

So I'm not sure where this particular OTIB falls in, whether the doses are still reasonable. That's where we thought there should be a little more discussion on it. You know, on how reasonable the end results are.

CHAIR MUNN: So, Steve, I'm gathering that you'll need to respond to this --

DR. OSTROW: Yes.

CHAIR MUNN: -- with the --

DR. OSTROW: There's two items we have to respond to, Wanda.

CHAIR MUNN: Right. Okay. My current list says Findings 1, 5, 6, 7, 8, 9 and 10 you are going to --

DR. OSTROW: Well, the first four items, 1 through 4, where I guess it's in abeyance, we're waiting for NIOSH to come out with their report on reactor modeling.

CHAIR MUNN: Right.

DR. OSTROW: Whenever they come out. And the other ones, we'll respond to, you know, NIOSH's recent postings on the BRS.

CHAIR MUNN: All right.

MR. MARSCHKE: I think, yes, basically, I don't think that 1 through 4 should be in abeyance.

DR. OSTROW: Well, whatever you want --

MR. MARSCHKE: It all should be, 1 through 10, all ten of the new ones here should be changed. That's why I was going to get this to talk to Wanda about.

These are, and my recommendation to the Board, I guess, would be to change all these statuses from open to in progress, just like we did on the other, I don't know what it was, the other OTIB.

And because, you know, basically NIOSH has given us a response. And we are

basically at this point tasked to review that response, and see whether or not we can make a recommendation to close any of these, or to, or what the next step should be.

CHAIR MUNN: You're correct, Steve.

MR. MARSCHKE: And then there are, like Bob started talking about. There are also nine findings currently listed. For example here, Finding Number 26 from the old Revision 0. They're currently being carried in the BRS as being in progress.

Steve Ostrow sent a memo around back, I think it was back in November. It was after the last meeting, you know, making a recommendation that because Rev 1 has been issued, all these nine Rev 0 findings are now moot. And we recommend that they should be closed.

And if you see on the screen there now, we've entered that recommendation from Steve into actually each one of these

findings. So, I mean, it's up to the Subcommittee if they want to instruct us to close those nine findings.

DR. OSTROW: This is Steve Ostrow. I would strongly recommend that the Subcommittee close the 26 findings.

MEMBER ZIEMER: Well we, this is Ziemer. You need to make sure that if we close them that the implication is not they've been resolved necessarily.

If we're closing them just because they're going to be covered in the revision, then it seems to me we handle it somewhat differently. But the issue of closing implies that the issue's been resolved, in my mind.

MR. MARSCHKE: Well the statement there, Paul, says that since the finding has been rendered moot by the issuance of Rev 1, that's why we're basically closing it. Now, I don't know --

MEMBER ZIEMER: Well, I'm asking

whether it's really moot in every case. I don't know that it is or isn't. But moot means that the finding sort of has gone away. Has it really gone away? Or does it reappear? That's what I'm really asking.

DR. OSTROW: Well, Rev 0 of the OTIB doesn't apply anymore. It's been superseded by Rev 1.

MEMBER ZIEMER: Yes. I hear that. But is Rev 1, if that pattern's the same issue on any of these, then that issue has not really been closed. So that's what I'm kind of asking. I don't --

Have you gone through them and determined that they are actually moot? That they simply have gone away? Or do they still exist in the next revision in some form?

DR. OSTROW: We're certain that they've all gone away. Because we did a clean review of Rev 1. We started out fresh on it. And these ten findings we came to

are the ten finding on Rev 1. And those are the findings.

MEMBER ZIEMER: And none of them are the same as Rev 0? That's what I'm asking. Because I don't know the answer to that. I haven't laid them side by side.

DR. OSTROW: Yes. I think the --

MEMBER ZIEMER: Do you see what my point is? In other words --

DR. OSTROW: Yes.

MEMBER ZIEMER: -- if it's a finding it says to be closed, and then it shows up again, then --

CHAIR MUNN: Yes, you certainly have a point, Paul. However, we do have a category that these probably fall into. We've not done a wholesale closure of this kind before that I can remember. So this hasn't come up in quite the same form.

But recall, we do have a category that is covered in some other finding. And in cases where we have a revision which, as

Steve Ostrow has pointed out, actually has a tendency to make moot the preceding problems that were a problem with the original document.

Then it would appear that the appropriate place for dispensing with that particular original Rev 0 finding would be in the, covered by other finding notation. Would it not be? It appears logical to me.

MR. MARSCHKE: I guess the question to ask Steve Ostrow then is, are any of the new findings a repeat of any of the current, the old Revision 0 findings?

MEMBER ZIEMER: That's sort of what I was asking.

DR. OSTROW: I don't believe so. But it actually, since you actually asked the question I would have to look through them.

MR. MARSCHKE: Because that might change the status, the way we close the status. I would change.

DR. OSTROW: We didn't deliberately carry any over. And I don't think we have any duplications. But I'd have to check, you know, in detail just to make sure.

CHAIR MUNN: Since the object of our efforts here is to assure that any person who has a claim that would have been changed by a new revision has not been overlooked, then essentially Rev 0s do become of little consequence in the resolution process.

If, any claim that was processed under that revision is going to be re-processed under the new revision, in any case. So the fact that we had a problem with the original revision would not necessarily be something that we need to run down to ground, for the purposes of why we're looking at these to begin with. If my concept of where we're going with this is accurate.

So the question that's posed here is, are we okay in closing all of the Rev 0 findings, by reason of the fact that subsequent revisions would either incorporate the problem that was addressed? Or are not reasonable because the claim would be re-processed under something other than Rev 0 in any case? So now we have --

MEMBER ZIEMER: This is Ziemer. I guess I go along with both of them in that action, as long as the narration in the closing statement indicated that they were closed in deference, or something to that sort.

CHAIR MUNN: Perhaps if our primary question is one of language here, may I suggest that I can work with Steve Marschke and Steve Ostrow on wording to send around to Board Members, to see if that wording is satisfactory, and covers the waterfront for you.

And with the expectation that if

the wording, once the wording is appropriate we can consider closing these. We can keep that open until next time.

MEMBER ZIEMER: That's fine with me. I don't think I need to see the wording, as long as you guys agree to it.

CHAIR MUNN: Josie?

MEMBER BEACH: I agree with Paul on that one.

CHAIR MUNN: All right.

DR. OSTROW: Wanda? Steve Ostrow. So how about if Steve Marschke and I come up with some wording, then send it to you in an email?

CHAIR MUNN: That would be just fine, Steve. That would be fine.

DR. OSTROW: Great.

CHAIR MUNN: All right. I'll look forward to that.

DR. OSTROW: Okay.

CHAIR MUNN: Any other questions, with respect to --

MEMBER BEACH: Oh, Wanda, this is Josie. The suggested language in the email that was sent out by Steve referenced that Rev 1 would substantially change the methodology and the generation by SC&A. So I think maybe it's the moot that is the issue. That in Rev 0, Rev 1 says they're all moot now.

CHAIR MUNN: Well, yes. And they actually are moot, except for the fact that what this statement does not incorporate is the fact that any -- it refers to the findings here. The current words --

MEMBER BEACH: Right.

CHAIR MUNN: -- refer to the findings, rather than to the end result, which the end result we need to incorporate here is that any claim which would have been affected by Rev 0 would, in any case, be --

DR. OSTROW: Reworked.

CHAIR MUNN: -- reworked.

MEMBER BEACH: Okay. I

understand. Thank you.

CHAIR MUNN: Yes, that's the whole point in the new words.

MEMBER ZIEMER: Let me add a few more words to this, and I'll be satisfied with that.

CHAIR MUNN: Yes. That's the real point here is to make sure that any reader is very clear on the fact that it doesn't matter whether this finding was fully closed in terms of everybody agrees on it. Because it's not going to be used. Okay? Good. Then I'll expect to see an email --

DR. OSTROW: Yes.

CHAIR MUNN: -- from Steve and Steve.

DR. OSTROW: Right.

CHAIR MUNN: Anything else? Any other comments with respect to OTIB-54?

MR. MARSCHKE: So you want me -- Wanda, this is Steve Marschke again. I will

go through and close these ten, or not close them, I mean, change these ten to in progress?

CHAIR MUNN: Correct.

MR. MARSCHKE: Okay. I can, I don't know, I can start that now?

CHAIR MUNN: I think so. I believe that we're not going to be beating up on you much in the next few minutes. I think we're going to talk about the PER status. But stop us if we get ahead of you.

MR. MARSCHKE: Okay.

CHAIR MUNN: And we'll go from there. If there is nothing further with OTIB-54 for this meeting, then let's move on to the next item on the agenda, which is upcoming PER status.

And I'm assuming that all of you have received John Stiver's new listing of where we are with each of the PERs. Does everyone have that in hand? Or have it available to you? Who needs it?

MEMBER BEACH: Yes, Wanda.

CHAIR MUNN: Good. Are you okay, Paul?

MEMBER ZIEMER: Well, I'm looking at John's email here. Let's see, attachment? Or wait --

CHAIR MUNN: Yes, it was an attachment with him.

MR. MARSCHKE: Paul, do you have --

CHAIR MUNN: His updated table.

MR. MARSCHKE: -- Live Meeting? I've got it pulled up here.

MEMBER ZIEMER: I'm looking at the wrong one. Hang on.

CHAIR MUNN: Okay. Very good.

MEMBER ZIEMER: I'm looking at an older John Stiver email.

CHAIR MUNN: And I need to comment that we've received a query with regard to the status of PER-24, General Steel Industries.

MEMBER ZIEMER: I'm not sure I got John's, what was the date on that one?

CHAIR MUNN: Fairly recent. This last week, I believe. John, do you have the date that was sent?

MR. STIVER: Hang on just a second. I can just re-send it here.

MEMBER ZIEMER: Well, I may not have put it in my Procedures review. Maybe it's still in my inbox. Let me look in my in box.

MR. STIVER: Okay.

MEMBER ZIEMER: What was, if you can tell me the date I can pick it up real quick.

MR. STIVER: I'm trying to remember. It's just I've sent so many emails out.

CHAIR MUNN: I think Ted may have forwarded it.

MEMBER ZIEMER: So I should look for Ted's name?

CHAIR MUNN: I think he may have forwarded it.

MR. KATZ: I'm looking. But it was more recent than a week ago. It was, I'm looking for it.

CHAIR MUNN: Did I say last week? I meant this week. Because it was just a few days ago.

MR. KATZ: Right. Oh, yes, in fact, it was yesterday. That's recent enough.

CHAIR MUNN: Oh, I've got February 11th here on my -- Okay.

MR. KATZ: Okay. Well, I wanted to --

MEMBER ZIEMER: Oh, I think I've got it here. Here it is. No, that's not it. That's the agenda you sent out yesterday. Hang on. Oh, here it is, PER, I got it, PERs not assigned. Is that the one? Yes.

CHAIR MUNN: Yes, that's it.

MR. MARSCHKE: That's the one.

MR. STIVER: So I'll give you a minute to pull up everything.

CHAIR MUNN: And then to repeat, I had an inquiry about the PER-24, General Steel Industries. And I responded to that, indicating that --

MEMBER ZIEMER: Yes, I saw that one.

CHAIR MUNN: -- it was deferred.

MR. STIVER: Okay.

CHAIR MUNN: Because it might be coming up again. But couldn't identify a date at this time.

MR. STIVER: Okay. Yes, this Table 1 is really, hasn't changed since the November 7th meeting. So it's just there for completeness. Just to refresh everybody's memory as to why all these PERs were not assigned in the column entitled notes, there's a little blurb about each one of those, and the reasons for not being

assigned. On Table 2, if you go on Page 3, there's seven PERs that have not yet been considered for review.

And if you recall, at the last meeting we had some discussion about how best to approach this. And I believe the consensus was the best thing for us to do would be to do these little pre-reviews up front. Take a look at all of them.

You know, some you'd be able to tell that they don't need a review at all. Others might just need a really short review. And others may need a more in depth review. But because of the contractual timing, because we're coming to the end of the contract, we will, we're tasked to go ahead and do that.

And so, all I can say at this point is we're still not quite -- we have the second extension. So there should be an answer on the upcoming contract within the next couple of weeks, I would think.

But at that point if we're successful in winning, we can go ahead and begin doing these pre-reviews, if that would be acceptable to the Subcommittee.

CHAIR MUNN: So we have suggested Baker-Perkins, Occupational Medical X-ray Procedures.

MR. STIVER: Yes, 42 --

CHAIR MUNN: Linde --

MR. STIVER: Reinforcing.

CHAIR MUNN: Internal --

MR. STIVER: In 46 and 47.

MEMBER ZIEMER: John, this is Ziemer. Can you remind us what, kind of the composition of the pre-review, and the time and effort involved?

MR. STIVER: A pre-review is just, basically we take a look and just kind of get an idea of whether it needs a full review or not.

MEMBER ZIEMER: Yes, I understand that. I just was trying to get a feel for

what it takes. So are we talking about, you know, like an hour review, a ten hour review, a week review? What does this involve?

MR. STIVER: The past experience is that these things don't take more than about a day's worth of effort. Some won't take more than about 20 minutes. If you can take a look at it you can see right away that, you know, this thing doesn't need to be reviewed.

MEMBER ZIEMER: Got you.

MR. STIVER: Rather than try to do that in the Subcommittee, which was kind of awkward in the past when we tried to do that. We thought that we could just go ahead and do these pre-reviews with a minimal amount of effort.

And then bring this back to the next meeting. Or even do it through emails, and say, look here's the results of our pre-review. This is what we, these are our

recommendations for further action.

CHAIR MUNN: You didn't provide us with recommendations for the MatLab. I'm assuming that there's a reason for that.

MR. STIVER: That actually should be in there. It should be recommended for pre-review. That just didn't make it in for whatever reason.

CHAIR MUNN: Oh, okay.

MR. STIVER: Yes, that I just forgot.

CHAIR MUNN: I'll just make that note, Page 5. Okay.

MR. KATZ: So, this is Ted. There are sort of two elements to what we do before -- because really these, I mean, we have tasked PERs at the Subcommittee level at the request of the Board.

But they're really, they're procedures. And the Board does the tasking of these normally. Though there's two elements that I think need consideration.

One, of SC&A looking at these and seeing, you know, whether they make sense. And the other side of it is NIOSH.

Because we've had this experience with several of these, where NIOSH realized for one reason or another, there was not much point in the review at this time for an element.

So we also, I think, need NIOSH input where they may have input, not necessarily that they will. But about the appropriateness of a particular PER for review at this point.

MR. HINNEFELD: Well that's --

MR. STIVER: It sounds, that's a good idea.

MR. HINNEFELD: -- this is Stu. Since you gave me an opening I will say that Baker-Perkins had a five day covered period, and we've had a total of nine claims on it.

MR. STIVER: So that would probably not warrant much more than a

paragraph or so, off the cuff.

MR. KATZ: So anyway, Wanda, if it's, you know, if it's fine with the Subcommittee, I think it's fine for them to put this on their plate to scan these things, and sort out whether there's a need for review, or whether these are strong candidates.

I mean, I think what they've done in the past is actually not just that, but sort of prioritized them, for whatever reasons are relevant to the particulars, as to which are the most important to review. I think that's nice preparatory work for the Board then to decide which PERs it wants to task, if that's okay with the Subcommittee.

MR. STIVER: But, Ted, would it be amendable to you and to the other Subcommittee Members if we kind of do this with the NIOSH back and forth off line?

Kind of say, here's our preliminary list, and send it to Stu? And

then he can kind of comment on it. And then we could bring that up for the Board teleconference.

MR. KATZ: Yes, I think that's perfectly appropriate, yes.

MR. STIVER: Okay.

CHAIR MUNN: It would be helpful I think for the Subcommittee to provide any comments that we might have at this time. My personal reading of this leads me to recommend that we drop PER 39, and that we drop PER 48 from the recommendation for pre-review. Primarily because of the final comment in the description column of each of those.

But that would leave PER 41, 42, 43, 44, and 45 that would be agreeable for pre-review by SC&A and NIOSH for potential inclusion. Any other comments from the Subcommittee?

MEMBER BEACH: Wanda, I agree with that, dropping those two, and then

going from 41 to 45. Good path forward, or 48, excuse me.

CHAIR MUNN: Okay. Any comment, Paul?

MEMBER ZIEMER: Yes. I think I heard what you said, just exactly go ahead with that, sounds fine to me.

CHAIR MUNN: All right. So we'll anticipate then that those, let's see, one, two, three, four, five, that the five that were recommended here be pursued by both the agency and the contractor as potential PERs for further discussion. Is that amenable with all?

MEMBER ZIEMER: Yes.

CHAIR MUNN: Hearing no negative comments, that's fine. John?

MR. STIVER: Okay. We will take our marching orders.

MR. KATZ: Thanks, John. And, John, if you would just then, once that's finished and you've had your back and forth

with NIOSH on them too, if there is any back and forth to be had, needed, if NIOSH has a comment.

But if you'd just put that together in a memo then, and send that back to the Subcommittee Members, they can look at that in advance of the Board teleconference. And then they'll be informed enough to, you know, speak with the rest of the Board about this.

MR. STIVER: Okay. We'll go ahead and do that.

MR. KATZ: Thanks.

CHAIR MUNN: Very helpful. Any -

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MR. MARSCHKE: There's one other thing, is Table 3. And this is, we referred to this earlier with regard to PER-38. It would be a subtask for a case review. And you can see there's several PERs here, 1, 2, 3, 4, 7, 8, 18, 29, 30 and 38 for which -

I mean, Subtask 4 hasn't been

completed, and in most cases hasn't been begun, except for 38, which we talked about a little earlier. Also, I would note that PER-29 has been transferred out. And a note there to the Hanford Workgroup.

So I know Hans and Kathy were heading up, did the heavy lifting in all these early PERs. And one that we talked about a little bit last time was PER-18. And so I'd asked Kathy if they had time, if her and Hans could put together --

She did indicate that they had some fairly detailed criteria for PER-18. I thought if you are ready to talk about that, maybe we can talk about it now.

CHAIR MUNN: That would be fine.

MS. K. BEHLING: Actually, I have to dig that out. In the initial review of the -- That's the Los Alamos National Lab's PER review under our Section 5. But it was Subtask 4. We had some very specific criteria with regard to selecting cases.

And I think there were five major changes to the external dose portion of that TBD that we were saying, if we could select one case from each of those five areas, that might be appropriate for the case selection. And I, to be honest I have to --

MS. MARION-MOSS: Kathy, I can't hear you.

MS. K. BEHLING: Okay, I'm sorry. Is that better?

CHAIR MUNN: Much.

MR. MARSCHKE: Much better.

MS. K. BEHLING: Okay. But what I was saying is, we put some very clear criteria in the review of the Los Alamos National Lab TBD review, PER-18 review. And we were suggesting selecting five cases, one associated with each of the major revisions to, I believe it was the external portion of the dose.

My desk is a mess. And I can't come up with all of the criteria. But I can

send that out to you. And it is part of the initial PER-18 review. It's under Section 5, Subtask 4 work. I know it's here somewhere. And I apologize. But it is, oh here we go.

Yes, we're just suggesting that maybe selecting one case, or five revisions associated with the TKBS-0010-6, which is their external. One would be a claim involving a target organ, such as a skin cancer or breast cancer. And that the individual associated maybe with the PA-53 area.

And then maybe four individual claims involving workers not monitored for neutrons, but whose employment records show work assignments in one of the following areas, which would be plutonium facility associated with plutonium 238, plutonium facility associated with Pu-239, criticality experiments, and other operations associated with neutron exposures. So that's what we

had laid out in our review of PER-18, under Subtask 4.

CHAIR MUNN: Kathy, you faded off there again. And I think what I heard was you're looking for one case that involves target organs, four cases covering workers not monitored for neutrons, and what did you say after that?

DR. H. BEHLING: Yes, this is Hans. One case involving plutonium facilities associated with Pu-239. Another one with plutonium facilities associated with plutonium 238. A third one with a person who may have been part of the criticality experiments.

And the last one, other operations associated with neutron exposures. And there were others. Those are the four criteria, in addition to the one involving target organs such as skin or breast cancer.

CHAIR MUNN: Okay. For a total

of --

DR. H. BEHLING: A total of five.

CHAIR MUNN: -- a total of five.

DR. H. BEHLING: A total of five. Those are basically the, we had discussed this with Ted before. He would like always to have certain permutations that are driven by the PER. And we will agree that one of each of the five.

CHAIR MUNN: That's all given the wide scope of the various site facilities that we have to deal with then. And those five appear reasonable.

MS. K. BEHLING: And we could put a memo together, or send something out if you and NIOSH would like us to do that.

MR. HINNEFELD: Kathy --

CHAIR MUNN: That would be --

MR. HINNEFELD: This is Stu. Kathy, you said the criteria are in the PER-18 review that you've already given us, right?

DR. H. BEHLING: Yes.

MS. K. BEHLING: Correct.

DR. H. BEHLING: And that was issued in October 20th, 2010. And it's in Section 5. And Section 5 is entitled "Subtask for Selection Criteria for Sample Set of Dose Reconstruction".

MR. HINNEFELD: Okay. We'll use that criteria. And if we have trouble we'll get back to you. But it sounds like we should be able to figure out that. This might be a little bit of a difficult search on our part. But we can search and see what we can, and look for claims that fit that criteria.

MS. K. BEHLING: Okay. Very good. Thank you.

CHAIR MUNN: Anything else with respect to selections that need to be made?

MEMBER BEACH: Wanda, this is Josie. Kathy suggested putting a memo together with that. And I think that would

be a good idea.

MR. KATZ: Josie, the memo was just to lay out just what Stu was mentioning --

MEMBER BEACH: Oh, okay.

MR. KATZ: It was part of the report.

MEMBER BEACH: Okay. That's fine.

MR. KATZ: Yes.

MR. STIVER: Would it be helpful, this is Stiver. Would it be helpful to the Subcommittee if we were to expand this Table 3, and maybe provide a column that has the criteria?

I know some of these are old, and have been kind of in kind of a holding pattern for quite some time. To the point where I think a lot of us have kind of lost the institutional knowledge.

So it may be worth our time and trouble to kind of go back and take a second

look at these and see which are currently relevant. And it might actually warrant some Subtask 4 cases.

CHAIR MUNN: John, given the effort that goes into establishing those criteria for the various sites to begin with, that seems to be an excellent suggestion.

It would be very helpful for most of us, I think, if you did have an additional column identifying when we have identified specific criteria that have been established. It's nice to be able to see those as well. That would truly round out --

MR. MARSCHKE: Yes, actually --

CHAIR MUNN: -- that table.

MR. STIVER: Okay. We'll go ahead and take that as an action item.

CHAIR MUNN: Thank you so much.

MR. STIVER: Okay. That's all I had to say about the PERs, unless anybody

else has some comments they'd like to suggest.

MR. HINNEFELD: Well, this is Stu. And I just want to be clear. So now, going out of here today what we will do is to try to select cases for review for PER-18, Task 4, right?

CHAIR MUNN: Yes.

MR. STIVER: Correct.

MR. HINNEFELD: That's the one assignment we got from this part of the discussion?

CHAIR MUNN: Well, except of course that the, except for the back and forth that's going to go on with not yet considered for review PERs.

MR. HINNEFELD: Oh, yes, okay. Right, right.

CHAIR MUNN: But from the Table 3 discussion, yes.

MR. HINNEFELD: Yes, from the Table 3 discussion, that's our one

assignment.

MR. STIVER: Yes. Well, there was a PER-38 also, from earlier.

MR. HINNEFELD: So we also want to do a selection of PER-38? Okay.

MS. K. BEHLING: Yes. I jumped --

MR. STIVER: Right.

MS. K. BEHLING: I jumped the gun on that one. I apologize. Because we discussed that when we were talking about findings associated with PER-38. So yes, we did decide that there would be three cases selected under PER-38 also.

CHAIR MUNN: Yes, we discussed that earlier in the -- select three was what we had said earlier in our discussions, before we got to this table.

MR. HINNEFELD: Okay.

CHAIR MUNN: Any other comments? Any other material that needs to be addressed, that we have not yet covered?

MR. MARSCHKE: Wanda?

CHAIR MUNN: Yes.

MR. MARSCHKE: This is Steve Marschke.

CHAIR MUNN: Yes, sir.

MR. MARSCHKE: At the last meeting we had, towards the end of the last meeting we had, Ted kind of brought up a concern about in the Procedures world, some of these reviews have opened findings. And they've had open findings for quite some time.

And we was looking to see whether or not there was any way we could prioritize or figure out, you know, prioritize I guess the resolution of some of these findings.

So, I mean, what I've got, I guess, I hope it's on the screen in the Live Meeting, is basically the BRS. And they're sorted by the number of, total number of active findings.

And you can see basically that

the ones which have the most, and the first page obviously has the most, has the ones that had the most active findings. Some of them have, like the Hanford TBD -- Oh, that's the PER, I'm sorry, it's a PER.

There's a OTIB-58, which is the external, Rocky Flats external dose coworker dosimetry OTIB. And it has ten findings, and they're all open. I don't know if we want to, somehow if we can prioritize, use this method to prioritize, and start looking at some of these.

And I think the OTIB-58 review was done in the third set, which was I think in 2007. So, you know, it's been around for quite some time without anything active on it.

Again, you go down to OTIB-39, there's another Hanford one, which looks like it's never been touched. Because it has eight total findings and eight open, eight active findings.

So, you know, again, and then there are a bunch of PROCs on the outreach program. And then the CATI process, which again, I don't know if those are still valid or not.

So, there may be some, you know, to kind of like address what Ted was talking about at the last meeting. You may be able to use this to somehow prioritize some of these OTIBs, just to try and work off the backload, I guess.

CHAIR MUNN: It's the intent to do that, actually. However, I'm not at all sure that what we're looking at is one of the things that's of major concern.

And the reason I say that is because, for example, OTIB-58, I know there's been a great deal of work done there. And I'd be very surprised if all ten of those findings were actually open. It's just, I would imagine that most of them are probably in progress. But --

MEMBER ZIEMER: Wanda, this is Ziemer. And I notice TBD-6000 is on here. And I don't know if that's, it looks like it's Appendix BB but those are all closed now, too.

CHAIR MUNN: Right. So I guess what I'm saying here is that the filter is looking at something other than what I think we need to look at. You're absolutely correct, Steve. This is the method that would be most efficient to approach the issue.

And it is the intent of the Chair to sort these in terms of how many have been, how many are open, in such a way that they have not been addressed at all. And how many are open and in progress. In progress is an entirely different thing, which, you know, we're working on those assiduously.

And those certainly, those two categories certainly need to be prioritized.

Something I think we really need to do. And thank you for calling it to our attention. We've not had an opportunity, I think, to have enough time in our one day meetings of Procedures to address those kinds of issues.

I think it's been primarily a time issue more than anything else for most of us. But certainly as an action item that is impending. Especially given the amount of closures that we're seeing coming off of our current agenda.

One would anticipate that this is precisely what we need to do. If not for our next meeting, then certainly for the one thereafter. Any other thoughts with respect to what Steve has brought to our attention again?

MEMBER ZIEMER: Well, how do we close these for other Work Groups that worked on that, like the TBD-6000? Do we just report back to you the status, and then close them, or what?

CHAIR MUNN: We should be bringing them up on our agenda here. And they should be, they should have been closed then by the action of the Work Group, Paul. And what we need to do is to put them on our schedule for the next agenda, so that they can be closed appropriately.

MR. MARSCHKE: Yes. Right now for the TBD-6000, they're being carried as being transferred.

CHAIR MUNN: Yes.

MR. MARSCHKE: Not actually as open. And obviously not as closed, but as being transferred.

CHAIR MUNN: Yes. And --

MR. MARSCHKE: So if Paul's Work Group has really closed these, then we should, you know, get some documentation and close them ourselves.

CHAIR MUNN: Yes. That's exactly what we need to do. And they need to be transferred back to us now that

they're closed. We need to be informed that each one of them has been closed.

So that's essentially all we'll need to do. I'll have it on next month's agenda. And if there's anything else, please speak now.

MR. MARSCHKE: If you want, Wanda, I can take an opportunity to look at this, and kind of expand this table more into the active. And look and see what, when they say active, what do they actually mean, open, in progress, or transferred, or something like that. More along the lines of the traditional, what we call the Summary Table here, or the traditional, what we call the Wanda Table.

CHAIR MUNN: Yes.

MR. MARSCHKE: But the trouble, the only problem, we'd have to expand like the third group. And the first group and the second group, we don't really have them broken down by individual documents.

CHAIR MUNN: Right.

MR. MARSCHKE: I can --

CHAIR MUNN: But the first three, my guess is that the first three columns are what one needs to focus on as being those that are still open. Anything that's in Columns 4, 5 or 6 are all, so far as we're concerned, closed. That is, we're not actively following them.

The transferred ones, of course, wouldn't be closed, because we don't have the final feedback from the Work Group. Just the sort of thing Paul was talking about with respect to TBD-6000. As those come back to us, they'll be closed, probably en masse. They won't be there at all.

MR. KATZ: Right. So, this is Ted. So, for example, Paul, with TBD-6000, some are closed, but many of them are in abeyance. And it seems to me that the right way to do this is just wait until they're actually fully all closed.

And then that Work Group could just report back in full that these are all closed. And you can, and Steve can reflect that in the BRS at that point.

CHAIR MUNN: We believe that that was our original thinking.

MR. KATZ: Yes.

CHAIR MUNN: When the Work Group had completed its work, then they'd let us know.

MR. KATZ: Okay.

CHAIR MUNN: Very good. With that in mind, we know what we'll be seeing on the agenda next time regarding some of these open items, and how we might address them to move them forward.

Our next meeting we will need an estimation, at least six weeks. That would put us into April the 2nd, which sounds like a pretty good time. That's still three weeks away from the Augusta meeting.

MR. HINNEFELD: I am on vacation

that week. And Jim is on travel that week.

CHAIR MUNN: Okay. Is the 9th then getting too close? The 9th is still --

MEMBER BEACH: Wanda, how's the 10th look? I'm tied up on the 9th.

CHAIR MUNN: The 10th is fine for this calendar. How's the 10th look for everybody else? Anyone who can't make April 10th?

MR. KATZ: Yes. Can I ask separately, how is that time frame for getting a reasonable amount of work done too?

CHAIR MUNN: Well, we've said in the past, we need at least six weeks. That gives us seven. So unless we're changing our concept of what we need --

MR. KATZ: I mean, we've gone much more than six weeks many times. But, I mean, again, I mean, NIOSH is operating in a constrained world right now. And to some extent so is SC&A. So I'm just asking the

question whether that's long enough or not?

CHAIR MUNN: I'm not hearing any negatives.

MR. KATZ: Okay.

MR. HINNEFELD: Yes, it's a little hard to judge, Ted, you know. You can try, we'll try to do some stuff in six weeks. But it's a little hard to judge on the phone what that means to our contractor, and what they can get done in six weeks.

And the fact of the matter is, you know, these meetings could be shorter. We're not traveling across the country. So there's no requirement to be meeting six or seven hours at a time.

MR. KATZ: That's true. That's true. So, on that note, I think that's fine then.

CHAIR MUNN: 11 o'clock, April 10th?

MR. HINNEFELD: Yes. Well, you know, the 10th isn't great for Jim and me.

But --

MR. KATZ: Are you just getting back then?

MR. HINNEFELD: Well, I mean, it's our first week back.

MR. KATZ: So, let's just make it the 17th. What about the week later?

CHAIR MUNN: That's putting them pretty close to Augusta.

MR. HINNEFELD: Yes, but -- Did you say the 16th? I'm trying to --

MR. KATZ: Well, we'll just --

MEMBER ZIEMER: That's fine with me.

MR. KATZ: The 16th is fine, the Wednesday.

MEMBER ZIEMER: Fine with me, Ziemer.

MEMBER BEACH: That's fine with me too. Josie.

CHAIR MUNN: 11:00 a.m. eastern time, April 16th. Anything else for the

good of the order? If not, thank you all. Try to stay warm. And don't slip down, whatever you do. We'll look forward to talking with you, probably before then, but certainly by April 16th. Have a nice evening, everyone.

MEMBER ZIEMER: Thank you.

CHAIR MUNN: Bye, bye.

(Whereupon, the meeting in the above-entitled matter was concluded at 4:39 p.m.)