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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL
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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

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DOSE RECONSTRUCTION REVIEW METHODS WORK GROUP

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THURSDAY
NOVEMBER 5, 2015

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The Work Group convened via teleconference at 10:00 a.m. Eastern Time, James M. Melius, Chairman, presiding.

PRESENT:

JAMES M. MELIUS, Chairman
JOSIE BEACH, Member
DAVID KOTELCHUCK, Member
DAVID B. RICHARDSON, Member
PAUL L. ZIEMER, Member

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ALSO PRESENT:

TED KATZ, Designated Federal Official
KATHY BEHLING, SC&A
RON BUCHANAN, SC&A
GRADY CALHOUN, DCAS
DOUG FARVER, SC&A
ROSE GOGLIOTTI, SC&A
ED MAHER, ORAU Team
DAN MCKEEL
BETH ROLFES, ORAU Team
MUTTY SHARFI, ORAU Team
SCOTT SIEBERT, ORAU Team
JOHN STIVER, SC&A

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C O N T E N T S

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

10:02 a.m.

MR. KATZ: Okay. Welcome, everyone. This is the Advisory Board on Radiation and Worker Health, Dose Reconstruction Review Methods Work Group.

And we're meeting today, have Board Members, we have all five Work Group Members, including the Chair on the line already. And no conflict of interest matters to discuss. I don't think we need to run through that.

There's an agenda for today. It's posted. It's very simple. It's posted on the website under today's Board section. And I'm sure Jim will address that.

And otherwise, just please, everybody, mute your phones. Press *6 to mute your phone if you don't have a mute button, and *6 to take your phone off of mute.

And please, nobody put the call on hold,

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but hang up and dial back in if you have to leave the call for a bit.

And Jim, it's your meeting.

CHAIRMAN MELIUS: Okay. Thank you. And welcome, everybody from the Work Group. And otherwise, so forth and now we all got a long report from SC&A just recently.

So -- but I don't think we'll be discussing that in detail. I mentioned in an email to you that I think it's more of a background support document or a reference document that we can utilize as we go forward in terms of thinking about how we -- to what extent we would modify how we do the dose reconstruction reviews.

And then I think Ted had also sent out some of the documentation statistics from the Dose Reconstruction Review Committee's preparation for their upcoming report on their activities over time. So, it's just a lot of summary statistics on what the findings have been and so forth on that.

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And I think, I'm pretty sure everybody's gotten both of those. I just want to give anybody time if there's questions you have or other documentation that you think would be helpful to have going forward.

We can come back to this later. But I thought we should at least talk about it somewhat now.

MR. KATZ: While you're thinking about that, I just realized that I didn't ask about Agency members and staff and so on for participation.

MEMBER ZIEMER: I was going to ask if you had done a roll call.

MR. KATZ: So I think we should that, please. My apologies, but --

CHAIRMAN MELIUS: Okay, then.

(Roll call.)

MR. KATZ: Okay, very good. Sorry. And now back to Jim's question.

CHAIRMAN MELIUS: Yes. Can you replay

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the tape, then, so I don't have to repeat? So, anyway, that's the documentation.

I just would indicate for people that are not part of the Board or the Work Group, a lot of this is not sort of public information. So, these reports are not generally available at this point in time.

And for those of you on the Board, to the extent we are -- I don't think we're going to discuss these in any detail. But to the extent that we do, it's just reminding that there is sort of -- we have to be careful because there is Privacy Act information, covered information that's in particularly the more recent SC&A report. At least as I read some of the tables and so forth. Do that, so be cognizant of that. Does anybody have questions on the recent SC&A report, any of the Board Members?

MEMBER KOTELCHUCK: This is Dave. I'm wondering which one's your -- which one you're

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referring to when you say recent SC&A Report.

CHAIRMAN MELIUS: That's the analysis of the 19th and 21st set of Dose Reconstruction Reviews.

MEMBER KOTELCHUCK: I've been out of town at a conference for a few days. When did that come in?

CHAIRMAN MELIUS: Late Thursday of last week.

MEMBER KOTELCHUCK: Aha. Okay. Let me -- I have not read that.

CHAIRMAN MELIUS: And that's why I wasn't expecting people to have, given its length. And it's -- and the time involved.

MEMBER KOTELCHUCK: Okay.

CHAIRMAN MELIUS: But again, it's more of a reference, you know, supporting document. I think it's -- I found it to be very helpful in sort of, it sort of establishes sort of the extent of how dynamic this program is in capturing what's --

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you know, we're doing dose reconstructions that have been completed.

There's some lag from the time that they are completed before the time that we review them. Or SC&A review, you know, the whole process that the Dose Reconstruction Review Committee goes through.

And during that time period -- and it actually sort of goes back to the selection of the cases up until the time we go through the review process. You know, changes take place. The SECs may be granted. Site Profiles change. Procedures change and so forth.

And that happens, you know, on a sort of a continual basis. And so, I think trying to understand that. So, we may be, you know, doing an individual dose reconstruction review and actually the methods may be, you know, by the time that we review it, those methods may be different.

MEMBER KOTELCHUCK: Right.

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CHAIRMAN MELIUS: How different and what changes or, you know, processes in place. But it's still -- doesn't mean that -- I mean, I think it's just helpful to our understanding of this whole process.

This program has always been very dynamic in the sense that rather than having a fixed set of review criteria, those review criteria are updated as more data becomes available or as we refine the procedures that are being used to do the dose reconstructions.

MS. BEHLING: Excuse me, Dr. Melius, this is Kathy Behling. I'm wondering, would the -- or would the Work Group benefit from just a very brief synopsis of this report? I know it's lengthy.

But perhaps we could just focus your attention on some of the conclusions. What we, you know, what we did. A reminder as to what we did and just some basic conclusions.

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So, that when you go through this, it sort of focuses your attention. Do you think that that's worth doing today? Because I think either Rose or myself could do a very brief overview if you're interested.

CHAIRMAN MELIUS: I mean, it's really up to the other Board Members.

MEMBER BEACH: Jim, this is Josie. I've glanced through it. I haven't had a whole lot of time. But I think just a brief overview would be helpful for me.

CHAIRMAN MELIUS: Okay. But I would emphasize on the brief.

MEMBER BEACH: Brief. Yes, I was thinking brief.

CHAIRMAN MELIUS: Okay. So Rose, if you or Kathy want to go ahead.

MS. GOGLIOTTI: Yes, absolutely. So, this review we focused on the 19th and 21st sets. So there's 60 cases total in these sets.

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And we set out to answer some very specific questions on how individual dose reconstruction cases were impacted by ongoing Board activities, specifically SEC Class implications, procedure revisions that have happened since the dose reconstruction was completed, and ongoing issues resolutions.

So, for SEC Class impacts, we looked at cases and answered the questions. Specifically was the case covered by an SEC? Was an SEC issued prior or subsequent to the case being reviewed? And if it was subsequent, would the review have -- significantly be affected by the SEC? Did our review identify SEC issues? And did our review identify other potentially SEC issues that were not in the actual SEC Class?

And from the SEC impacts standpoint, most of our cases did have an SEC that impacted them in some way, shape or form. I believe 50 of the 60 cases had an SEC Class.

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But only six of those cases were compensated as a result of the SEC. So, they had a presumptive cancer and dose reconstruction was warranted because they had non-presumptive cancers as well.

But from those cases, only four had SEC Classes added that impacted them subsequent to the dose reconstruction being completed. And of those four, two cases were significantly impacted by an SEC.

So, they did result in compensation as a result of the subsequent SEC. The remaining two cases, one had a PoC greater than 50 percent for the SEC Class, so it wouldn't be impacted by the SEC. And the other was already compensated based on a different SEC Class.

For references, revisions, we looked at, was a significant method in dose reconstruction updated since the dose reconstruction was completed? Would that impact -- or would that

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update have a significant impact on the case? And did our review identify a need for that procedure to be updated?

And in this case, we found most cases did have a few. I think 35 cases had a reference that was updated since it was completed. But only 24 of those had a reference that was updated that impacted dose.

And this is more of a qualitative than a quantitative analysis. So we didn't go in and recalculate doses to see the update, if it affected the PoC in a significant way.

But I will say that it was a little bit complicated with OTIB-54 that's been revised five times in -- since these cases were complete. So it's a little difficult to quantify the extent of a change when there's so many revisions happening in such a short period of time.

And also OTIB-52, which is the construction trade workers, and that was revised

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to include subcontractors. And so, that wouldn't have been cited if they had erroneously excluded subcontractors in the past. So, it's really difficult to quantify if that particular change would have impacted cases.

And we do have a list of the procedures that were updated and used in this case set. And then we also looked at references that were, have we reviewed the references? And is there ongoing issues resolution that could impact these individual cases?

And so to do those we broke it up into two categories. The Site Profile findings and everything else.

And that's just because the Site Profiles are typically drawn-out processes. And there are numerous considerations. And it's much more complicated than some of our procedure reviews.

So were broke that down and looked at

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just Site Profiles. And we also actually pulled in SEC ER review findings because they are integrated and related to the TBD methodologies.

And in these cases we had 33 facilities represented of the over 300 facilities that are covered under EEOICPA. And seven of those facilities did not have formal Site Profiles.

And the remaining 26 facilities that did have Site Profiles, all but Pacific Northwest National Labs have been reviewed. And 22 of those reviews still have open issues.

So, 72 percent of cases that were reviewed in this subset, which is not a random sampling, did have ongoing issues resolution that could impact these cases.

We also looked at the non-TBD methodologies. And we had 34 unique NIOSH guidance documents that were not TBDs that were used in these, and the vast majority of these have been reviewed by SC&A. And the vast majority do

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not have open findings that impact these cases.

We did identify two that have not been reviewed: OTIB-70 and OTIB-64. And 64 actually a subsequent -- or a -- the document that it supersedes was reviewed and has no open findings.

So, it's really one full document has not been reviewed. And that is site-specific, I believe.

And we also had six procedures that have open issues that we determined could potentially impact these cases.

MS. BEHLING: Excuse me, Rose. I'm going to interrupt you for just one second at this juncture.

The other thing that was not reviewed and we didn't go into a lot of detail in the report, is the templates. Again, this is the dose methodology that we have now discovered is embedded into the Dose Reconstruction Reports.

And I believe NIOSH has put together a

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listing of all of the sites that actually have templates and still think that's something that, you know, has not been reviewed by SC&A. And there's a lot of data in those templates.

So, it's something we may still want to -- the Board may want to consider having us look at. Sorry, Rose.

MS. GOGLIOTTI: That's all right. Thank you, Kathy. That is actually important.

And then in the course of doing this evaluation, we did also draw some broader conclusions and recommendations, which is outlined in Section 1.4 of this report. And actually I think that would be very meaningful to this report.

I can go through those if you'd like.

CHAIRMAN MELIUS: Yes. Go ahead.

MEMBER BEACH: Oh, Jim, can I ask a question of Kathy?

CHAIRMAN MELIUS: Yes, sure.

MEMBER BEACH: You said that the

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template, you had a list of the templates from NIOSH. Did we get those?

MS. BEHLING: I was under the impression that -- Ted, can you correct me here? I thought that NIOSH had provided a list of the facilities where there is a template like the Grand Junction and Westinghouse Nuclear Fuels.

And has that list been provided?

MR. KATZ: Well, I definitely distributed it. I'm not sure how widely. Whether just to the DR Work Group or what have you.

But I can go check my records and see.

MEMBER BEACH: Okay. Thanks.

MS. BEHLING: Okay. I wasn't sure if it was going to be this Work Group that would make the decision as to which templates are going to be reviewed, or if that's a full Board discussion. I don't know.

CHAIRMAN MELIUS: That's a full Board discussion.

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MS. BEHLING: Okay. Rose, I think you can go ahead. Because I think it's important that we get a, you know, that the recommendations and the conclusions be discussed.

MS. GOGLIOTTI: I completely agree. Well, our first recommendation, we really strongly recommend that the Site Profile and SEC Position Evaluation Report Issues Resolution starts to become documented on the BRS similar to how the Procedures Subcommittee documents their findings.

This was a monumental task going in and figuring out which TBD findings are still open and relevant. Many of these TBDs were done back, some of them as early as 2005.

And they still have open findings. But tracking down to identify that these findings were still open was very, very difficult.

And we cannot stress enough how much Subcommittees would benefit from putting their findings in a centralized location so you don't

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have to dig through mountains of documents to identify what finding is still open and what is closed.

We also felt that our TBD and SEC reviews, we need a standardized and consistent numbering format for these. When we were going through findings, we noticed a lot of times Work Groups would renumber their findings midway through, which is very difficult to track a finding if the numbers are changing between documents.

We also noted that we would like to see an update to Section 1.3 of our DR Report. And if you remember back to our DR Report, that's where we document TBD reviews that were completed, and if there were findings associated with the TBD review that could impact the case.

And when we first started doing DR Reviews, that made sense. It was meaningful. We could look back and see.

But since then, things have changed.

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Ten years down the road, it's very difficult for our reviewers to know which issues are still open, which are relevant, if any of these issues have been addressed.

So, we stick to TBD reviews. But things have changed since then. Our DR reviews are typically not involved in issues resolution process for a site. So, we don't necessarily have access to the current status of ongoing issues resolutions or subsequent reviews that could actually impact the case.

So, we would recommend that either we need to commit to maintaining an up-to-date list of unresolved issues for each Work Group, or we need to move to the BRS with a more standardized system.

We also noted that the Procedures Subcommittee has done a really good job of capturing all of the references, but we would note that a lot of the documents that we reviewed were earlier revisions.

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And subsequent review -- or subsequent documents have been issued, and we think that the Procedures Subcommittee would benefit from investigating the changes that happened to these revisions and identifying when a substantial enough revision was made that may warrant us looking at the review again.

We also noted that the majority of cases have unresolved TBD and SEC issues. And based on that observation, we suggest that the Board should prioritize resolving open issues, especially at the larger employment sites.

And then I also just wanted to point out that this document focuses on unresolved issues. So, findings that are open or unresolved.

We did not focus on findings that are in abeyance. And what that means at least on some Subcommittees would be that the finding has been resolved but not implemented and formally closed.

So, those findings still have the

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potential to impact cases even though they are technically resolved in the Subcommittee levels. And those were our recommendations.

Are there any questions?

MS. BEHLING: And this is Kathy Behling. If I could just add one more note. As you see here, based on our conclusions or recommendations, is that it would benefit everyone, I think, if the BRS was being used more widely among all the Work Groups.

I think that this report really lays the foundation, for if the Work Groups decide to go in that direction, that we could assist them in updating the BRS. Because this report and all the effort that went into it would allow us to help those Work Groups to populate the BRS.

And it would also allow if we did it along with the Work Groups, and would allow for consistency and perhaps even consistency in numbering format.

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I realize there has been a lot of water under the bridge. And there's been, I'm sure, some of the Work Groups are a little bit hesitant to go in that direction. But if we could just start today and put in open findings. And in-progress type findings today and move forward.

I think that would be of a great benefit not only to the Work Group, but to us as auditors and for posterity, and making sure that we all keep track of everything that has been done in this extensive program.

CHAIRMAN MELIUS: Any other questions?

MEMBER ZIEMER: This is Ziemer. Jim, I think there's certainly a number of these recommendations that are beyond just Sets 19 and 21. They're gone and proper finishing.

And clearly it's a little more consideration. I'm wondering if there should be a, you know, a comprehensive report on this kind of issue.

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I don't know if it's Dose Reconstruction Work Group that should deal with it. It goes beyond their Work Group. I think it covers all of them. And that's an overall report to the Board that's been suggested actually would be appropriate.

CHAIRMAN MELIUS: Paul, I'm actually a little puzzled by the conclusion and recommendations. You know, aside from whether or not they're, you know, helpful or useful or whatever for the overall Board.

They seem to have nothing to do with the dose reconstruction methods.

MEMBER ZIEMER: Yes, it's interesting.

CHAIRMAN MELIUS: I mean, I was -- and I -- you know, I'm actually always puzzled when I'm doing individual dose reconstruction reviews.

I mean, some of these issues seemed to be, you know, sort of a lack of communication within SC&A on what's going on in the program, and what

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else.

I mean, stuff that can be looked up on the website in, you know, two or three minutes doesn't seem to get done. And that now -- yes, I -- there may be a need for more systemization of what -- of review process for Site Profiles and so forth.

But I think we're trying to focus on dose reconstruction review methods, not, you know, something as broad as this. And I didn't find that part of the report particularly helpful for us in terms of our task today.

MEMBER ZIEMER: No, in fact, that's why I'm saying this sounds like it should be something as a separate report to the Board for those kinds of recommendations.

CHAIRMAN MELIUS: Yes. Yes.

MEMBER KOTELCHUCK: I agree.

CHAIRMAN MELIUS: Yes.

MS. GOGLIOTTI: Well, certainly this

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report looked at how the dose reconstruction work is impacted by the work that is being done in other Subcommittees and other Work Groups. So, that's why we felt this was appropriate.

CHAIRMAN MELIUS: Well, that was the intent of the report was how it was affected. And to try to sort of benchmark the extent at which things were in process.

But, you know, your conclusions and recommendations seem to focus all on that document or technical document review process, not on dose reconstruction methods and so forth.

And, you know, again, I'm not disputing, you know, particularly your -- the recommendations or whatever. Or findings. But that part of it wasn't what we were expecting. That's all I -- and I think there are, for some of these issues, there are other approaches that need to be considered in terms of what we're doing and so forth.

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Any other questions or comments on that part?

(No response.)

CHAIRMAN MELIUS: Okay. So, let's go back to individual case reviews and methodologies. And I sent a short email out to the Work Group Members to sort of -- at least my thinking about how we should approach this and so forth.

And at least in terms of different parts or different considerations for modifying the Work Group -- the Dose Reconstruction Review process. And that's not in detail.

And I think all these we've discussed previously. But maybe if we go through them one at a time, it gives us some organization to this meeting.

So, I think what we have talked about is, you know, one, you know, continuing the current, you know, review process. And -- but with, in order to make it more efficient, do we only

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focus on like the positive findings?

And then sort of separately from that, do we only -- do we change our selection procedures in terms of how we select cases in some way to make them, you know, sort of improve that process or -- and we have, I think, done that continually in the Dose Reconstruction Review Committee in terms of trying to focus on sites that haven't been evaluated before, or based on Probability of Causation, or, you know, other issues like that.

But I think the key one is I'd like to get back to it for some discussion is the issue of, do we want to modify the process in a way that is -- that we would provide more focus on just the -- sort of the positive findings that SC&A may have when they review an individual case as it sort of goes through the resolution process.

MEMBER KOTELCHUCK: Jim?

CHAIRMAN MELIUS: Yes?

MEMBER KOTELCHUCK: I mean, I found the

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SC&A proposal -- and I don't have the date on it -- of suggesting that we go through this by having more involvement with SC&A and NIOSH ORAU, before the Subcommittee meeting, and that we get sent a list of cases, that there seems to be pretty much agreement. And just check on those at the Committee before we get to the Committee meeting.

And that will allow the Committee to focus on problems, disagreements. And that seemed to me to be a very good way of speeding up our process, and therefore allowing us to review a greater proportion of cases. I don't know how great a proportion, how great an increase it would be because we haven't tried it.

But it seemed to me a good starting point for modifying the process and making it more useful and making the meetings more useful.

MS. BEHLING: This is Kathy Behling. If I could interject, that was a memo that I sent out on July 15, 2015. And the subject was approach

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to expediting the Dose Reconstruction Project.

MEMBER KOTELCHUCK: That's it. Yes. Right.

MS. BEHLING: On July 15, I put together a memo. And as you're referring to type, we classified them as Type I type findings that perhaps will only require minimal discussion. And then a Type II finding which would be a more detailed discussion.

And we actually in that memo, I used an example of four different sites. There was a table in that memo where we looked at the Oak Ridge Site, the Paducah, Portsmouth and Savannah River Sites.

And we tried to put it in perspective, the number -- the total number of findings. How many are still open, what we would think might fall into this Type I and Type II classification.

We also included a table that we actually list the finding. We list the discussion between us and NIOSH, gave you an understanding of

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the ranking and the PoC for that particular finding.

And we were hoping that, before the meeting we could get this into your hands at least a week or whatever, you know, how much time you would need. So that you could go through this.

And then at the meeting, for those Type I findings, perhaps the Board Members can state, yes, we agree with all these. Or no, we want to have a further discussion on this particular finding.

And based on these four sites that I looked at, we estimated about 79 percent of the findings for those four sites, and 94 percent of the observations appear that they are not going to need a very lengthy discussion to close.

Obviously, that's your call. But if we provide you with that summary table before the meeting, it would be something I think that would certainly help to expedite getting through --

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closing hopefully some of these findings.

But all of this that I'm discussing is in a July 15 memo.

MEMBER KOTELCHUCK: Right. And that -- am I on?

CHAIRMAN MELIUS: You're on, Dave.

MEMBER KOTELCHUCK: Okay. That was a very useful memo. And I just simply, how much time we'd save and how many of them would be closed with minimal discussion, I'm not sure until we try it.

But certainly, it seems promising. And I also -- I've for a long time -- we had a discussion in the Subcommittee about observations.

And a number of us wanted just to not have any discussion at all. Several Members of the Subcommittee pointed out that, in fact, occasionally we change an observation to a finding, which is important.

And that there are more substantive matters behind the -- what appeared at first to be

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an observation. So, this method that you're suggesting, that SC&A is suggesting, would allow us also to look at the observations. And, you know, essentially, I hope heartily discuss any of them. And you indicated you thought 94 percent of them would be closed.

That seems like a reasonable number, and that would save time. And even when we talk -- because when we talk now in the Subcommittee about the observations, people go through, you know, a detailed discussion, as is proper.

But it just takes time. And we are not going to -- we are not going -- generally, we're not going to take a position and just say so noted. Right? And move on.

So, it's a waste of valuable time for the discussion group, you know, during the conference -- a waste of time during the conference call.

So this seems to me -- now, we haven't

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had a discussion in the Subcommittee. And Josie, correct me if I'm wrong. But I don't believe our Subcommittee has actually discussed this, whether we want to go ahead on this.

MEMBER BEACH: I thought we had a brief discussion on it. But, yes, I don't believe we've had anything --

MR. KATZ: No. This is Ted. I'm sorry, I think we felt this was in the purview of the Methods Group to talk about it.

MEMBER KOTELCHUCK: Okay. That sounds good. Okay. That's -- you're right. I think you're right.

MEMBER ZIEMER: Well, Ted and Jim, this is Ziemer. According to my notes from our June 22 meeting, we discussed this quite a bit. I thought we had at least tentatively agreed to this kind of approach. I'm looking at my notes here and I have all those things down.

MR. KATZ: Paul, I think we did talk

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about it some. I'm quite sure we didn't come to any resolution on any of these changes -- possible changes.

MEMBER ZIEMER: Right.

MEMBER KOTELCHUCK: But you're right. I mean, this was mentioned. But, I mean, my feeling at this point is that we should move for resolution on it.

If we have general good feelings about it, that is that it's a reasonable method -- and I would just ask that, you know, we approve in principle, and then let the Subcommittee decide, you know, some of the details.

But the basic approach, I think my feeling is, I'm ready to say let's try it. You know, this is not a forever decision, and if we find after some experience that there are problematic aspects to it, we can change it.

But this time, again, with Board approval.

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MEMBER BEACH: Yes, but I think we need to send that memo forward to this group if it's something you're suggesting. Because I don't think everybody has it.

MEMBER KOTELCHUCK: That may be. I believe you may have come onto a Subcommittee since -- did you come onto a Subcommittee since the memo was --

MEMBER BEACH: No, I was on a Subcommittee.

MEMBER KOTELCHUCK: I don't remember.

MEMBER BEACH: I'm just having trouble locating it.

MEMBER KOTELCHUCK: Okay. I was having trouble locating it, too. But that's my problem. And once I have the date here, I have it, of course.

MEMBER BEACH: And it was --

MS. GOGLIOTTI: It's a PA-cleared document, so I can send it along.

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MEMBER KOTELCHUCK: Yes. Okay.

MEMBER BEACH: Thank you.

MS. BEHLING: I will also add -- this is Kathy Behling. That if you are --

CHAIRMAN MELIUS: Kathy, please, this is a Board Work Group discussion. And --

MS. BEHLING: I'm sorry, I was just going to say --

CHAIRMAN MELIUS: We'll ask for your input when we need it.

MS. BEHLING: Okay. I'm sorry. I was going to say SC&A could reference --

CHAIRMAN MELIUS: Thank you, Kathy. Please, we know that.

MEMBER KOTELCHUCK: Well, anyway, I would say let's go ahead -- from my own I would say, and as Chair of that Subcommittee, I would say let's adopt it. Let's formally agree to do so.

And then that would be, if you will, part of our report to the Secretary. In the

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section called -- after results, called future activities.

CHAIRMAN MELIUS: Well, I have some concerns about that.

MEMBER KOTELCHUCK: Okay.

CHAIRMAN MELIUS: And the concern is that the Board is charged with doing Dose Reconstruction Reviews, you know, not our contractor. And we're essentially turning over that function to our contractor if we're not reviewing the findings.

MEMBER KOTELCHUCK: Well, but we are reviewing the findings in that it's supposed to be sent to the Board a week before, and we are supposed to go through it.

Now, it's our responsibility as a Subcommittee to actually read through what they say. Now, if they just send things out and we do not examine it ourselves, then we are giving up our responsibility and our required responsibility.

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But my figure is that our people are disciplined enough that the Subcommittee people will read through carefully, and we can certainly check that at the meetings that we have to make sure everybody's really read it through carefully.

CHAIRMAN MELIUS: And give them a quiz, Dave?

MEMBER KOTELCHUCK: Well, no. But I think --

CHAIRMAN MELIUS: You and Paul can take turns writing. You've had students for many years.

MEMBER KOTELCHUCK: Right.

CHAIRMAN MELIUS: You can write out the quiz. But I guess I'm having a little bit of trouble figuring out why having a memo is -- when you're in the Board -- in a Subcommittee meeting, you're telling me that people don't have the discipline to go quickly through a -- what's called a minor finding.

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MEMBER KOTELCHUCK: Well --

CHAIRMAN MELIUS: Well, let me finish, Dave, please.

MEMBER KOTELCHUCK: Sure.

CHAIRMAN MELIUS: But you're saying that if we shorten that in a memo and give them less information, you know, maybe they'll not feel the need to ask questions or talk about it.

And it seems sort of counterintuitive that that would happen. It seems to me that we're, you know, as I said, delegating our responsibilities to our contractor.

And without giving due diligence to what that responsibility is, which is to review and, you know, identify problems with the dose reconstruction, the individual dose reconstructions.

MEMBER KOTELCHUCK: Well, I certainly was concerned about that when I saw the memo, and thinking about it. But as we go through our

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Subcommittee meetings, the minute we review a case, people go through like ten or a dozen or so different, you know, the internal dose, the external dose, how we got it, how we calculated it.

And in many cases that is -- that's not an issue and say, okay, I mean, you know, 10 out of the 12 points that they go through are not points in which there is disagreement.

And at some deeper level though, we do give responsibility to the staff, the SC&A and NIOSH. We review, but we really don't as individual Board Members, we don't go through a calculation. Right?

And so we are giving them major responsibility and we're overseeing them. So, I would say if the oversight -- if the time spent in the Committee meeting doesn't produce any useful -- puts a lot of words and time down and doesn't present much useful material, then I just feel as if -- I'm willing to give a certain amount of

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greater responsibility to the two staffs.

Again, with the obligation that we go over it carefully on the Board. And no, I can't tell you -- I'm not going to give them a quiz obviously.

But I think the Board Members, knowing that they are giving up some degree of oversight, will certainly be careful. And I think will be honest enough and open enough to say, well, you know, I haven't reviewed this. I'm not, you know, I'm going to listen or something like that.

Because, obviously, if they haven't read and gone over the material, then it's not -- their input is not -- the oversight that we should have is not there.

But I just find a lot of time is spent at the meetings on repetitive items where there's no disagreement because one goes through everything. Maybe we should.

CHAIRMAN MELIUS: Okay.

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MEMBER ZIEMER: Could I make some additional observations?

CHAIRMAN MELIUS: Yes, please.

MEMBER ZIEMER: This is Ziemer. Well, one thing is that we need to remember there's a couple of parts to this.

One is, a priori, before SC&A is ever involved, the Board is involved in -- and the Subcommittee -- involved in selection of cases. And I think, Jim, part of what you're asking is, should we modify that selection process in terms of either proportion of cases or what other criteria we may wish to include going forward? That this also includes whether we should increase numbers of blind reviews and that means we need to evaluate the value of the blind reviews. Are they giving us more information than the other ones that are -- that's important?

So, there's a lot of issues. I think that we have to, in terms of this review process,

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just in case selection, clearly we're depending on the contractor to go through what I'll call the mechanics of dose reconstruction. Because a lot of it is sort of mechanical in the sense of the procedures are there. And they're going through and sort of checking against those procedures. And then preparing a report.

But we have an important consideration in the selection of what they do. And then it seems to me we need to be focusing a lot on consistency issues.

And we may need to give instructions to our contractor as to what we want to look at in terms of consistency. You know, are people in the same category, are the cases being handled in a consistent manner, that sort of thing.

The issue of what we do with the observations and so on, I think the Subcommittee, the Dose Reconstruction Subcommittee, as you suggest, they can come up with those very easily.

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And they can make that determination of what things they can go through quickly or not.

But certainly a lot of our responsibility starts at the front end in the selection of the cases.

CHAIRMAN MELIUS: No, I mean, I agree. And this part of the process, which is what's called the traditional or the old process has been -- I think it's question of, is there a way of making the resolution more efficient?

MEMBER ZIEMER: Yes.

CHAIRMAN MELIUS: But in some sense we have a check on SC&A because what gets flagged is when, you know, their calculation differs from NIOSH slash ORAU's calculation. You know on a -- in that.

And usually at least my experience has been that they're very diligent at tracking down when there is a, you know, inconsistent finding. Now, I mean, what we always worry about is that

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they, you know, both NIOSH slash ORAU and SC&A get it wrong. But, usually, that's not going to be in the calculation per se but in some of the assumptions that go into the calculation, I would think and do that.

MEMBER ZIEMER: Right.

CHAIRMAN MELIUS: And usually that's -- when there is a discrepancy, that's what's that. It's sort of -- it's an error. Sort of not an error but a difference in interpretation on period.

And then some just, you know, simple mistakes that are probably not very -- they're usually not very important in the larger scope of the dose reconstruction that's being done.

Where somebody, you know, puts down the wrong month or includes an extra month or leaves off a month or that kind of thing. And based on, you know, just transcribing from the work records or there's a discrepancy in that.

But it would seem to me rather than

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having a two-resolution process, so to speak, one, you know, without the Board involved, just SC&A and NIOSH; that we have, you know, we have one process.

And it's a question of how you manage that. Now, you know, a separate question is whether we want a way of sort of combining these, is that we, you know, have a process where we would only focus on positive findings, and we totally, you know -- or on major findings somehow defined. I think that would be, you know, a reasonable possibility.

But I still think you have to sort of mix that with sort of a complete review of the dose reconstruction process. Because, you know, there are, you know, people that have a very high Probability of Causation under 50 where, you know, a small change can make a difference. Not commonly. But, you know, it does occur. And I think we have some obligation to make sure that the overall process is going satisfactorily.

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I don't remember the details of the SC&A proposal. So, I may be mischaracterizing it. But I guess I just feel more comfortable at this point of, you know, modifying the Committee, Subcommittee process.

MEMBER KOTELCHUCK: Mm-hmm. I mean, I just feel as if we spend a lot of time needlessly on things where there's no disagreement.

Now, possibly it's a question of myself as Chair, simply ruling those same, let's not talk about those. Let's go to the major findings.

I mean, but once we review a case, typically we go over a number of -- most items in the calculation. We've always done that. And maybe we shouldn't. But I don't see, Jim, in what you're saying, I don't see what would be changed. And I am interested in changing and speeding up the process.

CHAIRMAN MELIUS: I think what -- and again, I don't fault you for your running the

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meeting. Because I don't think it was different than Mark. And you're our two Chairs.

MEMBER KOTELCHUCK: Right.

CHAIRMAN MELIUS: Paul's, I think, been on the Subcommittee since the beginning. You can comment.

And I'm not, you know, I understand that people in a Work Group or a call or a meeting, whatever, like to talk and spend time. But it seems -- and when we do the individual Board Member reviews prior to the Subcommittee, we go through it finding by finding.

And that's been, you know, done. I mean, we all when we're reviewing it, you know, the paperwork ahead of time we focus on positive findings and observations. Because that's most likely what's going to change.

But there is a process of at least the ones I do, where we go through them one at a time. But I think that we have a -- I think if, you know,

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the Subcommittee reaches an understanding that, you know, we're going to, you know, start with a positive finding so to speak, or a higher priority findings.

And then, you know, go through and when you get to the, you know, the lower priority, the negative findings, whatever you want to call them that you sort of group them. And does anybody have questions on them or concerns they want to raise.

MEMBER KOTELCHUCK: Yes.

CHAIRMAN MELIUS: So, to me that would be, you know, possibly more efficient, you know. I don't want to be overly optimistic because, you know.

MEMBER KOTELCHUCK: I will admit, and first by the way, I don't -- whatever we talk about, how the Subcommittee should go, I'm more than open to suggestions. Including suggestions that I change, modify things.

I am not at all feeling personally

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threatened by suggestions by the Board of how we ought to function. Far from it.

But one of the things that has influenced me, and maybe overly so, and maybe inappropriately so. Is that we had originally said in our first Secretary's report that we were going to go over 2.5 percent of cases.

When I took over, we had a terrible backlog. We still do. We have a backlog. But we've been making progress on that.

And so I've always -- we did not even make -- we have not even reviewed SEC in the graphs that we have. We did not even review one percent of cases.

We have 0.86 percent of cases. So, there has been the feeling. I certainly have the feeling, and maybe have been overly influenced by that of feeling that we should be moving toward one percent and beyond.

If in fact, we are comfortable with one

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percent and we -- then I'm not unhappy with our current process, personally not unhappy just as a Board Member and as the Chair.

But if we can speed it up or do things differently, obviously I'm more than open.

MEMBER ZIEMER: This is Ziemer. I have a comment on that if I may.

MEMBER KOTELCHUCK: Please.

CHAIRMAN MELIUS: Go ahead.

MEMBER ZIEMER: It seems to me that we may be at a point, and Jim, I don't know if it's this Review Committee that should do it or what.

But I think we have to ask ourselves a question on that. And that is the following. The original two and a half percent in a sense was somewhat arbitrary. I don't think we knew how much effort would be required to reach that. Whether that was enough. Whether it was too much.

We have a number of years of experience now. And we have results. I think we have to ask

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ourselves the question, is the two and a half percent necessary? Is it enough? Is it reasonable? Or is one percent enough?

I mean, we're actually under one percent I think. And to reach two and a half percent, I think you're talking about substantial effort. I'm not saying that shouldn't be put in.

But we have to ask ourselves the question as to whether or not that additional amount of review is needed. And if so, how we're going to achieve it.

Or, are we getting enough information from the present rate of review to assess the quality of dose reconstruction? Because we've -- the Board may want to say okay, we're willing to go with a different number.

CHAIRMAN MELIUS: And I think the one is I think we are reassessing the two and a half percent. I think the question is not just this part of the process, but is our overall dose

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reconstruction review approach sufficient?

And is it addressing, you know, the potential for major problems. And you know --

MEMBER ZIEMER: Yes, exactly.

CHAIRMAN MELIUS: Is it capturing consistency? Is it capturing all the changes that constantly go on within, you know, in terms of procedures and methods and data being available and so forth?

And it is complicated to do that. But I think we need to -- what I'm trying to say is, we step back. We look at different options we have and different ways we might want to do things and approach that.

But the overall package, you know, we want to be as good as it can be within our available resources. Now, if we think that, you know, five percent or, whatever is necessary, then you know, when we pick up Grady off the floor because, you know, it increases his workload a great deal and

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NIOSH resources.

But, you know, again, we need to I think say that to the Secretary.

MEMBER ZIEMER: Exactly.

CHAIRMAN MELIUS: I mean, that we need more resources, or we could, you know -- now, I'm not thinking we're at the point where we necessarily need more resources for doing this.

But I think we have to, you know, be able to defend what we've done so far. And I think, I'm trying to make this as sort of a critical look at what we've done so far.

And how we could improve it. Make it more efficient. And really address one of our key functions.

And I'm not sure. It's just the current approach takes up a lot of resources. Both Board time, and contractor time and NIOSH time and for money that's associated with that.

And so is there a better way, a more

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efficient way of doing that? And I think yes, again, we've identified one, maybe we're spending too much time and resources trying to resolve, you know, or discussing and reviewing, you know, negative findings or minor findings.

And I think that's legitimate to look at. But at the same time, it is a Board responsibility. More than, you know, making an SEC recommendation is a Board responsibility. It's not a contractor responsibility. Or it's not something we, you know, let NIOSH do.

MEMBER ZIEMER: Right.

CHAIRMAN MELIUS: Yes. So, do that. So, but maybe we, you know, move on at this point. And let's start and talk about some of the other potential parts of doing this.

For example, the blind reviews. And I'd be curious what people's, other people's assessment of the utility of those.

MEMBER KOTELCHUCK: I'd like to hear

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from -- I'm not sure the Board Members are really up to date on our -- where we are on the blind reviews, since we've been doing a lot more recently.

You know, we have 14 blind reviews done now. I think that's correct, then. So, I would be -- I'm not sure, Paul, for example, whether you as a Board Member have -- we presented information to you about the blind reviews, or enough information. We certainly talked about them in Subcommittee.

MEMBER ZIEMER: Well, for me, I think what I would be looking for would be a recommendation from the Subcommittee to the Board as to the value of the blind reviews. Whether or not more are needed and so on.

I mean, you guys are looking at them in detail.

MEMBER KOTELCHUCK: Right.

MEMBER ZIEMER: I mean, the Board kind

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of sees it summary-wise. But we need -- those who are working closely with it, we need, I think, a recommendation from you as to whether we should emphasize those more? Do more?

Where does the Subcommittee stand on the usefulness of the blind reviews? Where do others?

MEMBER KOTELCHUCK: Well, should I respond, Jim?

CHAIRMAN MELIUS: Yes.

MEMBER KOTELCHUCK: I mean, what has happened is, we've had long and intense discussions on a number of these blind reviews. Where at first there seems to be a disagreement.

And then in the discussion it turns out that there are questions -- often the questions are not the mechanics of calculating internal dose, external dose, et cetera. The issues are what radioactive materials are there?

Is it possible that there was depleted

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uranium being used? And if so, that would, you know, there could be certain assumptions and conclusions from that.

After we've had the discussions, what we've found -- what I've -- let me say my observation. Let me not speak for the Board and of course Josie is on the line too and should please come in.

My feelings on those is that oftentimes it's that the folks in SC&A aren't there working as intimately with the data. And the people, interviewing people who are at the site.

And so oftentimes the NIOSH folks will give us, if you will, a reality dose. And say no, no, no, they don't have that.

Or, while it may be possible that something like this happened, it happened and this is why. And so, we've resolved well all but three of them.

And those three are -- we're working on

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right now. There was, if you will, Subcommittee resolution that there was potential agreement. And that they're recalculating the PoCs.

So, we're finding quite good agreement where the assumptions are the same. There are times where quite properly SC&A is saying is it possible that this was being used?

Or that this radioactive material had entered the site briefly and may be around? And again, I don't know that I'm properly characterizing SC&A's position on this.

But my impression is that we are -- that the calculations themselves, which are very important. And I'm extraordinarily happy that we're doing these. We might want to do more even.

But that there's agreement at this stage between people. But only after discussion. And discussion about what's going on in the field if you will. Not with the calculations.

Maybe that's the way to characterize

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it.

CHAIRMAN MELIUS: This is Jim. I would just add to that. I think it's also, at least, and I've read I think most all of the reports now. Maybe not some of them.

But the ones where there was a discrepancy, a significant discrepancy, there was -- I don't know how to characterize this. But I would say a methodology that was being used by ORAU that wasn't, you know, that SC&A was not aware of.

Or some assumptions that SC&A was not aware of --

MEMBER KOTELCHUCK: Yes.

CHAIRMAN MELIUS: About the site. And I think -- and again, that can be resolved. And my understanding is that the situations, it was resolved.

I think that the importance of these blind reviews are twofold. One is sort of what Dave was talking about, at least as I understood

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it, was that how do you interpret what exposures a person had at a site?

And what needs to be evaluated and so forth? And again, that may point to some of the problems with the, you know, Site Profiles or whatever.

Or, it may point to other documentation that's not included with the Site Profiles. So, it's not transparent to the Board or to SC&A.

And then, secondly, are some of these, you know, calculation procedures that I think are important for the Board, obviously SC&A to know about as they're evaluating dose reconstruction. But also for the Board to, you know, be aware of in terms of how we oversee and review the dose reconstruction process.

And again, I think I've said this before. It's not that I think it's, you know, these are not sort of deliberately hidden, secret methodologies or whatever. It's just, you know,

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dose reconstruction's a complicated process.

And these are complicated sites. So, I don't think it's -- you know, I don't think we expect everything to be included in, you know, some sort of technical document or procedure that's, you know, widely available or whatever available to the Board, you know, on the website or whatever.

But I thought those were there was a discrepancy found, I thought that was very useful for understanding how things are being done. And I think we've always had this issue of, you know, how do we interpret the facts about a site? And what people did and so forth.

How many we need to do or continue to do, I don't know. But I think they're -- that they do have some value in terms of overseeing the process.

MEMBER KOTELCHUCK: Oh, I think --

CHAIRMAN MELIUS: But if the process isn't transparent and reproducible, then there's

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some problem with it. And if it can't be done consistently, I think there's a problem with that.

I don't know if we've really evaluated the consistency issue. But certainly the transparency is, you know, not necessarily there.

Again, it doesn't mean that dose reconstruction is being done wrong. It just limits our ability to oversee it.

MEMBER KOTELCHUCK: I --

MEMBER BEACH: This is Josie. Dave, sorry.

MEMBER KOTELCHUCK: Go ahead.

MEMBER BEACH: I agree with both of the -- what you've discussed. I think it's a really -- blind reviews are important for the reasons that you both discussed.

I don't think they need to be, definitely not decreased. I'm not sure how many exactly we're doing at this time number wise.

MR. KATZ: Josie, it's Ted. We do a

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half a dozen a year now. Which was ramped up from what it was under the old contract.

MEMBER BEACH: Okay. Yes.

CHAIRMAN MELIUS: I think one thing we should do before we maybe change that number or whatever would be to have, this is more work for Dave, but have the Subcommittee do a presentation to the Board about their findings.

You know, because I don't think the larger Board Members are aware of it.

MEMBER KOTELCHUCK: Yes.

CHAIRMAN MELIUS: I think that might be feasible to do that at one of our Board calls. Rather than waiting, you know, four or five months to do it.

But, you know, we should think about that.

MEMBER KOTELCHUCK: I would be more than open. I think the blind reviews are really of great value. They certainly, for me, give me

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an enormous amount of confidence in the consistency of our methods.

CHAIRMAN MELIUS: Yes.

MEMBER KOTELCHUCK: And I was planning to have the Board have a discussion of what constitutes agreements and disagreements. Because clearly the numbers didn't come in, the PoCs didn't come in the same.

But after discussion we realized that there were different assumptions. And when the assumptions were the same, the results were pretty much the same. And that --

MEMBER ZIEMER: Could I ask a question?

MEMBER KOTELCHUCK: Sure.

MEMBER ZIEMER: Yes. This is for Dave.

MEMBER KOTELCHUCK: Yes?

MEMBER ZIEMER: Dave, I don't know if you have this information, but have you noticed any difference between blind reviews of older cases

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versus newer ones?

I was going through that ORAU document on their Quality Assurance Program. And it's clear internally at ORAU that their error rate has gone down quite a little bit over recent years.

And many of their earlier errors were based on assumption differences within dose reconstructors for even given sites. And they seem to have achieved a better method of assuring that dose reconstructors who were doing similar or cases from same sites were using similar or the same assumptions.

And the implication is that newer dose reconstructions have a much lower rate of error on the assumptions themselves. And I wonder if that shows up for us in our blind reviews as well? Our newer cases are showing a different level of error, or perceived error, than older cases. And maybe we don't know that at this point.

MEMBER KOTELCHUCK: Remember, we only

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did -- before we did sets, was it 6 through 13, we only did two blind reviews. So, there's not enough data -- there's not enough data.

MEMBER ZIEMER: There's not enough data. Okay. Thank you.

MEMBER KOTELCHUCK: But, however, you know, looking at the sets that -- even 6 through 13, I mean, as you suggested, I do see the later ones that were done. There was a group that was done for set 17, I believe. The set 17 reviews seemed to come in quite a bit better than the first set of six. Which were in the 6 through 13.

I must say, I did not look at it carefully in response to the kind of question that you asked. But I will.

And as you mentioned, it comes to mind that things are -- we're having fewer disagreements as we go along to later sets. Which is good.

But there's no -- again, as for the percent of cases reviewed, there's nothing magic

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about how many we need to do. It's not that we're going to be able to say that.

It's not a statistical question, that if you do this many, then this is your confidence interval. I think it's just a matter of saying that we have to keep monitoring on a regular basis.

But I certainly agree that we can say to the Secretary that we have increased the number of blind cases reviewed since the first report. And that those results are very important in assuring that we have consistency in this -- in the larger process.

MEMBER ZIEMER: But there are sites, you know, that don't have formal worksheets and approaches. And maybe more emphasis on those for the blind reviews would be called for.

MEMBER KOTELCHUCK: Yes.

MEMBER ZIEMER: Just thinking about the fact that a lot of sites, the assumptions are pretty well spelled out.

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MEMBER KOTELCHUCK: And that really moves to item three I think, does it not? On to--

CHAIRMAN MELIUS: Well, let's stay on this just a second. I was going to make that comment.

But I also think it's, you know, we've done a very limited number of blind reviews. And it gives lots more sites than blind reviews.

And, again, I think I concur with Paul's suggestion that, yes, and that not only do we sort of need to think about how we target those in terms of sites. But also, you know, more specifically, where there may be sort of less documentation to rely on. And therefore, the findings from the blind review may be more helpful.

MEMBER KOTELCHUCK: Right. We speak to selection because we select only from the sets that we choose, which have PoCs between 45 and 52 percent.

CHAIRMAN MELIUS: Yes.

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MEMBER KOTELCHUCK: Right? And many of the others are done on a best estimate -- on a, excuse me, maximum/minimum basis.

CHAIRMAN MELIUS: Right.

MEMBER KOTELCHUCK: And certainly we don't blind review those at all. And that seems to me well-taken and should be done. We should modify the selection of blind review cases. We should.

CHAIRMAN MELIUS: So, let's move on to the -- sort of the number three, which was sort of the consistency, judgment. I guess, it really comes back to what you were talking about, also what are the assumptions that are made by the dose reconstructor in doing the dose reconstruction and so forth.

And one thing I was just thinking, when we're talking about the assumptions now of when we -- when SC&A and ORAU discuss the -- and NIOSH discuss the assumptions involved, they reach

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agreement.

But, you know, it's sort of, well, is that the right agreement? But overall I do think because there is by nature a lot of judgment involved in doing these and not all that judgment can be easily or is necessarily worthwhile to document.

I mean, these are complicated sites. And their dose reconstructions are difficult to do. And, you know, there's limited information. Placing people within these sites and what kind of work, et cetera that they might have done.

And, you know, all the other complications, we deal with at these sites. But it would seem to me that one important thing that we haven't looked at is our -- how are these assumptions, methodologies that may require more judgment on the part of the dose reconstructor, how consistent are they being done?

And you know, the QA/QC data from ORAU,

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you know, it's gotten better. Which is good. But I think we -- it doesn't mean that we don't need to look at this. And their QA/QC data may not capture, you know, all of the issues. And all the consistency that we might want to do.

And so we need to evaluate that I think. And I think we've not really been in position or been able to do that up too now.

And I think that the -- how we target that I think is we need to sort of think through and develop, you know. One way of targeting it is, well, we have a finding where, you know, a significant finding in a dose reconstruction review which would indicate something was done, you know, done wrong.

We agree with SC&A's evaluation and so forth. Well, you know, how often is that done wrong? And what is the basis for that error so to speak?

You know, is it a question of judgment?

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Is it a question of the underlying documentation that doesn't, you know, capture maybe what we think is the appropriate methodology or the appropriate exposure evaluation that needs to be done for -- at a particular site and so forth.

So, to me that's one selection. The other is sort of the basic, you know, methodology. And Grady, I don't know if you're still on the line. Are you?

MR. CALHOUN: Yes. I'm on the line. Can you hear me?

CHAIRMAN MELIUS: Yes. This isn't a quiz or attendance thing. But my question is, what -- we have the listing of sort of where there's documentation for doing, you know, so Site Profiles where there isn't that's being done and so forth.

But is there any sort of master mapping that ORAU may have or NIOSH may have for say dose reconstruction at a specific site? What methodologies are used that add up, you know, for

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doing dose reconstruction at Savannah River or even a more simple site?

Is there sort of a single document that would sort of list all of the things that a dose reconstructor would, you know, do? All the documentation, all the procedures that would be followed?

MR. CALHOUN: For Savannah River, just to use Savannah River Site as an example.

CHAIRMAN MELIUS: Yes, yes.

MR. CALHOUN: You know, the starting point is obviously going to be the Technical Basis Document. The internal/external X-ray, environmental section to that.

And then the requirements of those documents are contained within worksheets, which really help the dose reconstructors not have to make as many decisions.

CHAIRMAN MELIUS: Right.

MR. CALHOUN: And those are the

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worksheets that I believe that the DR Subcommittee folks have finally gotten access to a lot of those workbooks to them. And that's the main way.

Now, there's the other side to that. You know, just going off the top of my head. Just one of the sites that doesn't have a Technical Basis Document.

We have guidance written down, they're not approved documents. But our people are supposed to write the dose reconstruction in a detailed enough way that you can tell exactly what we did.

So, I would say that the key really is getting the information from the Technical Basis Documents to those workbooks. And those have evolved.

And, you know, through the discussions that we have during the DR Subcommittee and evaluating cases, the questions are asked pretty often like well, what have you done to prevent

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there? Because as you said, a lot of these cases were done a long time ago.

CHAIRMAN MELIUS: Right.

MR. CALHOUN: So, I don't know if Scott or Ed has anything additional to add to that on the workbooks.

Evidently not.

CHAIRMAN MELIUS: Okay. Or they can't find the mute button.

MR. MAHER: Hold on, guys, it's the mute issue here.

MR. CALHOUN: Right.

MR. MAHER: I would also say that you need to use the basis for it. The tools, make sure that whatever can be done consistently is done consistently. And there's no transcription errors and all that.

CHAIRMAN MELIUS: Yes.

MR. MAHER: But I also want to point out that there are lots of interface between the BR,

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who purely deals, who's an independent to do review. And if they disagree on the interpretation of a TBD, which has happened at times, then they work it out, you know, to move on. Because if they need to elevate it to Scott or Joe, then they will do that. But, also, Joe and Scott have the two major bits of BRs. And they meet, you know, weekly or biweekly to resolve issues.

You know, we're interpreting the TBD this way. We're doing it that way. And to get those resolved.

MR. CALHOUN: And when you say DRs, you're referring to your dose reconstructors. I'm not sure everybody knows that.

CHAIRMAN MELIUS: Yes.

MR. MAHER: Yes, dose reconstructors. And if it's a crosscutting issue that isn't just the one slice and it gets rolled up to the objective management meeting, I have it every other week. Now, and I also think it's important to point out

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that the document on each of these TBDs are DRs for the most case. And they are the site lead DR.

So, it's not like it's a real huge disconnect between the TBD and what the DR. That the DRs are actually doing the documents. And they're also being independently reviewed by a second DR who's doing claims at that site.

So, you know, it's an integrated process. And you know, we do have some, you know, differences and interpretation of TBDs. But we bring them to the surface really quickly.

And of course, the reviews that, you know, Grady's group would do their DRs, and they would have a different interpretation and send it back for reconsideration. So, there's a lot of cross back and forth among, you know, the production managers, the DRs, PRs, and the document owners that, you know, work those things out.

And that's aside from the training they go through. Which, you know, all DRs have 40 hours

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basic training. If they are non-experienced at a site, then they're given the DRIT, we call a DRT-status, DR-in-training status.

And where they need to work for a DR who is trained at that site. They must review all the DRT's DRs before it goes to PR.

So, really there's still some opportunity for inconsistencies. But we are very concerned with that. And the more tools involved -- the tools really help with the inconsistencies.

MR. KATZ: Alright, can you just identify yourself, because you're not Scott.

MR. MAHER: No, no. I'm Ed Maher. I have all the dose reconstruction and tool redevelopment under me.

MR. KATZ: Thanks so much.

MR. MAHER: Yes.

CHAIRMAN MELIUS: My question is, is that all like -- for an individual site, is that all documented in one place, what to do? Or sort

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of how much of this is based on it?

MR. MAHER: Well, as far as the training of the DR, that's documented. I would say the other things we document it pretty quickly.

CHAIRMAN MELIUS: Okay. Okay. Because I'm just trying to understand, you know, again, it's not being critical of your process or whatever.

Again, but, you know, sort of from an outside perspective of how do we identify what needs to be reviewed and not reviewed? And how do we assess what you're doing, you know, in terms of the outcomes in terms of dose reconstruction?

But that was very helpful. Thank you.

MR. MAHER: Okay.

MR. CALHOUN: And this is Grady. And I just have one more thing to add. It's a little bit -- there is probably more prescription than it asks for credit for in the actual TBDs. There's a lot of "if-then" kind of statements. You know,

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if a person worked here, do this. If they worked there, find that.

So that is in those documents.

CHAIRMAN MELIUS: Yes.

MR. MAHER: And I think about methodology. I look at overestimates, underestimates, maximization techniques. Those are all -- I look at methodology. And they can occur at any site with any one claim.

CHAIRMAN MELIUS: Right.

MR. MAHER: And in some cases it has a mixture too.

CHAIRMAN MELIUS: Yes.

MR. MAHER: And I also want to point out, not to slight Liz because I know she's on the call, but Liz is our internal dosimetrist, principal dosimetrist, and she holds meetings weekly on issues of hey, we have issues of interpretation of internal dosimetry.

So there's other people that also feeds

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into this now.

CHAIRMAN MELIUS: Okay, okay. Thank you. Does anybody else have questions on that? Any other things?

MEMBER ZIEMER: This is Ziemer. I have one question for Grady.

You know, in some fields such as laboratory testing, they do what's called split samples where you send half of each sample to two different labs. And they analyze it. And you look at the results.

It just occurred to me, do you ever send the same case to two or more dose reconstructors to see how their results compare?

MR. CALHOUN: Well, we typically -- our review, once we get the dose reconstruction from the ORAU Team, it comes over here and one of our people review it and sign it.

And then it goes through another kind of a higher level of review that just to see if

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there's any significant policy changes or anything like that that have been changed. But we actually --

MEMBER ZIEMER: No, I understand what a review is. But I'm sort of asking about -- the one thing about consistency is between dose reconstructors. Do they come up with the same result? From the same case?

MR. CALHOUN: Yes. We actually have a blind program that we do over here as well.

MEMBER ZIEMER: Okay.

MR. CALHOUN: We haven't finished a lot of those lately because other items. But we kind of found that we were running into the same problem that SC&A was, in that we -- even us, we didn't have ready access to the tools that were used out there.

And I think we fixed that problem. But we truly picked at random. And so what happened was, when you've got an overestimate or an underestimate and there's somewhat of a

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discrepancy there, it's not very important. Because it can be a really big overestimate or a very little overestimate. And as long as it's compensable, it's not a big deal.

Now, when the SC&A chooses the 48 to 52, or the Work Group does, that would require a lot more a review. And to this point, we've not done that. We've just picked at random.

CHAIRMAN MELIUS: Any other questions? Okay.

MEMBER KOTELCHUCK: Jim?

CHAIRMAN MELIUS: Yes?

MEMBER KOTELCHUCK: Okay. Coming back to something that we talked about before on the issue of the blind reviews.

CHAIRMAN MELIUS: Yes.

MEMBER KOTELCHUCK: I had a further thought if I may come back. By the time we're at 14 blind reviews, it makes some sense to worry about are we making sure that we've spread the blind

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reviews out among the appropriate sites.

And I just went back to my little table of the blind -- of the 14 we've done. And I see we've done a couple of Rocky Flats. We have three Hanford's that we've done.

But that actually -- we should be thinking now as we accumulate blind reviews, that we in fact cover a reasonable spectrum of the sites. And make sure that there are not medium and large sites that are not being reviewed just because.

So, that's something for the future that we ought to do.

CHAIRMAN MELIUS: Yes. And I think Paul and I were referring to that. But also, in terms of sites where there's not a Site Profile or, you know, --

MEMBER KOTELCHUCK: Yes. Right.

CHAIRMAN MELIUS: Which it's generally the smaller sites. So, I don't think we want to exclude them. But we certainly need to be

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spreading these out.

MEMBER KOTELCHUCK: Right. And I agree with you on the smaller sites.

CHAIRMAN MELIUS: Yes.

MEMBER KOTELCHUCK: The smaller sites need special attention because they're small.

CHAIRMAN MELIUS: Okay.

MEMBER KOTELCHUCK: Yes. Agreed.

CHAIRMAN MELIUS: Okay. Back to sort of consistency issues. I think what we need to work out there and I haven't thought it through, and I don't know if other Work Group Members have thoughts on how we do this.

But it's how we select -- how we target these. And how many do we have to do to show consistency or inconsistency? I think it's tricky and difficult.

And that's sort of why I was trying to get a sense of what, you know, can we get a better overview of the dose reconstruction methods? And

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then can we -- that are actually used.

And then thinking about what types of situations we want to target where we think that consistency is going to be more difficult to achieve I guess is a way of putting it.

And I don't know if anybody has thoughts on that. That is maybe something we need to think about and come back to.

MEMBER ZIEMER: Well, it's certainly going to be more of an issue for sites that are not -- where we don't have the kind of detailed methodologies.

I assume the workbook sites will -- the sites that have detailed workbooks will inherently be more consistent in their outcomes. Would that be a fair statement Dave?

MEMBER KOTELCHUCK: I think so. I think so.

MEMBER ZIEMER: So, when we're talking about consistency here, I guess we're talking about

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people doing things the same way.

And I think we've already identified that a lot of the inconsistencies hover around assumptions. So, and the assumptions seem to turn up more in sites that are not well characterized.

I'm sort of thinking off the top of my head here.

If we're going to focus on consistency, it kind of leads us to sampling certain types of sites I guess.

CHAIRMAN MELIUS: Yes.

MEMBER KOTELCHUCK: Right. And this is a place where I feel that you folks who have been on the Board from the beginning, not only have a real advantage, have real knowledge that I lack just as a relatively new Board Member.

I mean, I haven't, you know, I haven't seen the cases, a lot of the cases where -- I mean, you have to see a lot of cases to know what's usual and what's unusual. And what kinds of unusual

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things may turn up.

So, those are -- certainly I feel like I can use help in trying to identify some of those sorts of situations.

MEMBER ZIEMER: Jim, Ziemer again.

CHAIRMAN MELIUS: Well, you bring a fresh perspective on it, Dave.

MEMBER KOTELCHUCK: Well, you know, but --

CHAIRMAN MELIUS: But we'll look at it that way. We don't want to, you know, pigeonhole you as the junior Member of the --

MEMBER KOTELCHUCK: Well, you know, you can say different perspective. But I also see that if you need to have a heart operation, what do you want to do? Go to a person who's been doing them for years. Or go to a person who's done half a dozen and they were all successful.

CHAIRMAN MELIUS: Yes.

MEMBER KOTELCHUCK: Well, I think I

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know who I'd choose. So, but in this case for purely sort of unusual things, oddball things, it's not -- one might have a new perspective on things that you have been doing.

But you won't have a perspective on things that you haven't seen done or you haven't noticed happened in the past.

CHAIRMAN MELIUS: Yes. I'll bring up another issue where I think consistency, you know, maybe a -- may be problematic. And that's how to what extent incidents, or, you know, acute exposures or accidents are taken into account in dose reconstruction.

MEMBER KOTELCHUCK: Yes.

CHAIRMAN MELIUS: And now, you know, we've wrestled with that for a long while. A lot of it's, you know, issues of documentation and so forth.

But, to me at least, I can think of instances where it would come up and at least in

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the public comments on our SEC evaluations and -- or just general public comments on dose reconstruction where people are -- claimants raise concerns about, you know, why was this, you know, why did they not know about and why didn't they include this in my dose reconstruction and that?

So, it may be not on the sort of the actual dose reconstruction. But what information is taken into account on the dose reconstruction.

Does anybody have any -- is that making sense, I guess?

MEMBER ZIEMER: Well, that makes sense to me. I think that's an important issue.

It also occurred to me, and I know we don't -- this is a Board responsibility. But it seems to me, since our contractor invests a lot of time in the dose reconstruction efforts, that they may be able to observe or make note of things that they believe are not consistent. And alert us to those as well.

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CHAIRMAN MELIUS: Yes.

MEMBER KOTELCHUCK: Yes.

CHAIRMAN MELIUS: And I'm going to raise an old issue, which got put to bed by the lawyers many years ago. But I think it's another somewhat related to incidents.

But I think the overall is how the interviews are evaluated and incorporated into the dose reconstruction process. And Dave, since you're new, we had a long discussion and sort of internal disagreements within the Board and with NIOSH about our ability as part of the blind reviews to go out and re-interview the claimants.

And it just got everyone concerned about doing that. And so, we decided to -- the Board decided not to -- not sort of hold that in abeyance and whether we need to go, you know, in some future time consider that or not.

And I just want to mention it. And I think a lot of that has to do with -- now the

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documentation is better. And at least individual reviews, dose reconstructions that are done, I see a lot more reference to the interviews and evaluation of them. That I think is helpful.

But I think in the area of incidents is where it's more problematic. And some of that's just inherent in the fact that, you know, the interviews were often with survivors and people that really don't know what their spouse or father or mother did at the -- in working at the site.

At any level of detail because there was secrecy, et cetera, in time.

And one of the things we can do is, I have no problems with, is suggesting that SC&A, you know, prepare a short report suggesting particular areas were there may be issues with, you know, consistency that we could, you know, should be focusing on.

Does that make sense to the other Work Group Members?

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MEMBER BEACH: Yes, Jim. This is Josie. That makes perfect sense. And I think your comment on the interviews, it's very valuable to interview workers.

And I agree, you have to have the interviews with the workers and not necessarily survivors. But that's an important key.

MEMBER KOTELCHUCK: Yes. I agree also. I think both the incidents, accidents/incidents recording and what we do with the CATI reviews is important.

And I agree with Josie that the interviews the survivors, I don't think what we -- if that's the only option we have, of course we do them.

But I must say, they are much less helpful than interviews with individual workers.

MR. MAHER: Yes. This is Ed Maher. Can I make a comment addressing that?

CHAIRMAN MELIUS: Sure. Go ahead Ed.

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MR. MAHER: All right. We had one claim where we interviewed the survivor. And the survivor was a technical person.

And she mentioned that this individual was involved in the SL-1 accident. And of course those records were not given to us by the site. We had to go hunting for them.

And sure enough, she was exactly right. So, we don't treat survivor interviews lightly. Sometimes they're spot on.

CHAIRMAN MELIUS: Yes. No, it's a good point. And I think usually it's the opposite error is that they just don't -- aren't aware of that.

Or they're -- the information they have about an incident or an exposure is so vague it's, you know, -- well, you know, by the passage of time, well it was 20 years ago or whatever.

And unless you, you know, it's hard to evaluate that unless you can link it to a known

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incident or, you know, some documentation of that. And I think we know from at least some of the sites that the documentation is poor on those incidents.

MEMBER KOTELCHUCK: Well, we have an obligation no matter what. You know, no matter how useful or not useful they are, we have an obligation to interview those folks.

And it is well taken that sometimes it provides really good information that we don't otherwise have. But whether or not we get good information, it's up to us to evaluate it.

But we need to call them.

CHAIRMAN MELIUS: Right. Yes.

MR. MAHER: And let me also add that, you know, the quality of a survivor interview, the technical quality is not going to be --

CHAIRMAN MELIUS: Yes.

MR. MAHER: Except in rare instances. But I would also say in the past, and I'm talking about ten years ago, if in the CATI we saw a

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reference to an incident, and we saw them all the time saying, I was contaminated with skin counts through such and such.

You know, we will attempt to reconstruct it. Now if the information was not relevant to dose reconstruction, a lot of people talk about chemical exposures --

CHAIRMAN MELIUS: Right.

MR. MAHER: We would not mention it. And that was probably a mistake. Because we should at least mention it in the pre-narrative of the DR report. And say it has no bearing on the dose reconstruction.

Now we do that more consistently.

CHAIRMAN MELIUS: Yes. Yes. No, I think the documentation that you've done on the incidences and based on the interviews has been much better.

Any other questions on the consistency issue?

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For our next steps, what I was going to suggest one is the -- I think we gave two assignments for Dave I think it was.

And I think one is -- well, first off for Dave is the presentation on summary of the blind reviews that have been completed so far for an upcoming either Board meeting or a Board call.

And leave it up to Dave to decide, you know, what's appropriate timing and so forth on that. We'd do that.

And then I think we probably need to think more, you now, and Dave may want to talk to the other Members of the Dose Reconstruction Review Committee about, you know, this issue of how do we handle -- what's the best way of handling and prioritizing the time and resources available to that Committee in terms of doing reviews?

And we probably should come back and for this group is to have some discussion which we really haven't done today on, you know, sort of

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selection of the -- of cases. And how we want to approach that.

So we can make a recommendation. Though I don't think that recommendation is going to be overly prescriptive simply because I think really the Dose Reconstruction Review Committee sort of needs to do that on an ongoing basis.

But I think if we can put some framework that the whole Board can agree on, I think that would be helpful. Then I think we need to come back and talk about the -- sort of think about how we -- consistency, what information would be useful.

And I think we're asking SC&A to, you know, give us a short report that would, you know, recommend certain -- where they think that the consistency issue -- consistency maybe an issue that, you know, in terms of how we select and what we should focus on.

Am I missing anything?

MEMBER ZIEMER: I think that covers it

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pretty well.

CHAIRMAN MELIUS: Okay. Any further thoughts?

MEMBER KOTELCHUCK: Sounds good.

CHAIRMAN MELIUS: Okay. At least for some of us it's getting towards lunch time. So, we get a little -- we slow down a little bit.

MEMBER KOTELCHUCK: Okay.

CHAIRMAN MELIUS: But if you have to go get another cup of coffee or --

MEMBER BEACH: Yes.

MEMBER KOTELCHUCK: Very good.

CHAIRMAN MELIUS: Early morning. But, anyway. So, I thank everybody for their time.

Ted, do you have any?

MR. KATZ: No, I don't. But thanks. That was a good meeting.

CHAIRMAN MELIUS: Yes. Final word. And thank everybody. And, oh, I know what is the final.

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What I will do, they're probably overdue now, because -- but I will prepare a set aside. We've set aside 45 minutes for the Board meeting I think on the agenda.

And I will just sort of present an update on what we've been discussing sort of under these general categories. If that's reasonable.

And then, I mean, I think what we really want to do is generate, you know, more Board input and discussion. And hopefully we can. And then when we get the report back from SC&A, I'll figure out, we'll hold another meeting. And by that time, I think people will have more of a chance to review the -- their recent report that they sent us last week.

And that may generate some other discussion also.

MEMBER KOTELCHUCK: Very good.

CHAIRMAN MELIUS: Okay. Thank you all.

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MEMBER KOTELCHUCK: Thank you.

CHAIRMAN MELIUS: And if we don't talk to you, we'll see you in Oakland --

MEMBER KOTELCHUCK: Very good.

MEMBER BEACH: Okay.

CHAIRMAN MELIUS: In a couple of weeks. And actually some of you in Cincinnati next week.

MEMBER BEACH: Oh, that's right. See you Thursday.

CHAIRMAN MELIUS: We have the Idaho.

MEMBER BEACH: Yes, we do.

CHAIRMAN MELIUS: Tuesday. Tuesday, not Thursday.

MEMBER BEACH: Yes. See you next week.

CHAIRMAN MELIUS: Okay. Take care. Bye-bye.

MEMBER KOTELCHUCK: Bye-bye, all.

(Whereupon, the above-entitled matter was concluded at 11:52 a.m.)