U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL
NATIONAL INSTITUTE FOR OCCUPATIONAL
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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 30, 2017

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The Subcommittee convened via teleconference at 2:00 p.m. Eastern Time, James M. Melius, Chair, presiding.

PRESENT:

JAMES M. MELIUS, Chair
JOSIE BEACH, Member
DAVID KOTELCHUCK, Member
PAUL L. ZIEMER, Member

ALSO PRESENT:

TED KATZ, Designated Federal Official
BOB BARTON, SC&A
KATHY BEHLING, SC&A
RON BUCHANAN, SC&A
GRADY CALHOUN, DCAS
ROSE GOGLIOTTI, SC&A
MARK GRIFFON, NIOSH Contractor
STU HINNEFELD, DCAS
JENNY LIN, HHS
JOHN MAURO, SC&A
JIM NETON, DCAS
JOHN STIVER, SC&A

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2:02 p.m.

Welcome and Roll Call

MR. KATZ: So, welcome, this is the Advisory Board on Radiation and Worker Health. It is the Dose Reconstruction Methods Work Group and Dose Reconstruction Review Methods Work Group.

And the agenda for today and as well as a primary document that we'll be discussing today is posted on the NIOSH website under this program under the Board Section Schedule of Meetings today's date.

So, anyone online can go there and pull up that. It's quite a big document that will be discussed today.

All right, and so, otherwise, let me just take the roll call as there aren’t any conflict of interest matters.

Actually, I could just deal with the roll call because I know who's on.

(Roll call.)

MR. KATZ: Okay then, the Members of

Board, I'm going to mute your phones and, Dr. Melius, it's your meeting.

CHAIR MELIUS: Okay, thank you. Thank you, Ted.

I think we're going to be discussing, there are two documents today. One is the one -- the large one by Mark Griffon and then, I can't remember if it was sent out separately, but it's also included as the second appendix on Mark's document is a document dated March 11, 2016 from SC&A from Rose regarding -- sort of summarizing of some ideas on ways that we can look into or subjects for looking at consistency and among the dose reconstructions in terms of our review process.

I don't think we've met since some time in 2015, maybe in '16, I can't remember. But, since our meeting, one is for the Review Subcommittee to sort of get caught up and then starting -- where we started any new endeavors.

And then, secondly, we've also been waiting for Mark's report to get completed and through review. And so, back and forth there.

So, we have that.

I think, if I'm understanding things right, we're almost at the point where the Dose Construction Review Subcommittee is sort of caught up, I think is fair to say. There's still some work to do, but they're going along at decent speed.

I guess one of us just got taken away.

MEMBER KOTELCHUCK: Right, yes, we're moving along.

CHAIR MELIUS: Yes. And so, we need to start thinking about the new assignments for them. So, one of the rationales for getting this Methods Committee meeting again and trying to move that whole process along with that.

Since we're meeting in a couple weeks on the agenda for the Board meeting, we have sort of a presentation from Dave Kotelchuck to bring us up to date on where the Subcommittee is.

And then, we'll also talk about the methods or new methods.

Then, we'll get a more complete presentation of Mark's report. But, all I asked

him to do today was to sort of summarize it.

And, I was hoping to accomplish this so everybody knows that information is out there and thinking about what we need to do.

Obviously, if we are going to change the approach to dose reconstruction reviews, that, you know, really is a decision for the full Board to make. And, hoping at our meeting in Albuquerque in a few weeks, we'll have some good discussion on that and be able to at least chart our plan for moving forward on this.

So, let me start with asking Mark to do a brief summary of his report.

Are you there, Mark?

Report on Assuring Consistency in Dose Reconstructions

MR. GRIFFON: Sure. This is Mark Griffon, contractor for NIOSH.

And, I, yes, I'll keep it brief today. I planned in this call just to give an overview and then have a quite a bit more granularity in the presentation in a couple weeks in Albuquerque, if that makes sense.

So, first of all, I mean, the focus of this report was to try to look a little further at, and maybe in more detail, look at where professional judgments are necessary in the dose reconstructions.

And, I did that through -- we selected a couple sample sites and, perhaps, not completely representative of all sites, but we wanted to have at least one large DOE site to look at and one AWE type site to look at as examples. And, I looked at Savannah River and Linde Ceramics for the two examples.

The idea was to, first of all, determine whether professional judgments could result in potential inconsistencies. In other words, are these judgments such that two different dose reconstructors could get significantly different, you know, answers or doses or whatever in certain areas of the dose reconstruction.

And then, possible approaches for assessing the dose reconstructions to determine where professional judgments may result in these

inconsistencies.

So, the assessment, you know, sort of the how can we examine that?

And, if you look at the document itself, I did an executive summary. And then, the frame of the report. And then, further back in the report, there's a section on Savannah River, the review I did of Savannah River and then Linde and then several appendices at the end, or attachments at the end.

To look at -- to do this review, just quickly, I mean, I looked at those two sites. I reviewed a lot of different TBDs, TIBs and procedures and in more depth than I --

And certainly, I appreciated what happens in the dose reconstruction reviews. I went down into the details of calculating the doses, so I had a little re-learning curve on some of that.

I also looked at SC&A's reviews of a lot of the TIBs and TBDs and Technical Basis Documents.

Importantly, I reviewed internal

guidance documents, such examples, DR Guidelines for Savannah River Site.

And so, these are not controlled documents. They're sort of done in between revisions of TBDs sometimes. And, I think sometimes they spend a little more detail of prescriptive guidelines for the dose reconstructor to do certain parts of the dose reconstruction, whether it be external or internal dose calculations, that sort of thing.

And, they become very important in the process.

And then, I looked at many individual cases. My focus on the cases was from trying to select best estimate cases through querying NOCTS. NOCTS usually is -- to get those, you sort of have to look at full internal, full external. I couldn't necessarily query based on 45 to 52 percent PoC, but I tried to get the ones that would likely be best estimate cases.

And I also did, some ones that were identified in some of the other databases, tracking databases, where findings have been

found, even the Board's -- the Dose Reconstruction Subcommittee, a few of those cases I also included.

One -- so, one thing I want to note up front is I sort of defined this notion of two general categories of judgments.

And, one is what I defined as personal judgments and the other is program judgments.

And, personal judgments are -- I defined them as being judgments that the individual dose reconstructor has to make in reconstructing an individual case.

Whereas, the program judgments are still professional judgments, but they're made sort of for the dose reconstructor ahead of time. So, they're either in Technical Information Bulletins or the Tech Basis Document or these DR Guidelines and through the work of ORAU and then often reviewed by NIOSH and the Board.

These procedures have professional judgments in them, but they're not individual judgments that the dose reconstructor has to worry about. They've been taken care of. They're

sort of prescribed for the case work.

So, and then, if you look at a lot of my -- there is a listing of sort of personal judgments. And, in Albuquerque I will expand on some of these so you get a better sense of the specific ones, especially the ones I found at Savannah River and more at Savannah River, and I'll get to it in a second.

But, a lot of the, I think, if you look at the two documents you have, not surprisingly, these overlap quite a bit with ones that SC&A identified through, you know, through their ten years or so of experiences in dose reconstructions.

And, you know, they include the one that we all remember very well is the judgments regarding worker location for the purposes of, you know, both internal and external dose estimates.

I think the -- an example of one of those that came up often in -- while I was on the Dose Reconstruction Subcommittee was the assignment of neutron dose.

And, sometimes you wouldn't have data and there had to be a judgment depending on the individual's job title and/or work location whether they were likely -- or whether neutron dose should be assigned.

So, that's one we all remember very well.

Job title and this sometimes gets into the construction trades question versus non-CTW jobs by calculation of missed dose both internal and external.

And, judgments require reconciling discrepancies and, I don't need to go through all of them, but that's just some of the personal judgments.

As an example for the personal judgments, you know, resolving missed doses, the individual dose reconstructor has -- often has a few options.

They can use either nearby doses. They can use a coworker dose of, you know, sometimes an option of either if it's in the 95th percentile of the coworker dose or they can use

LOD over 2 in many cases to fill in those missed dose areas.

Some of that is, I should note, is often pretty well prescribed on like for Savannah River where they've done the guidance, the DR Guidance lays out pretty precisely in different time periods what some of the -- it certainly narrows down the options for the individual, you know, individual dose reconstruction to help facilitate that decision.

And then, the other broad category that is the professional judgment. And, you know, some that I noted, and I included this in the report because I think some of these are fairly important and very cross cutting issues.

And, for instance, one of them would be the judgment on how to handle doses from residual contamination at the AWE sites. So, this after the operational period and, I believe it's TIB-70 outlined this protocol.

There's other ones that have, you know, certainly have come up over the years and some are still included in the Board tracking

system as sort of global issues.

One would be, even estimating uncertainty for internal, external doses, there is some overall guidance and there's some level of individual or site specific approaches that are used there.

And, you know, and so, I mean, that's -- this is why I used these is because -- or include these is because they're pretty cross cutting issues.

Now, I should note that, you know, that's what the Board's been doing for 13 or so years is looking at a lot of these, you know, the procedures, the TIBs, everything else and reviewing them and approving these, what I would call program judgments.

So, one reason I raise this, though, is that, and Jim Neton wrote a very nice summary document for the first one that I just raised, the residual contamination, summarizing the sort of history of that document and the review by SC&A and the Board and then the sort of final agreement by the Board of the approach in the

final revision of TIB-70.

And, I thought that was a very useful summary. And, for some of these other issues, I'll use uncertainty as an example, I found myself really, really trying to track through and see where these issues stood and how and whether they were completely closed out by the Board.

And, I thought that, for some of the bigger issues, it might be useful to have a nice summary document, you know, outlining all the years of work that have gone into these issues and the final decision that, you know, that was arrived upon.

And then, I'll just go into the -- so, some recommendations that came out of this.

The first recommendation was to do assessments in these areas that were identified for the personal professional judgments.

And, I left some options of how, and the options and/or a combination of things that I think might be appropriate, including ORAU and NIOSH blind and/or focused reviews.

And, the idea of -- the idea -- and

then, when the Board blind and focus reviews and also another part of that recommendation was to perhaps refine the current approach for the peer review by NIOSH to get a greater percentage of best estimate cases that are -- that go through the comprehensive review.

The one thing, when I say ORAU, I'm not certain how this would work but, if for ORAU, I know right now that they -- I think it was in 2012 enhanced their internal peer review.

So, and I believe I have this right, that all their best estimate cases, anything in that 45 to 52 percent range of PoC, they were actually put through an extra peer review for those cases.

And, the idea of this -- these -- for the ORAU blinds would be to take one case that would have some of these professional judgments and give it to two separate dose reconstructors and see if, given the guidance available to see if they came up with the same answers and where there were inconsistencies. And so, sort of a split sample approach internally before, you

know, before it gets to the Board.

I think, you know, one note I will make on this recommendation is that I think this works -- this will work best if there is a -- well, let me preface this by saying that, over the years in this program, it's obvious that the improvement in the sort of question we had earlier on in the Board about showing the work in the case files, and it's drastically improved from the early days.

And, but, on the best estimate cases, I think there is some enhancements that might be made. And, I give in the report an example of the Hanford. Hanford has a workbook, a time line workbook, for cases.

I'm not sure how old or new that, you know, when they started using this, but it even notes in the instructions on the workbook how the importance of using the time line to do the dose reconstructions including that it will make the review, the peer reviews, more efficient.

That, in other words, the more of the work that is shown up front, it makes it a lot

easier in the review process so there is no -- less guess work on what, you know, where the judgments were made and what the basis for making a certain judgment was.

If it's just included right there in some sort of a road map or a time line of the case, that would make it easier.

And, you know, so, that's just one point I wanted to make on that.

The other recommendations, and these will be quicker because I'm sure people want to discuss this and have questions.

Recommendation two was what I just mentioned a few minutes ago about a summary document for some of these bigger issues, the program-wide issues.

And, recommendation three is similarly is looking at these sort of the broader approach on AWE sites. And, they're all based on similar case underlying data.

And, I think it would be worthwhile to do some inter-comparison to assure that similar protocol and, you know, the hierarchical approach

of which data should be used when available, you know, that should be compared across some of these sites to make sure that there is consistency there in the way that the sort of non-personal dosimetry data is being used to estimate personal doses.

And then, moving toward the end of the executive summary, the additional recommendations.

One was for a tracking system. And, I think there is a few database tracking systems right now that have some of the internal peer review information.

And, I know that since 2012, ORAU has done a more expansive tracking of these sort of internal peer review findings.

And, I think it may be useful to see if some of those various ones can be merged into one database so that if there's a way to track the Board findings with the internal findings.

And perhaps some things will jump out at us there, you know, certain types of -- I mean, anecdotally, we see this, but searching through

the database might show some other things where professional judgments are coming up in findings fairly frequently.

The second was this -- I think I mentioned this earlier, the increased level of peer review for best estimate cases or cases with significant professional judgment.

And, that was currently, I believe NIOSH does a comprehensive peer review of five percent of the cases that come from ORAU. And, I believe they are randomly selected.

And, if possible, if practicable, I would say that it may be -- you may want to bias that sampling a little towards best estimate type cases.

Although, we, you know, I know the Board already reviews many, many, many of the best estimate cases, but that's just one other possible additional peer review.

And, as I was, you know, writing this document, ORAU also did note to me that they, I believe, again, it was in 2012, that they modified their own QA/QC approach to require an

additional peer review for the best estimate type cases.

So, and then, the last one was the idea, during this review, I looked at a lot of the CATI information.

And, you know, one thing I wanted to look at was how the judgments were made, if individuals noted incidents or accidents or those sort of information in their CATI, what sort of judgments had to be made in terms of handling that.

But, also, another thing that struck me was, you know, the question, and this is perhaps an older issue, but the question of whether the CATI information might be useful in aggregate.

I did a sampling of certain -- a few job titles and found that there was a fairly, well, not always including great information on dates, it was just a pretty high level of specificity about a number of accidents and incidents and that sorts of thing.

And, I thought the dose reconstructor

is handling this, you know, in the individual claims development, but would there be any utility in sort of aggregating some of this data from the CATIs, from the questionnaires.

And, I also think that, and I'm not sure about this, but I believe early on in the program, there were some efforts to look at the -- some of the AWE questionnaires sort of in aggregate form.

But, that was on sites where they had a much -- NIOSH and ORAU had a much less certain idea of the history of the sites.

So, you know, but anyway, that's sort of the final recommendation along the lines of CATI.

And, I guess I'll leave it there. I mean, I think it's, you know, that's, like I said, I plan to present and give some more detail on the individual professional judgment examples, personal professional judgment examples that I found, especially in the Savannah River Site example.

And, I think a lot of them are

probably applicable at many of the DOE sites. You know, the one I just talked about, the missed dose and how do you form the absent doses for external, for internal. You know, there's a lot of overlap there.

And, that does bring up one final issue I think which is important in terms of the assessment that's done, I think it would be useful, at least on some of these professional judgment instances, in looking at -- or looking at them in a cross cutting way.

For example, their internal dose is largely covered by TIB-60, I believe. And, it's applicable at several or many of the DOE sites. And, it is the overarching guidance.

And, it would be useful to see if the internal dose reconstructor is doing the cases for Hanford are following sort of a similar claimant favorable approach as the ones at Savannah River?

You know, are they using similar rules of thumb in cases where one example would be the bioassay data runs through a certain time period

and then there's another ten years where the person is employed, how do they handle internal dose for that later ten years of employment?

And there's some, again, there's guidelines on that in the TIBs. It would be -- I think it would be useful to assure that it's being handled consistently across sites as well as within one site. But, that's just one example of that.

And, that's it, Jim. I'll leave it there for now.

CHAIR MELIUS: And, I'll take my call off mute.

Thanks, Mark.

MR. GRIFFON: Okay.

CHAIR MELIUS: That was helpful. I didn't want you to think that we had all hung up or something.

MR. GRIFFON: Not at all, not at all, am I connected still?

CHAIR MELIUS: You were talking to a conference call for a half hour.

MR. GRIFFON: Right.

CHAIR MELIUS: Twenty minutes, whatever.

No, I mean, what struck me about your report and things like this is, you know, how complicated this all is. And, so, how do we pick the priorities, where to look and so forth and make those, you know, useful to the program.

And, again, not in a way that -- not to sort of catch fault with ORAU or NIOSH in terms of what they're doing, but just, you know, assuring that things, you know, are being done appropriately and are there ways of improving the program going forward.

So, anybody else on the Work Group have questions, comments at this point?

MR. GRIFFON: Jim, can I make one more comment just before you open it up? Is that okay?

CHAIR MELIUS: Yes, sure.

MR. GRIFFON: I just wanted to say that, you know, the other thing, and it is within the body of my report, but I want to emphasize it here is that, this is my opinion anyway, I think the focus on any assessment that's done here

should be on improving the system and assuring consistency, not to try to question or red flag any individual dose reconstructor.

You know, like this dose reconstructor A is always not conservative and this one is always doing it conservative, you know.

So, I believe this shouldn't be in any way looking at sort of the, you know, results that way, but more of the process so that, if, you know, as I looked at these DR Guidance, the guidelines for Savannah River have evolved over, I think, I forget, more than seven or eight different versions of the DR Guidelines.

And, it's clear in through my review and through discussions with ORAU and NIOSH that there is very much a team approach so that when they run into one of these, you know, questions on professional judgment, they don't just do it in isolation and try to, you know, they will bring it back to the team sometimes and, you know, say how do I handle this.

And, the SRS group, especially, it seems that the site level group gets together and

shares these, you know.

And then, often, that'll -- that may result in, I think, and that's why some of these guidelines evolve, is that they run into these questions and then they say, okay, let's add that to the guidelines to be as prescriptive in certain areas as we can.

Now, you know, the other point I think that's important is, you know, this is professional judgment. On some level, you can only get so prescriptive. So, then the way might be to, you know, fix other parts of the QA.

You know, maybe, you know, for these certain areas we need, you know, to assure there's a, you know, the double peer review or whatever, that sort of thing.

And, but I think there is -- they've done a lot in terms of this sort of shared approach I think helps to ensure consistency.

The workbook certainly, over the years, has evolved so that you, you know, there's a lot of prescriptive information in there that makes sure the dose reconstructor does it a

certain way, given certain up front assumptions, a lot of fields then are almost auto filled, you know.

So, that's a good thing, that's the good work that's been done over the years.

So, anyway, I just -- the only reason I mention that is because I know there's a source of discussion on one of the Subcommittees, I think it was the Dose Reconstruction Subcommittee.

MEMBER KOTELCHUCK: That's correct, yes.

MR. GRIFFON: Was, you know, do we really want to get into the questioning someone's professional judgments?

And, I say no, that's my opinion. I think this should be focused on the process and what can we find out that may help to add better instructions or better, you know, better QA process, whatever. It's not about comparing individuals' work.

So, anyway, that's all, that's it.

Path Forward and/or Work Group Recommendations for Dose Reconstruction Case Reviews

CHAIR MELIUS: See, I'm not sure I agree with you on that, Mark, in the sense that I agree that we're not here to try to, you know, evaluate each dose reconstructor at ORAU.

But, we do have to look at those -- I mean, it is legitimate to look at are those professional judgments made, you know, consistently so that, you know, a claimant gets treated the same as the other.

And, if, you know, they were working side by side and had similar histories and so forth and so that.

And, again, I expect that they are doing that because I think the process is pretty good and robust. But, I think it's our job as the Advisory Board and what the legislation asked us to do is to confirm that and do that.

But, then, if we find that there's inconsistency, then it's up to the program to figure out why and to do that. And, I suspect that maybe there would be a need for

clarification or more -- better guidelines or whatever.

But, that's not, you know, it is a complicated process and --

MR. GRIFFON: Yes, okay, yes.

CHAIR MELIUS: -- we're not expecting everything to match up perfectly either. I mean, it can't, it's not the nature of the information that people have to work with. And, we have to recognize that at the same time.

They have limited information and, therefore, they have to make judgments.

MR. GRIFFON: Yes, okay.

CHAIR MELIUS: So, I think that's --

MEMBER ZIEMER: Good point.

CHAIR MELIUS: Yes, Paul?

MEMBER ZIEMER: Yes, good point.

If I could make some comments as well. First of all, let me say hello to Mark, I know -- I'm aware he's attended a number of meetings recently. But, since I haven't been able to travel, I haven't seen him since he left the Board. So, good to have you back, Mark, working

on this.

I've appreciated all the work you've done on this particular report.

Several items that struck me, I think, worth pursuing, not just the recommendations per se, but related to them.

The issue of the internal guidance documents on the major sites and the possibility of them impacting doses more significantly than one might otherwise guess.

I think you've raised this, sort of as a point, and I think that one is worth pursuing as well.

The impact of the changes in the internal guidance documents versus the changes in the basis documents as well.

Another one I thought was worth pursuing was the use of the time lines. Mark, you provided a lot of details on dose reconstruction that I wasn't even personally aware of. I thought I knew pretty well how things were done, but the time line thing struck me.

It sounded like it's done at some

sites and not at others. And, perhaps that was not the case, but it seemed like you were raising that question. And, it seemed to me that was another one worth pursuing.

The other thing I wanted to mention, of course, you raised a lot of things that related to how dose reconstruction is done at Savannah River. And, it seems to me that we do need to -- and you did some inter-comparisons of some of the different issues there.

I think it's also important that we think about inter-comparing several of the major sites to look for those kind of consistencies in approaches where the -- where we have either the guidance documents or Technical Basis Documents.

I know we're trying to be consistent on that and we have a number of documents that cut across all of the sites. So, the consistency across the sites on these kind of judgmental things I think is going to be important.

The other thing I'm going to mention, this is one thing that I'm always picking on and that is, editing. I guess I'll ask, is NIOSH

going to edit the report when your draft is at some point, Mark?

When I say edit, I'm not talking about editing the technical content so much as the sort of things I also look for like: “data was,” “data were,” use of “howevers.”

I didn't see any dangling participles, so I'm okay there. But, who does the editing on these things?

MR. GRIFFON: I think we should stop there, Paul. You didn't see any dangling participles.

MEMBER ZIEMER: I should stop there?

CHAIR MELIUS: Mark, now that you're off the Board, you're like this open season so --

MR. GRIFFON: Yes, I know. I haven't talked to Stu, but even after I submit it --

MEMBER ZIEMER: Well, there's just some --

MR. GRIFFON: I'm not an editor.

MEMBER ZIEMER: -- regular editing that I think will need to be done. And, I don't

want to have to do it on this length of a report myself, but I wondered if NIOSH is going to do that?

Then the other thing I assume we're going to hear from ORAU and NIOSH on the recommendations to make sure that if you or we have misunderstood what's being recommended or if they're already doing these that they clarify that.

So, those are the comments, my initial comments on it. But I appreciate all the work that was done on it. I think it's a good report.

MR. GRIFFON: Thank you, Paul. And, it's good to hear you and I hope I see you in -- you're going to be in Albuquerque, I hope.

MEMBER ZIEMER: I won't be for medical reasons. So, I'll be on the phone.

MR. GRIFFON: Good to hear from you, yes, thank you, Paul.

CHAIR MELIUS: Any other -- Dave?

Yes, go ahead.

MEMBER KOTELCHUCK: First, I thought overall, it was a very good report. And, it

helped clarify the confusion I think when we first discussed this in the Dose Reconstruction Review Subcommittee, that it's not a question of one professional looking at another professional and questioning them.

But, what you suggested was that there's a percentile group and there are programmatic issues.

And, in a way, what you've showed many of them, and I'm -- I'll talk about specific things later -- but, it seems to me that the programmatic dose reconstruction judgments can -- we can use the -- we can focus on those and use those either to narrow the scope of personal professional judgments or give better guidance to the persons doing the dose reconstruction so that there's a more limited -- better guidance for them.

So, it was quite useful and convincing to me of the importance and value of this effort.

And, when we later as we talk about specific items, I'll have some suggestions about things I would like to look at among the very

many different kinds of suggestions that you made.

Thank you.

MR. GRIFFON: Thank you, yes, thank you.

CHAIR MELIUS: Anybody else?

(No audible response.)

CHAIR MELIUS: I would just weigh in. I think, at least in major areas, think in a similar fashion.

And, I guess what -- and I think we've talked about this before, we sort of have this higher level procedure, TIB Review process and Site Profiles and so forth.

And then, sort of -- and then we have this, you know, individual case reviews and it's these, you know, guidance documents and other things that are sort of in between that don't always get done that you sort of translate the higher level document down to, you know, how do you -- how should dose reconstruction be done at an individual site.

And, again, there's this dynamic,

these sites are complicated and, you know, it's important that they -- these internal guidance documents be sort of flexible and can be updated relatively quickly.

At the same time, I think we need to think about, at what point do we, you know, review some of them or review -- how do we chose which ones that need to be reviewed and how do we also look at this issue of consistency across the different sites.

Or, how maybe some of the higher level documents are being applied at those sites. And are the, you know, are they all being done in a, you know, appropriate fashion?

So, I think that's sort of one task in sort of how to approach it is complicated.

I think the other one that I think that you brought up in yours is, I guess, I think they're related issues.

One is sort of the initial interviews that the claimants go through and how that information is used and so forth.

And then, you -- closely related to

that is how do we get a handle on, which always seems to be the most problematic area for people -- so claimants understand it is this whole issue of, you know, individual incidents and so forth, many of which are I think we found to be very poorly documented at many of the sites.

And so, the dose reconstructor is sort of left with, you know, limited information and limited documentation and trying to figure out what the potential exposure was.

And again, it's hard to say just how important it is overall, but certainly can be important in individual cases. And, obviously, it's further complicated by the fact that many of our claimants have died and, you know, the family is the claimant and have less information about the site.

So, I think that's another area we need to explore of doing things and sort of doing some sort of evaluation or study of the CATI interviews I think may be, you know, a focus study would may be one way of approaching that.

So, that was another idea that I sort

of liked that you had raised, Mark.

MR. GRIFFON: Yes, no, I think -- and I agree that it's -- and, I mean, it's a very fair point to say that you'd review many of the CATIs and a lot of them, even though they mentioned incidents, there is very little to help the dose reconstructor to go on.

They often don't have dates or areas or, you know. So, it does make it challenging.

But, I am curious whether, in aggregate -- so, yes, we at least put out the idea of perhaps a partial, you know, look at this at one of the sites to determine if there's any usefulness in aggregate data in this regard.

CHAIR MELIUS: Yes, it would be both aggregate data and then, this may be a pipe dream on my part, but it's sort of, you know, maybe one of those incidents was documented.

MR. GRIFFON: Right.

CHAIR MELIUS: You know, some sort of exposure evaluation, whatever did take place. And so, you know, maybe that information could be helpful. It wouldn't be in the individual's, you

know, you'd have to track it down in the aggregate and then see if it would apply to other reports of incidents from people.

MR. GRIFFON: Oh yes, I see what you're --

CHAIR MELIUS: Or areas, you know, that kind of thing. And, again, it may be -- I may be, you know, maybe wishful thinking on my part, but --

MR. GRIFFON: That would -- that might be challenging to piece together, but I know I reviewed several cases where there were mentions in the CATI of skin contamination and in the dose reconstruction report, the dose reconstructor found in a DOE record some, you know, instances where the person had been contaminated.

And, in some cases, they even did a, you know, a more detailed skin exposure, you know, focus using a VARSKIN code, they were able to do.

Because they actually had contamination numbers, you know.

CHAIR MELIUS: Yes.

MR. GRIFFON: They could do a dose to a certain area of the skin or whatever.

But, yes, piecing the CATIs together with the DOE records, yes, might be a challenge. But, I know what you mean. Yes, that was my hope also in one of the incidents that I actually mention in here, you know, with a Californium, not an incident, but work that the person was doing with the Californium source, and mentioned in the, I think, Section 9, the other work or other incidents or, you know.

And, you know, the question is, were other people involved in that work or in that area where they could have got similar exposures.

And, this might help shed light on some of those things.

MEMBER KOTELCHUCK: Dave?

CHAIR MELIUS: Yes?

MEMBER KOTELCHUCK: I want -- I have trouble getting my hands around the entire report. And I had hoped or assumed that today, what we might do would be to set a few priorities of issues that we think are fairly major and worth

the initial assessment.

And then go ahead and have, if you will, a series of our Working Group meetings to go over whole portions and to discuss some portions in detail about internal exposure, external, CATI, et cetera as well as some of the items raised in the SC&A report that Rose did earlier which do not quite overlap. They are specific issues rather than a broader statement of issues.

So, to me, I mean, I wish -- I would hope we could maybe set a few priorities today or to recommend to the Board.

CHAIR MELIUS: But what I was going to, I mean, that was a similar plan, but it was a little bit different than what you're suggesting, Dave.

MEMBER KOTELCHUCK: How's that?

CHAIR MELIUS: Was that, I really think it's important that the Board get as much involvement from the Board as we can on this effort.

It's an important function of the

Board to do, how we do individual case reviews and how we approach this.

So, what I was going to do was for -- after Mark does his presentation in Albuquerque is do a quick PowerPoint that would list some of those ideas that came out of it and get, you know, people's thoughts on -- Board Members thoughts on, you know, what are good, what are bad, where do we start? Are there other ideas they have?

MEMBER KOTELCHUCK: Well, that sounds good to me.

CHAIR MELIUS: Yes, and if you want to email me some of your thoughts beyond what's involved or Rose's report or what you think are priorities within that, I'll include those.

MEMBER KOTELCHUCK: I can do -- I'd be very glad to.

CHAIR MELIUS: Yes.

MEMBER KOTELCHUCK: I can just say one line off coworker data.

CHAIR MELIUS: Yes.

MEMBER KOTELCHUCK: Fifty or the 95th percentile, which have a major impact on the PoC.

But, yes, and I perhaps have a few others I'll email you.

MR. GRIFFON: That's very good, Dave.

And, I would just say, I think I did compare, I mean, it's not necessarily all the same issues that SC&A covered, but I -- in the front end of this report, it -- I tried to put them in broader terms.

But, if you get back into the Savannah River section, I think you'll see that a lot of these same things that the specifics about coworker data, about in vivo versus in vitro or the combination thereof.

I mean, some of the same things, I did.

MEMBER KOTELCHUCK: Okay, good, good.

MR. GRIFFON: Yes, yes, yes. I just felt it was, you know, it was -- I made it broader statements on the front end for discussion purposes, yes.

MEMBER KOTELCHUCK: That's right, okay, good, good. And I'll look at that a little more carefully, too.

MR. GRIFFON: Oh sure.

MEMBER KOTELCHUCK: In preparation for the meeting.

CHAIR MELIUS: Yes, and it is a lot to sort through.

MR. GRIFFON: And I also, in the PowerPoint I'm putting together now for the meeting in a couple weeks, I'm trying, I'm still working on it, but I'm trying to put a table that sort of gives the broad category and then some of the specifics and also making a slide that's readable for the audience.

You know, so but I'm trying to do some of that. And I think you're right, I think there are some maybe that, you know, the Board may want to start on as priorities and that might also allow you to fine tune the review approach.

I know in reviewing transcripts from past meetings, there was some question about how to do these assessments, too.

And I think that's going to -- I think you guys are going to have to get involved with that.

But I'm less concerned about, because I thought I remembered seeing some discussion about, well, we have to have, in order to do a review like this, we have to have people that worked in the exact same areas and did the exact same job and did the, you know.

And, I'm less convinced of that. I think if we focused on issues and then focused on is the guidance sufficient to make -- is the decision making process consistent rather than we're not looking to compare exact answers, but rather is the decision making process consistent?

If not, is the guidance -- can the guidance be improved or can other parts of the system improve?

That's sort of my look at this.

MEMBER KOTELCHUCK: Yes, that would be helpful. Okay.

CHAIR MELIUS: And, I would just add to that as one sort of the idea is one is, you know, there may be some preliminary work we need to do just to see if some of these ideas are feasible. Which sites they're feasible at and so

forth.

So, that's one reason we may want to get started on some sort of separate evaluations that would just sort of, you know, be sort of pilots or whatever, studies to let us see if it makes sense to do.

I think the other thing they could think about is how do we prioritize the, you know, what we focus on and what we do.

And I think you mentioned in your report the, Mark, but, I mean, it makes no sense to spend a lot of time on, you know, trivial exposures, I mean, just, you know, if something isn't going to be important in terms of, you know, upping the dose or what happens to a claimant.

Then, you know, we shouldn't be spending a lot of effort trying to get consistent, you know, perfect consistency in the evaluation of that particular exposure and nor should we fault ORAU or NIOSH for, you know, taking that into account in terms of how they focus as much as they do with the sort of the over estimates, under estimates and, you know,

best estimate approach for dose reconstruction.

So, I think, you know, do we just focus on best estimate cases or, you know, it may depend on how evaluations are done and so forth.

So, I think it's another thing to keep in mind, again, it makes no sense to do something that's not going to really even be meaningful and, you know, just makes -- we can make a recommendation that would make, you know, more work for NIOSH and ORAU and not really be very meaningful in terms of the actual dose reconstruction.

MR. GRIFFON: Yes, I totally agree with that, yes.

CHAIR MELIUS: Stu, do you have any comments?

MR. HINNEFELD: Well, nothing particularly earth-shaking.

I guess I am interested in sort of a kind of a consensus priority on recommendations for -- to be pursued here.

Because there are a number of recommendations in the report and, some probably

more work-intensive or effort-intensive than others.

And, I'm -- every time, you know, my view of, you know, additional recommendations and additional work means that, doing -- embarking on that work can supplant some of the other work we're doing.

I think we'll continue to keep up with dose reconstructions, but it would supplant site research work that is also, of course, takes a long time.

So, I'd like to be selective in terms of the recommendations that we really engage in and try to, you know, essentially take on. So, that's one aspect.

And, we've not really had a particular discussion with ORAU yet about how we view the various efforts required for these various recommendations. So that would be part of the consideration also.

So, that's kind of my overriding approach to Mark's report is that I thought that I have no particular complaint with any of the

recommendations that he made. I just felt like we have to balance recommendations that come from that report with our already relatively full inbox.

And then, as to Paul's question about who will edit the report, we can certainly give that a shot. You know, if Mark wants us to do that.

We didn't attempt to edit this when Mark delivered it. I just sent it on to the Work Group or to Ted to distribute to the Work Group.

So, we can certainly take that on if you would like. I think ORAU might actually have better technical editors than we do. We may farm it out to them.

MR. GRIFFON: Yes, I'm certainly happy with that. Like I said, I realized after issuing it that I read through and found many edits on my own. So --

MR. HINNEFELD: Well, we'll let Mark start, how's that sound? We'll let Mark start editing.

MR. GRIFFON: Yes.

CHAIR MELIUS: You just got assigned, Mark.

MR. HINNEFELD: I keep -- I have to keep reminding myself, he works for me now.

CHAIR MELIUS: Yes, I know, I know.

Along the lines of what you were saying, Stu, I think the other thing that's important is we sort of -- some of the recommendations pertain sort of less to the Board and more to you.

MR. HINNEFELD: Exactly.

CHAIR MELIUS: And then, sort of -- but sort of also want to avoid, you know, duplication in terms of -- needless duplication, unnecessary duplication in terms of the work we're doing and as we pursue this.

So, if you're already, you know, working on it or that's on your list to get done at some point, it makes no sense. And hopefully, at the same time, where we can supplement with work and divide it up appropriately.

Again, recognizing that we have certain different responsibilities here. You,

you know, run the program and manage it and us to, you know, be sort of the quality, you know, independent quality check on it that Congress asked us to be. So, do that as part.

Let's see, Dave, John or whoever else is on, John Stiver?

MR. STIVER: I was on mute there.

CHAIR MELIUS: Yes.

MR. STIVER: I know John Mauro had a few things he'd like to talk about if given the chance to weigh in here.

DR. MAURO: Oh yes, hi. Hello, everyone.

I did put together a -- this is John Mauro -- by the way, I did carefully read the main body of Mark's report and just a couple of quick observations.

One, I was very impressed that Mark would operate up in the stratosphere, understanding the big picture and then down in the weeds, really getting down there and going -- and bouncing back and forth, tried to come to grips what I believe to be a herculean task to

try to find out, you know, get your arms around ensuring consistency.

So, I just wanted to have a positive statement. And, like Mark, I've been around for a while and watched the program mature. And I've been listening.

And I sent out a memo of what my notes were. I had some notes as I was reading Mark's report. And I forwarded them on to John just -- and the other members of our team just for food for thought.

But, John, am I correct, did you forward anything on to Ted regarding those five or six items that I sort of jotted down? I saw a memo that you may have passed that on.

MR. STIVER: Yes, yes, I did. I sent it on to Ted, I think he passed it on to Dr. Melius.

DR. MAURO: Good.

CHAIR MELIUS: John, I was using it as my cheat sheet for -- so I could sound intelligent when Mark was --

(LAUGHTER)

CHAIR MELIUS: -- asking questions and making suggestions. But, it was helpful and I don't think there's a problem with forwarding it to the rest of the Work Group either.

I wasn't sure if it had been or not, but then I realized that just before the meeting it hadn't been. So, I was keeping it as my private, you know --

DR. MAURO: Well, great, you found it useful.

It was never intended to be other than internal to SC&A just to get us thinking about it at that level.

Rather than go through some of those items and everyone, if you would, distribute them, you could make that part of the milieu of material covered.

I had a couple of thoughts listening very, very carefully to Mark and thinking about everything that we do. And I'm just going to put a couple of, you know, musings as was mentioned about some of these thoughts I have sometimes. You know, I have a couple of musings.

It goes toward the actual DR documentation. And I'm envisioning a dose reconstructor doing his work and there's a very complex process.

And I learned more about it by reading Mark's report. We don't always see behind the curtain. Mark takes a look behind the curtain and understand the richness of the -- and complexity of the process at an even higher level than I thought that I understood.

But one thought I had is when -- while I was reading Mark's report, I said, you know, all said and done, if there are places where there are problems, it either has to do with a quality assurance question or a judgment question.

And, of course, Mark's report focused on judgments and consistencies in judgments.

So, I was thinking and, you know, and I think after our reviews and how we make them and we have findings and then we try to resolve findings.

But the thought I had is two things. One is, when the DR is being done, one of the

things that the DR -- the person doing the dose reconstruction, the originator of the document, to keep track of where he has made a judgment.

Now, the judgment is sort of interesting in that it's a judgment on how he interprets the guidance.

Now, of course, if you have a workbook, there is no judgment.

But there are times when a judgment is being made interpreting how the particular OTIB, Site Profile, OTIB, applies to this problem. And so, he makes the judgment that if, and this falls in an interesting area, he's making a judgment of the degree to which how he's going to use that guidance for this particular problem.

And so, I think that's a judgment call. I think that should be written down, kept track of.

And the other place is where the dose reconstructor truly has a situation where he had to come up with a fix for how am I going to deal with a particular scenario, exposure scenario, that might be associated with an accident or some

unusual circumstance.

By the way, we just encountered that in how to deal with an issue working on Metals and Controls which sort of led me to think about this.

So, there are two kinds of judgments that are made. One, and it goes toward the way Mark defined an individual professional judgment and then the judgment that's made programmatically. And I agree with that dichotomy.

But I think the way you bring that down to where the rubber meets the road is really a process. How do we capture a process that, in some regards, is somewhat creative?

You know, you try to make as strict, very disciplined process, but we all know that individual dose reconstruction is really dealing with each person, interestingly enough, trying to be -- deal with them on a case by case basis but in a way that's very consistent.

And so, my first thought, just to lead you folks to this is perhaps while the dose

reconstructor is performing his dose reconstruction, he documents where he feels I have to -- I found myself in a place where I needed to make a judgment and how to interpret and apply a particular OTIB or in a place where he has to actually come up with something new like we recently had to do with Metals and Controls.

So, that actually makes it into the actual DR report. And that'll create a platform that will allow people to be introspective about consistency and almost force it. Granted, it requires additional work.

And I'm going to flip real quick now on SC&A's end when we do a review. We start off, and we still do, have findings.

And, in a way, maybe there's another way to think about this, go back to a process.

Maybe the reviews should be a discussion of the -- where we feel that maybe a judgment was made either in applying or interpreting the existing guidance where -- that needs to be discussed.

Or, where something new is invented to solve a particular problem. And, we look at that.

So, it's no longer a matter of findings, it becomes a matter of the judgments that we made and the degree to which they are consistent and that we interpret and any -- and the perspective that we might have on those judgments that are being made.

This is sort of like an extemporaneous thoughts that came to mind as Mark was describing his report, his excellent report. And I hope that it just sort of helps to stir the pot a little bit.

CHAIR MELIUS: Thank you, John.

Actually, you made me think of one other area of where this process could look at is, I think one of the other things a dose reconstructor may run into, and I'm sure he does or he or she does quite often, is they really just don't have adequate information to base a judgment on or they're basing it on very little information.

Some of that's just, you know, the

nature of the DOE sites and record keeping and so forth.

But some of them may be programmatic that there isn't enough information and whatever documentation on a particular exposure or part of a facility or whatever just hasn't been retrieved yet or whatever.

And that will be another, I think, interesting thing to try to document. Is that -- so one would think where you had less information, it's more wide open. You're going to have less consistent results because there's more judgment involved.

And I guess you can narrow the consistency by making a, you know, a guestimate in applying that for every person in that similar situation.

But, it would also be a way of sort of feedback in terms of what, you know, what further information needs to be looked for. Because it may very well be available and just hasn't been a priority or whatever.

Again, it may not be a very important

exposure, but where it is or where it could have a significant impact on people working in that area under dose reconstruction, it would be, I think, important to note that and so forth.

Much as the way, you know, SC&A, I think you just mentioned, John, would do it -- when you're doing your reviews, you note that as a problem.

But, it's also, I think, you know, some cases it may be more a solvable problem than we think because we just assume that the information is just missing and has already been looked for or whatever.

Just one more aspect to sort of think about in terms of this process.

MR. GRIFFON: I just have a comment, Jim, on John's comments.

Thank you, John, for your input.

I do -- I think what John was discussing in his first part is sort of captured in what I was saying as this time line. It goes a little further. There may be a better term for it, but it's sort of a roadmap to the case, you

know, that so that --

And, I mean, I really appreciated something in the Hanford document that was developed. That says that the supplied time line, a time line should be used for most -- all but the simplest of dose reconstructions since they help the DR ensure consistent and systematic dose reconstructions, assure all information is considered, provide a final check of completion.

They also help the PR, the peer review, understand the DR's approach. And I think that's a critical point in these judgment things. The better that it's outlined in the case file, it'll be a lot more efficient when a peer review is done.

I think in the past on the Dose Reconstruction Subcommittee, where we start looking at a case wondering exactly why neutrons weren't assigned in this time period. And, you know, it was sort of a best guess of what the dose reconstructor was doing with that, you know, for that particular situation.

Whereas, if the judgments had been

detailed like John said, it would allow for efficient external review. It would also help in the internal peer review and they could capture these things and perhaps, you know, tighten up consistency before it ever gets to a Board review.

So, anyway.

CHAIR MELIUS: Good. Thanks, Mark.

Any other comments from SC&A?

(NO RESPONSE)

CHAIR MELIUS: Comments or musings?

MR. STIVER: Nothing from me, I don't know if Kathy --

DR. MAURO: No, that's it. But -- this is John -- if you can circulate those thoughts that I had, that would be good, just it keeps everyone engaged.

MEMBER KOTELCHUCK: And I appreciate that.

DR. MAURO: Sure, thank you.

MR. KATZ: Jim, I'll send them around to the rest of the group.

CHAIR MELIUS: Okay, thanks, good, to

that.

Well, unless there are further questions for Mark at this point or other recommendations, what I think we'll plan is -- at least what I'm proposing we do is, I'll put together a short set of PowerPoint slides that can be presented, you know, sort of listing a number of these ideas we've talked about are included in the report.

But, that will -- I will present that following Mark's presentation. And then, we can -- use that as sort of as a basis for discussion during the meeting.

And then, and again, I think we'll come back to another Work Group meeting probably after the first of the year to discuss where we, you know, try to pin down a little bit more where we go and so forth.

Does that sound reasonable to everybody?

MEMBER KOTELCHUCK: Yes.

CHAIR MELIUS: And, so well good.

And, then, as I said, Dave will be

presenting, I guess, before Mark. So, on -- sort of an update on the dose reconstruction review and where that stands. So, I think that'll provide a good background for the discussion also.

MEMBER KOTELCHUCK: Yes.

CHAIR MELIUS: I think that's where we all are. Well, most of us have been sort of divorced from the dose reconstruction review process while you've been catching up on the backlog. So, it'll be good to remind us all of what's going on.

MEMBER KOTELCHUCK: Right. Well, we have our new categorization of the cases for review has been very helpful in speeding us up and doing a good job, I hope.

CHAIR MELIUS: That's what I've been hearing.

MEMBER KOTELCHUCK: Yes.

CHAIR MELIUS: Okay, no further discussion, I think we can close the meeting.

Ted, do you have any final words?

MR. KATZ: No, I don't, but thanks

everyone.

Adjourn

CHAIR MELIUS: Yes, thank you. Thank you, Mark, for taking the time and everybody else.

Okay, see you in Albuquerque in a couple weeks.

(Whereupon, the above-entitled matter went off the record at 3:20 p.m.)