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

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

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SUBCOMMITTEE ON DOSE RECONSTRUCTION REVIEW

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TUESDAY
NOVEMBER 27, 2012

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The Work Group convened in the Zurich Room of the Cincinnati Airport Marriott, 2395 Progress Drive, Hebron, Kentucky, at 8:30 a.m., Mark Griffon, Chairman, presiding.

PRESENT:

MARK GRIFFON, Chairman
BRADLEY P. CLAWSON, Member
DAVID KOTELCHUCK, Member
WANDA I. MUNN, Member
DAVID B. RICHARDSON, Member

ALSO PRESENT:

TED KATZ, Designated Federal Official
KATHY BEHLING, SC&A*
GRADY CALHOUN, DCAS
DOUGLAS FARVER, SC&A
STUART HINNEFELD, DCAS
JENNY LIN, HHS
JOHN MAURO, SC&A*
KEITH MCCARTNEY, ORAU Team*
BETH ROLFES, DCAS
SCOTT SIEBERT, ORAU Team
MATTHEW SMITH, ORAU Team*
JOHN STIVER, SC&A
BOB WARREN*

*Participating via teleconference

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

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

(8:31 a.m.)

MR. KATZ: Good morning everyone in the room and on the line to the Advisory Board on Radiation and Worker Health, the Subcommittee on Dose Reconstruction Review.

We'll get started with our roll call. The agenda for this meeting should be posted on the NIOSH website, under the Board section, under meetings for this date. And some materials related to this meeting should be posted along with that agenda.

Let's do Board roll call. And for Board Members and Agencies, well Board Members only actually. Please speak to conflict of interest with respect to Rocky Flats and LANL. Are we, John, are we talking about LANL too?

MR. STIVER: Yes. LANL and Rocky Flats.

MR. KATZ: LANL, Rocky Flats, just those two, right?

MR. STIVER: I believe that's all

we have.

MR. KATZ: Okay. In particular. Obviously, also, when we talk about cases, particular cases, recall your conflict of interest as well and recuse yourself from speaking about where you have conflicts for your major sites, for example. So Board Members beginning with Mark.

(Roll call.)

And if you need to speak to the group press *6 again to come off of mute. And please, nobody put your phone on hold at any point in this meeting. But hang up, dial back in if you need to. And Mark, your agenda.

CHAIRMAN GRIFFON: Yes. As Ted said, the agenda was posted on line and sent to all of us. And my hope is that we get through the first three. We can do these pretty much in order.

I think it does make sense. The first three items. And I'd like to do the fourth item, which is the procedures stuff,

right after lunch when we're fresh and ready to go. And then as usual, we'll fade into the last set statement.

Well, you know. It's reality. So starting with the first item. I think most of this is going to fall into NIOSH's hands. The first bullet's NIOSH ten year review. Items relating to the NIOSH 10-year review, starting with the DCAS blind, DR case --

MR. CALHOUN: That will be me.

CHAIRMAN GRIFFON: Yes. Whoever presents it, you can like tell us what was sent out, so we can --

MR. CALHOUN: Okay.

CHAIRMAN GRIFFON: -- have a second to find the documents on our computers. That would be great.

MR. CALHOUN: Certainly. Yes, this is Grady. We completed one more assessment of the blind DR program. The last time we were here I gave you the first one.

The second one that just went out

yesterday is a review of 19 additions blind DRs that were completed by our group. Basically there were no overturns of compensation decisions that resulted from completion of our review.

There were two that the initial Probability of Causation was different. But that turned out on further review to be determined to be an error on our part. The ORAU DRs are correct. Ours were not.

One of those was because somebody, one of our reviewers, used an overestimating technique, instead of actually using the dosimetry that was there, which resulted in a Probability of Causation over 50 percent.

And then the second one, there were many, many, many, skin cancers and two lung cancers. And they used a coworker intake. But it was more appropriate to use ambient dose.

It was an individual who worked as a -- he was rarely at the site, maybe three or

four times over the years that they verified employment. He worked for the city. And he did some -- he worked on water lines.

There was a lot of information to go through. And I think the individual on our side should have went through the DOL file a little bit more thoroughly to make that determination.

Overall we've got -- now just to let you guys know how it works. We select cases to review. We review those cases. And then we wait for the ORAU team to provide their completed dose reconstruction.

They don't know which cases we've chosen. We don't know when they are going to turn theirs in. So these sit kind of in limbo for a while, completed on our side, waiting for theirs to come in. And then we will review it.

CHAIRMAN GRIFFON: Just to refresh our memory.

MR. CALHOUN: Yes.

CHAIRMAN GRIFFON: The selection criteria, is it random, is it -- how do you select these?

MR. CALHOUN: No. It's random. And it's cases that have not yet been completed. Okay. We've selected 70 at this point, okay. Twenty-seven have been completed. They've been actually through the entire process.

The remainder, 43, are in various stages of review at this time. The 27, that was 19 that were completed in this last assessment that I just forwarded to you yesterday. And there were eight in the initial one.

And the number of blind DR resulting in overturned compensation decision was zero at this point. Still at 43 in the pipes that we haven't completed.

CHAIRMAN GRIFFON: And just, can you step us through what you -- I'm looking for the file that you sent yesterday.

MR. CALHOUN: Yes, It should be called --

CHAIRMAN GRIFFON: First line, no, no.

MR. CALHOUN: It should be called -- Let's see if I can find it. It's called OCAS-COT-041. It's a rather large file. There's 70 pages.

CHAIRMAN GRIFFON: Seventy pages.

MR. CALHOUN: Yes, right.

CHAIRMAN GRIFFON: Did you have -- I must admit I didn't get to look at this one.

MR. CALHOUN: Well I didn't get it to you until --

CHAIRMAN GRIFFON: Right. I saw it on the plane.

MR. CALHOUN: -- the end of the day yesterday.

CHAIRMAN GRIFFON: Can you, do you have -- I mean, you said that it resulted in none being overturned.

MR. CALHOUN: Yes.

CHAIRMAN GRIFFON: Did you, are you collecting information like a table of what NIOSH reviewed --

MR. CALHOUN: It's in there.

CHAIRMAN GRIFFON: -- versus the, yes --

MR. CALHOUN: Yes, it's in there. It is, it is.

CHAIRMAN GRIFFON: Okay.

MR. CALHOUN: And it's -- the attachments of all the questions that we respond to are listed for all 19 cases. And each case has, I want to say three or four pages associated with, probably three with each dose reconstruction. And it has the ORAU team's approach and our approach.

MR. FARVER: Did you find any that would be considered quality errors?

MR. CALHOUN: Basically what turned out is that we routinely have differences in dose. I mean, it never turns out that the dose assigned is the same.

And just like the previous assessment, it turns out that it's always a result of the degree of overestimate or underestimate.

MR. FARVER: So none that you consider a quality --

MR. CALHOUN: Well certainly the two that we looked at that were -- The first one was, there was one that was actually a procedural violation I'll say. In that you can't use an overestimating document or technique for a compensative claim.

And so in ours, our first person will review that, will review the dose reconstruction. They actually do the dose reconstruction.

And then we've got a second level of review that compares the two. That compares the contractor provided dose reconstruction and the DCAS completed dose reconstruction.

And when that comparison was done,

that individual found that an overestimating technique was done. And it should have been actual dosimetry was used. So that was a, really a procedural violation on our part.

MR. FARVER: On your part.

MR. CALHOUN: Yes. And the second one I think was I'll say more of a professional judgment. But it was fairly clear. And everybody who did the re-review of that, that was an ambient case.

I think it may have been that there were so many cancers involved, that to go through it would have taken days and days and days. And if I can comp it based on a coworker dose, I think that's the direction you might have taken.

MS. BEHLING: This is Kathy Behling. I was curious as to your selection process. Is the PoC considered at all?

MR. CALHOUN: No.

MS. BEHLING: Alright.

MR. CALHOUN: No. Because we

don't know the PoC when we select them.

MS. BEHLING: That's true. Okay.

MR. STIVER: Grady, this is John. The last time we left it, I guess there was kind of a, what do you call it, a kind of a long discussion about the selection criteria, and the advantages of doing random versus pre-selecting within the PoC ranges. But I see here -- I haven't had a chance to really look at this in detail.

MR. CALHOUN: Right.

MR. STIVER: But it says that you guys, as one of the improvements, are to include the PoC per case. But I didn't necessarily see that in most of them. Was it the intention --

MR. CALHOUN: Right. We just did that.

MR. STIVER: Was that --

MR. CALHOUN: We just did that. And basically the issue was, is that we wanted to make sure that we also had a total PoC.

And that wasn't, there wasn't a slot listed for that.

And now the actual form that we complete has been modified. So that's a required field to complete. And another thing that we did is that we talked to all our HPs, and asked them to start defining their decision points a little bit better.

Now we probably won't see that until the next assessment as these things go out. Because we just did that recently within the last couple of weeks.

MR. STIVER: And were the -- do you know the cases that were inadvertently went over to the person done? Were those cases that were pretty close to the 50th percentile to begin with? Do you know?

MR. CALHOUN: I don't know off the top of my head. I have to look. The one certainly was. I think the one with all the multiple cancers, the ambient case, was probably in the 40 percent range. But I'll

have to check. I've got that right here.

MR. STIVER: Okay.

MR. CALHOUN: I can pull that up in a second. Let me see. Yes, the one with the multiple cancers was 43.18 percent as completed by ORAU. And the first one, where the actual dosimetry was used was 37.86 percent.

MR. STIVER: So is it your sense now that, you know, as you do more of these, that you're kind of converging the ORAU and the DCAS reconstructor, to kind of getting closer to the same value?

MR. CALHOUN: Well I hope so. I mean, what we've got to understand, and what I certainly understand, is that our folks are used to reviewing, rather than doing. And the ORAU team is certainly used to doing.

And they've go the tools laid out. And they're so accustomed to doing the dose reconstructions. And when our HPs review the dose reconstructions, they typically don't do

the dose reconstruction. They review it, they look and say, does this make sense for these values used? And that kind of thing.

So certainly I think that the attention has been raised on being a lot more careful with this. Because it's just not -- We want the effort put forth when our guys use a blind dose reconstruction.

Let's see. Another thing that we've done too. I don't think that we had forwarded that previous assessment, prior to the last meeting, we had to the ORAU team, to let them know how we are comparing.

And so that's been done. And also, we'll be forwarding this one to them too, right away. And Scott's going to get here in a second.

MR. SIEBERT: That is good. Got it right now.

MR. CALHOUN: You got it? Okay, good.

MR. STIVER: Bought him just

enough time.

CHAIRMAN GRIFFON: So, I mean, I'm just flipping through some of the many pages in this document. And I look, it's on Page 62.

MR. CALHOUN: Okay.

CHAIRMAN GRIFFON: Claim number 36 -- no we don't have to say the claim number.

MR. CALHOUN: Yes, probably shouldn't say it.

CHAIRMAN GRIFFON: But anyway --

MR. CALHOUN: But Page Number 62.

CHAIRMAN GRIFFON: Yes.

MR. CALHOUN: Let me see if I can get that. Okay. I'm there.

CHAIRMAN GRIFFON: Yes. Item B.1.1. I'm curious about the DCAS response versus the ORAU response there. And it says, you assign .014 rem. ORAU assigned .034. And then it says this is based on 0.28, which appears that ORAU doubled dipped .014 rem actual dose of record.

So I guess what I'm trying to understand is, does it appear? Or is that what happened? And why did they do that? And then how did it go from .028 to .034.

MR. CALHOUN: There's no way I can answer that question --

CHAIRMAN GRIFFON: Right. Alright.

MR. CALHOUN: -- off the top of my head right now. So I don't know. I don't know.

CHAIRMAN GRIFFON: Alright.

MR. FARVER: That's something I would consider a quality issue.

CHAIRMAN GRIFFON: Well that's what I'm wondering. You know, when we're looking -- I think when you're using this going forward, I'm just wondering, you know, it's not only to look to see if anything got flipped. It's to sort of look for trends. And you've only got a fairly small set so far.

MR. CALHOUN: Right.

CHAIRMAN GRIFFON: But I'm curious about whether it's --

MEMBER RICHARDSON: Mark, could I follow up on that?

CHAIRMAN GRIFFON: Yes.

MEMBER RICHARDSON: Because I was looking at that too. Because that seemed to me one of the reasons we were interested in the blind reviews.

CHAIRMAN GRIFFON: Right.

MEMBER RICHARDSON: And now that's an abstraction entry of a single recorded photon. There's only one recorded dose for this person. So the data abstraction problem should not be that difficult.

CHAIRMAN GRIFFON: Right.

MEMBER RICHARDSON: And there was an error that -- but so I started up at the top. And the first three or four cases have no recorded photon dosimetry. So there was no data abstraction problems.

But by the time we get to Page 28,

that case has a data abstraction issue, where ORAU abstracted 60, DCAS abstracted five. The next case, on Page 31, has an abstraction issue where ORAU abstracted 20 records, DCAS abstracted 21.

The next case, on Page 35, DCAS abstracted 14 records, ORAU abstracted 18. So there's a lot of, I mean, on both sides. For some reason there's a difficulty in doing data abstraction. I mean, this is before we're getting to any of the issues regarding calculations, or scientific issues --

MR. CALHOUN: What's the -- Let me, I'm going to have to get another one of these examples.

MEMBER RICHARDSON: So --

MR. CALHOUN: Give me one of these examples, so I can --

MEMBER RICHARDSON: Page 31.

MR. CALHOUN: Thirty-one.

MEMBER RICHARDSON: This is the second one I mentioned.

MR. CALHOUN: Three point one point two.

CHAIRMAN GRIFFON: Let's not mention the claimant here.

MEMBER RICHARDSON: I'm just using the page numbers.

MR. CALHOUN: Yes, right.

MEMBER RICHARDSON: So if you go to Section B.1.2. Number of positive recorded doses; 20. And number of positive recorded doses by DCAS; 21. I mean, I was just, I was looking at those.

MR. CALHOUN: Yes.

MEMBER RICHARDSON: And there's a whole series of claims here which have different numbers of doses.

MR. CALHOUN: Okay.

MEMBER RICHARDSON: I don't know. You know, I haven't done anything more than more. I was just looking through the case series. So the first ones there's no problem, because there's no dosimetry information.

And the we hit a series where -- I mean, that stands out to me still. I mean, again, I haven't spent any time looking at this. But this was one of the things we were interested in.

What's -- now, and I can only say, I mean, when we were sitting in that room looking at it, it did seem to me like a very difficult thing to do. To look at a PDF version of a microfiche record.

If I remember this correctly, the process, the historical records were maybe, had been archived to film, scanned into PDF. And the data abstractor was looking at that digital PDF of a microfiche of a hand written log book and abstracting that in.

And that is really hard work. I mean, and we had this problem I remember with the multiple myeloma study. Where we couldn't reconstruct a lot of doses from a lot of the sites exactly, because things were illegible.

MEMBER MUNN: Can't read it.

MEMBER RICHARDSON: But this was one of the quality issues, was do you want to do this by double entry, or something? Where you at least flag out where there's data abstraction problems.

MR. CALHOUN: Yes. Like I said, with these I'm going to have to just go back and look. Because I just don't -- obviously I don't know these cases off the top of my head.

MEMBER RICHARDSON: Yes. No, absolutely, yes.

MR. CALHOUN: But I'll check that.

MEMBER RICHARDSON: I just wanted to point this out as a series of early on in ten minutes that seemed to pop out. And this is what we were finding with, I think, with the case reviews that we had done as well. That these often occurred.

MR. HINNEFELD: David, what were the page numbers on that?

MR. CALHOUN: I got that.

MR. HINNEFELD: You got the page

numbers?

MR. CALHOUN: Yes, yes. At least a couple of them. You got some of them?

MR. SIEBERT: What were they actually? Because --

MR. CALHOUN: I got Page 31. And I'm actually -- I'll send an email just to see if we can find anything out about that. I don't know exactly what --

MEMBER MUNN: Sixty-two.

MEMBER RICHARDSON: Sixty-two, 28, 35. And that's as far as I got.

MR. CALHOUN: Is it all on the B.1.2?

MEMBER RICHARDSON: Yes. That's just what I was flipping through.

CHAIRMAN GRIFFON: Wonder if there's any other format that this would be good to have this information in.

MEMBER RICHARDSON: Well I'm imagining that this is stored --

CHAIRMAN GRIFFON: In a database.

MEMBER RICHARDSON: -- in a database. Is that right? I mean, it looks like it's generated like --

CHAIRMAN GRIFFON: Yes, yes. But also, just other fields I was thinking of was, just looking at -- even though we know there's going to be variations. It would be interesting to me to know the total external assigned, the total internal, you know, numbers like that maybe.

MEMBER RICHARDSON: I like the form that you guys have made for the data abstractions. It's great. I was -- I remember when we were talking, we were sort of struggling with, like how were we going to digest this as it's moving forward.

CHAIRMAN GRIFFON: Right.

MEMBER RICHARDSON: It's perfect.

CHAIRMAN GRIFFON: Yes.

MR. CALHOUN: Okay, here's one of the issues here. I can tell you here that this is -- I don't remember which number this

has. But this is a paragraph out of the actual dose reconstruction, which is not in the assessment.

It says, in addition, dosimetry records indicated some potential short term gaps in external dosimeter records. For example, 2002.

Potential dosimeter cycle gaps were filled in based on adjacent cycle dosimetry data, in order to provide a claimant-favorable estimate of Mr. S external dose, in accordance with the guidance technical basis.

So when there's a gap -- and I don't know if the differences are typically that ORAU assigned more than we do, or did in that one case. But that could be it. But I'm still going to follow up with that.

MEMBER RICHARDSON: Okay. But would that go under B.1.2, or B.2.1?

MR. CALHOUN: Don't know.

MEMBER RICHARDSON: Because I

would imagine --

MR. CALHOUN: I don't know.

MEMBER RICHARDSON: I would call that missed dose. As opposed to positive photon dose.

CHAIRMAN GRIFFON: Right. For monitoring.

MR. SIEBERT: Well, it actually would kind of fall under unmonitored as such. Because if it was a, if you were -- this is Scott, by the way.

MEMBER RICHARDSON: Yes.

MR. SIEBERT: If you were filling the gap and there were positive dosimeter results on either side, it's going to be a positive result.

MEMBER RICHARDSON: Right. Okay. So if you use 3.1, unmonitored dose. I'm sorry, I didn't move down to that category.

CHAIRMAN GRIFFON: Or be at 3.1.

MEMBER RICHARDSON: But it should be, we still should have positive recorded

photon dose in the IREP sheet for gaps. I mean, there should be, the explanation for there being a difference between the number of years of positive recorded photon dose between two dose constructors shouldn't be due to gaps.

I'm just, I'm stating that to see if I'm understanding what you're saying, so I can understand the values that are recorded within the matrix here. So there's a question mark at the end.

MR. CALHOUN: Yes, I --

MR. HINNEFELD: I think your premise is correct.

MEMBER RICHARDSON: Okay.

MR. HINNEFELD: That if we, you know, we have to arrive -- part of this whole process is arriving at a consistent understanding of what we're doing here. Because we invented this and threw it at everybody.

But I think what you're saying is

correct. If there are five years of recorded dose, and there is a missing year, that we are going to say it was likely, the person was likely monitored because their job assignment didn't change.

We can't see why they wouldn't have been monitored. So we're going to treat them as if they were monitored during that year. But we don't have that recorded dose. That should not be recorded here as a year of recorded dose.

MR. CALHOUN: Right.

MR. HINNEFELD: It should be recorded as unmonitored.

MR. CALHOUN: Right. And it might very well be how we're, what we're counting in those numbers when we're filling out the form. That's what I'm thinking.

MR. HINNEFELD: Yes. I think, yes. And I'm not, now this -- the right two columns essentially is the reviewer of the blind, and not the person who does the blind,

or the person, of course the bridge person does the --

MR. CALHOUN: Right.

MR. HINNEFELD: The reviewer goes back and compares the blind to the ORAU one. He's the one who completes these two columns.

MEMBER RICHARDSON: Okay.

MR. CALHOUN: Yes.

MR. HINNEFELD: And so that's the population people then that we have to focus this message to. To make sure that when we're talking about recorded doses --

Because that is a clear indication that something is different. If somebody's reading six lines and somebody's reading five lines of recorded dose, that would be a pretty serious indicator, if it happened a lot.

MEMBER RICHARDSON: Yes.

MR. HINNEFELD: And so that would be a clear indication of a clear message to our reviewers then, that these mean the recorded doses in the exposure record, not --

MEMBER RICHARDSON: Empty pages.

MR. HINNEFELD: -- something. Not an empty page, yes, not an, yes exactly. Good work.

CHAIRMAN GRIFFON: Okay. Any more? I mean, I think this is good. And this is going to be an ongoing --

MR. CALHOUN: Yes, it is.

CHAIRMAN GRIFFON: -- part of our agenda I imagine. Anything more now? Any other questions now?

MEMBER RICHARDSON: So you were working at -- I'm thinking it was one or two a week was the target.

MR. CALHOUN: I don't recall what, I don't recall. I'll get that information. I don't know what our goal is. But it's not, certainly not our highest priority, you know.

MR. HINNEFELD: I think we started at two, David, and we backed up to one.

MR. CALHOUN: Yes.

MR. HINNEFELD: Because we were

building up such an input on these things, that in light of the other work then we backed it up to one.

But once we have a program that does something automatically, we don't go back and remind ourselves very much about what it's doing right now.

MR. CALHOUN: And then we're also held hostage to some degree by the influx of completed DRs from ORAU. Because ours can be sitting there completed. But we can't do anything with them --

MEMBER RICHARDSON: Right.

MR. CALHOUN: -- until we get in so we can compare it.

CHAIRMAN GRIFFON: And do we have access to the -- I think we asked this before. Access to the database that we're using?

MR. HINNEFELD: Well that request -- I missed the last meeting I think.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Because I was, I think I was traveling. And it came back to me. And, you know, this is really a work in progress, you know. Until we take it out and assess it it's really a work in progress.

And I'd hate to make, you know, get in the normal habit of sort of lifting the skirt for the Advisory Board, and say look in the internal workings. I'd rather have a product here.

I'm not really over the moon about that. I mean, I'm not over the moon about the idea. I'm not steadfast in my resistance against it either. If you, you know, I think there's a fairly simple -- I know it's simple because I don't have to do it.

It's a pretty simple thing for our TST team to provide this application. It might be easiest just to do it to all Board Members, rather than this subset of the Board Members. Because we have a -- you know, Board Members can see certain things.

And so if we gave it to all Board Members it would appear on your staff tools as just a blind review. And you could do that. I think, I've thought about this since it came up.

And I don't really have a strong argument against that. We do want to be open about stuff to a certain extent. But recognizing that what you're seeing is work in progress, you know.

CHAIRMAN GRIFFON: Right, right.

MR. HINNEFELD: And I think you'll be able, if you see what I see, you'll probably be able to see it all. You'll be able to see what the progress is, you know, the cases that have been selected, whether they got a DR on them or not.

And so I guess I don't have a particular problem with that. I really don't know my way around the application all that well. I know how to go to one thing and look at the comparison.

But I'll see what I can do. I'll talk to our TST and see if they can do that. If they can, if it's as easy as I think, it should happen quickly. And we'll just send you an email and let you know.

MEMBER RICHARDSON: I guess that's all I was trying to think of, is a way they look at whatever, what was it, B.1.2, or whatever. Or in this instance I'm looking at D.2.1. Maybe I'd like to look at that for all the cases.

MR. HINNEFELD: You could --

MEMBER RICHARDSON: You know, just be able to query quickly --

MR. CALHOUN: You can do that.

MR. HINNEFELD: You can't query.

MEMBER RICHARDSON: Oh --

MR. HINNEFELD: If you want to query, send it to us --

MEMBER RICHARDSON: Oh, okay.

MR. HINNEFELD: -- and we'll see if we --

CHAIRMAN GRIFFON: You can't query. Okay, right.

MR. HINNEFELD: We can't do that. This application does certain things.

MR. CALHOUN: Yes.

MR. HINNEFELD: As a user we can do certain things on it.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: It does not have a query.

CHAIRMAN GRIFFON: Got you.

MR. HINNEFELD: Does not have a query. So if you want a query, if you send it to us, TST could probably do it. Our Technical Support Team could probably do it.

MEMBER RICHARDSON: You know, one thing in the long run, or a couple of things is -- the cells that are being filled out with the DCAS response and the ORAU response, I don't know how they're doing it.

If this is like a -- the point is that the values that are in the cells are not

always consistent. Like so B.1.2 says number of years of positive reported dose. It would probably be better if the person just entered two and two. Or, you know, entered a number.

But sometimes they write two YRS, sometimes they write two years, sometimes put the number two. So in the long run, when you want to, if you wanted to do any sort of analysis of that it would be better to standardize those. And it could be done with a drop box.

MR. HINNEFELD: Could be a drop box, yes.

MEMBER RICHARDSON: And the same thing with yes or no. Sometimes is Y and N, sometimes it's yes. Just to make it more workable.

MR. HINNEFELD: Pretty sure that would be more work for TST, than just letting you guys look at it.

MR. CALHOUN: Right. And I think that the reason it's not just yes and no is

because sometimes they leave that open so there can be some commentary in there.

MR. HINNEFELD: Yes, yes.

MEMBER RICHARDSON: Or to separate if there's --

MR. HINNEFELD: You could have a separate comment field. I mean you can design it for query if you want. I don't think it was necessarily designed to be queried.

MEMBER RICHARDSON: Yes, I mean right now there's --

MR. CALHOUN: It definitely was not.

MEMBER RICHARDSON: Right. Now there's only 19 of them. But we imagine in two years --

MR. HINNEFELD: Right.

MEMBER RICHARDSON: -- there'll be another 100 added in. And at some point you want to summarize it maybe. But anyway, it's just a suggestion.

CHAIRMAN GRIFFON: And again, I'm

just looking through the, looking at this live. But Page 29 and Field D.2.1, this is certainly one that we've had come up on our cases. Missed neutron dose.

And I think part of it depends on whether you believe the worker was in an area where they likely got neutron exposure, which is what we've struggled with on many cases. So here you got DCAS assigning 91.6 rem and ORAU with none.

And, you know, I'm just looking at the ones that jump out at me as -- I wonder if there's -- even though, like you said, none of these changed compensation status, it seems to me that something's wrong there, you know. Or maybe the guidelines are not clear enough, or whatever. I don't know.

MR. CALHOUN: Yes. It's just overestimating again, you know.

CHAIRMAN GRIFFON: No. It was DCAS --

MR. CALHOUN: And I think the

point of that note was, is that DCAS overly -- One of the notes that I have written here is that DCAS was overly favorable in neutron missed dose. The initial PoC was 23.32, and then all ours got close to 49.

So it's just the degree of overestimate. And I think the ORAU team is a little bit more sensitive to -- if they come up with an overestimate, and it's between 45 and 52 percent, they got to do it over.

CHAIRMAN GRIFFON: Well wouldn't that apply to yours also? If you got 49 --

MR. CALHOUN: If we're overestimating it, and it's less than, that's really not our -- our thrust is to make sure that the compensation decision is right. So I see what you're saying there, you know. We can certainly look at that.

CHAIRMAN GRIFFON: Yes.

MR. CALHOUN: But I don't know that we would be wanting to jump into best estimate cases unless we had to. So I see

what you mean there. We'll talk about that.

CHAIRMAN GRIFFON: Yes. Okay. I'm just trying to think about the goal too. I mean, I know your thrust is to make sure you got the compensation decisions correct.

But the thrust of this program, this aspect of your program, I think also is to make sure your DRs are as accurate as possible, I guess. Or the quality is good.

So if you find, if you have things like this that keep occurring. I'm not saying, you know -- then you start to wonder well, what if, you know --

MR. CALHOUN: I mean, but you got a -- it is a degree, you know.

CHAIRMAN GRIFFON: Yes.

MR. CALHOUN: It's a gradient here. Because unless that --

CHAIRMAN GRIFFON: Yes.

MR. CALHOUN: -- ten thousand iteration Probability of Causation calculation came up as above 50 percent, it's pretty much

just as right as the other. It's just not as precise.

MR. KATZ: But you are trying to avoid grossly overestimating too. So that, because of --

MR. CALHOUN: To some degree. To some degree, you know. But everybody --

MR. KATZ: Sure. I see.

MR. CALHOUN: It's an efficiency thing.

MR. KATZ: Right.

CHAIRMAN GRIFFON: I'm trying to figure out why you wouldn't apply the same rules to your reviewers. Going back to that question about when you're reviewing it.

MR. CALHOUN: Right.

CHAIRMAN GRIFFON: If it doesn't go over 50 --

MR. CALHOUN: That's why I said, I think that something we should look at.

CHAIRMAN GRIFFON: Because I would think that, yes. Because that might alleviate

some of these things.

MR. CALHOUN: Right.

CHAIRMAN GRIFFON: If you saw that --

MR. CALHOUN: Right.

CHAIRMAN GRIFFON: -- say we got to fine tune or, yes.

MR. CALHOUN: Right.

MEMBER RICHARDSON: So they did other things which overestimated more than you. I mean, their ORAU photon assigned dose, the missed assigned dose were all higher.

If they had taken the same step with the neutron over assignment, instead of assigning zero, which is what they did, which I would say would be a minimal bound on this --

CHAIRMAN GRIFFON: Are you talking about this case, David? I'm sorry.

MEMBER RICHARDSON: What? Yes, still the same case.

CHAIRMAN GRIFFON: Yes, yes.

Okay.

MEMBER RICHARDSON: Because you ended up at 49 point something, with your overestimating as a probability --

MR. CALHOUN: Forty-eight point seven.

MEMBER RICHARDSON: -- of causation. If they had taken the same approach with the neutron dose that you had --

CHAIRMAN GRIFFON: They would have --

MEMBER RICHARDSON: -- they would have been -- Well they would have -- No. They would have moved themselves into a best --

CHAIRMAN GRIFFON: They would have sharpen the pencil, right.

MEMBER RICHARDSON: And they would have had to do more work.

CHAIRMAN GRIFFON: That's right.

MR. CALHOUN: Right.

CHAIRMAN GRIFFON: Yes, yes.

MEMBER RICHARDSON: And the question is, they did a lot of things which were little, little overestimates, in terms of assigning this photon dose, for example. A difference of four rem. But they did something as low as possible with the missed neutron dose by assigning a zero to it.

CHAIRMAN GRIFFON: Now that to me doesn't seem -- ninety-one point six rem versus none doesn't seem to be more overly claimant-favorable, versus not overly claimant-favorable. I mean, that's just --

There was one DR that the ORAU person that said this person was not working in there where they could have gotten neutron exposure, period, I think. So that's a different, I think that's a different question, you know.

MEMBER RICHARDSON: Yes.

CHAIRMAN GRIFFON: If it was a matter of 20 versus 40 rem, you know, I could see, okay there was more claimant-

favorability. But this is a case of, you know --

MR. CALHOUN: Right. I got it.

MEMBER RICHARDSON: But, Mike, I was --

CHAIRMAN GRIFFON: I mean, I'm just, we're just jumping around. But, you know --

MEMBER CLAWSON: This is on the same case. But the one statement down in the comment here, where it says there appears to be two different versions of OTIB-18 being used. Do they have a different OTIB-18 than what you do?

MR. CALHOUN: They should not. There is one approved OTIB-18 that's out there.

MEMBER CLAWSON: Well it's just this comment section down here. That kind of disturbs me a little bit, to be able to see that it appears that there is two different ones.

MR. SIEBERT: Well there are different -- this is Scott. There are differences in the application of OTIB-18. OTIB-33 does give modifications to how you apply OTIB-18.

Whether you're using the full OTIB-18 values. Whether you're using the ten percent based on somebody who is unlikely to have been exposed. But we are still going to overestimate.

So those, that may be the difference here, without looking at the specific case. But I can see there are definitely situations where one person running OTIB-18, and another would get different values if they made different assumptions on OTIB-33.

MEMBER CLAWSON: But see, looking at this -- and this is Brad again. How would we know that they used the other OTIB, 32 or whatever you were saying.

MEMBER RICHARDSON: Thirty-three.

MR. SIEBERT: They would be likely referenced in the dose reconstruction. Looking at this you would not necessarily know that.

And this is, and I think Grady's agreeing with this. This is, you know, we're going to have to work together on making sure that the way we're approaching the cases is more consistent. So that you see the information that's useful to you, if that kind of makes sense.

MEMBER RICHARDSON: But it points to another, I mean, this was another issue that came up, where we had questions about whether ORAU claims examiners were always following the protocol of starting with a tool which, a clean tool pulled from a central source. That there was, that over time kind of --

As I remember the, kind of the question here. Over time modifications had been made to tools. And there's the danger

that someone doing dose reconstruction was, had an older version stored on their PC, for example. Or went back to a workbook that they had used previously.

And that you saw, we saw things which we couldn't understand how those mistakes, or how those discordances between the evaluations we had done, and the ones which had been prepared that we were provided, how those arose if there wasn't something about, a question about the tool.

And I think that's what this remark was pointing to. Brad's asking, are there two different versions of OTIB being used because of something that's happened?

MR. SIEBERT: Well, and there are not. In this case this tool is very specific in that there are different --

MEMBER RICHARDSON: Yes.

MR. SIEBERT: -- different options within the tool that can be selected. It's not different versions of a tool. There's

different options of applying the OTIB-33 reductions or not.

So the tool itself is identical. And it's an online tool. So it's a consistent version. So it would be a selection of decisions in the tool, as opposed to different versions of the tool. And I'm just saying this is, you know, without looking at the case. But that is --

MR. CALHOUN: Yes. And I'd have to talk to the reviewer and find out what he said on that. I just --

MEMBER CLAWSON: On the bottom of this --

MR. CALHOUN: Yes.

MEMBER CLAWSON: -- who makes the comment?

MR. CALHOUN: It's the third reviewer. We've got --

CHAIRMAN GRIFFON: The third person to review it.

MR. CALHOUN: -- an OCAS HP who

does the DR, we've got an ORAU person who does the DR. When those come in there's a third reviewer who compares those. And they fill out that form.

MEMBER CLAWSON: Okay. Because, you know, just in reading this --

MR. CALHOUN: Yes.

MEMBER CLAWSON: -- you see what, why --

MR. CALHOUN: I do. I need to --

MEMBER CLAWSON: -- we're questioning.

MR. CALHOUN: I need to talk to the guys about what they write in these things actually.

MEMBER CLAWSON: Yes.

MR. CALHOUN: Really. Just to make sure --

MEMBER CLAWSON: Well I'd like to --

MR. CALHOUN: -- that they're useful.

MEMBER RICHARDSON: I like what they write. Don't tell them to --

MEMBER CLAWSON: Yes, don't tell --

MR. CALHOUN: I need it to be more definitive. It says, it looks like there may be. I don't want that.

MEMBER CLAWSON: Yes.

MR. CALHOUN: You know, I don't want to argue about it.

MR. KATZ: Work in progress. It's a work in progress.

MR. CALHOUN: Right.

MR. KATZ: Maybe it's better that way.

MR. CALHOUN: Yes, it is, it is. And so far it's, you know, it's been a fairly useful tool for us to do these things.

CHAIRMAN GRIFFON: Anything else? This is good information. I mean, it's good. I think David's right. The format's good and the information is good. And I think, well,

deep.

Well this is the extent of the agenda item, at least for a while, on this Subcommittee, I imagine. Is there anything else, David, and the Board Members, and Wanda?

MEMBER MUNN: No, I think you're right.

MR. HINNEFELD: I think it would be helpful actually for Board Members to have access to the application.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: And if they want, if you have time and want to spend some time, rather than a Board Meeting --

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: -- to see these things and highlight questions that come to mind, then we could have a more meaningful discussion either via email --

MR. KATZ: Absolutely.

MEMBER RICHARDSON: Yes, okay.

MR. HINNEFELD: -- or here.

Having been forewarned about things like this. I think there's some value here.

CHAIRMAN GRIFFON: Yes. It's tough to kind of --

MR. KATZ: I was going to suggest --

CHAIRMAN GRIFFON: And there's seventy pages --

MR. KATZ: You all have seen this just at the last moment. If you would give this some time between now and the next meeting. And then if you have access that's even better.

But then forward me any questions, issues, wishes, what have you. So that DCAS can be as prepared as possible. So at the next meeting you can discuss this as deeply as you want to.

So if you provide all that input to me, I'll provide it. I mean, provide it to Grady and me. But at least copy me. But I could sort of coordinate it all, so that they

don't get peppered in different directions with --

CHAIRMAN GRIFFON: Okay.

MEMBER MUNN: That would be helpful. Because it was a little delightful and daunting to see this on the screen for the first time. Whoa, look at all this information.

CHAIRMAN GRIFFON: Yes, yes.

MEMBER MUNN: And it's, it will be very helpful for us to absorb it.

CHAIRMAN GRIFFON: Okay. With that said, why don't we move to this second item. Alright with everybody? Presentation of a test plan for involving -- Let's see.

MR. SIEBERT: And I'm going to be doing that. And Grady gives you a nice big --

CHAIRMAN GRIFFON: And now is the genesis of this -- I guess I should know my agenda. Can I ask, I mean, I thought we were -- refresh my memory, but we had some further question on your overall QA plan, right? Is

this is in response to that?

MR. SIEBERT: This is addressing portions of that.

CHAIRMAN GRIFFON: Oh, a portion of that. Okay.

MR. SIEBERT: Because one of the questions was --

CHAIRMAN GRIFFON: Because I remember specifically asking for this aspect, right. Did we?

MR. KATZ: We did ask. We discussed this specifically in the last meeting. And then put it on the agenda.

CHAIRMAN GRIFFON: Alright. Okay.

MR. KATZ: On your behalf.

CHAIRMAN GRIFFON: Thanks.

MR. SIEBERT: Okay. Grady gives you a nice thick file to look through, and I give you pretty pictures.

MR. CALHOUN: That's what I prefer.

MR. SIEBERT: The first one we're going to cover is the V&V of the dose reconstruction tools. Actually the best person to be addressing this is Keith McCartney, who is our tools manager, who also lives out near Hanford. So bringing him out here was not the most economical.

However, he has been patiently waiting on the phone since 5:30 a.m. his time. So thank you, Keith, very much. And as we go through here, if there's any questions, you know, I'll address it or Keith can address it as we move forward.

So the topics, we're going to hit the general purpose of V&V, the governing documents that were used, the requirements documents, configuration management of the tools themselves, the test plans that we go through.

Graded approach for those tools that we don't do full blown test plans on. And the independent verification of the tools

throughout the whole process.

So what's the purpose of verification validation? Validation is basically saying, are you building the right thing? In other words, here is the widget you want out the end, do you know the process you need to walk through to get the accurate widget, so that you can then design the tool?

The verification is, are you building the tool correctly, when you could gain the information you want, is it giving you the correct answer out of the tool when you're done with the tool? Your validating it's, verifying that it's giving you the correct answer that you were looking for.

The governing documents, the IEEE standard is what we based our approach upon. Obviously ORAU Plan 1, they got QAP. And Plan 26 and Procedure 94, as I said, those were based upon the IEEE standard on how we started developing dealing with the development and methodology for software.

And that's actually for the whole project. And the specific V&V for dose reconstructive tools, which is done with the tools group and through Keith's house.

The requirements documents. As we create our tools it's based on the imp guides, the Technical Basis Documents, the OTIBs, the procedures. In most cases we don't have the required, right specific requirement documents for the tool.

Because they're just implementation of the actual IGs, TBDs and OTIBs that already exist in our document control system. It's just implementation. So that we're implementing more consistently, and in a more efficient manner.

Okay, working right through this. Configuration management. We use Team Foundation Server. It's a Microsoft product that tracks all the tools. It's not just used for all the dose reconstruction tools. But it's used for all the software on our project.

Basically, it works like a library. When a developer wants to work on a specific tool they check it out of the library. And at that point no other developer can pull that tool and do work on it as well. Just so we're controlling our configuration correctly.

Then when a developer's finished with it, they check it back into the -- And that's through all testing and so on. They check it back into TFS. And then it's available for all dose reconstructors to work the rest of the project personnel.

So the test plans that we go through are very intense for the ones that we do full test plans for. The general sections, introduction, that's pretty self explanatory. What's it going to do? Why are we developing this tool?

The testing hardware. We have pretty consistent hardware across the project for specific laptops that are used, operating

systems, and so on and so forth. Operating system we have found is actually one of the huge issues that we had to deal with as we migrate to new operating systems.

Ensuring that our tools and everything else works under the same -- gives us the same answer we were expecting under the new operating system, as the old operating system.

We just migrated to Windows 7. Of course that means Windows 8 is out. It only made sense. But we are completing the Windows 7 transformation on -- I believe there's a few more laptops to get through, and then we'll be fully Windows 7 compliant on the project.

The prerequisites. This is basically just what type of things are needed for doing the tools. Some of them tie directly into Excel. So you would have to have the right version of Office. Obviously operating systems, things like that.

So we pulled that information into the test plan, so that the testers know that they have the prerequisite software, and so on. Procedures to be tested. That's obviously a pretty straightforward thing.

And then we list all the features that need to be tested, as well as if it's a totally new tool, they would list all the features, obviously.

Then the test approach is basically just walking through for the testers, how they're going to be working through it. How many testers there's going to be. Whether there's going to be comparison between testers, things like that. Just the overall approach.

And the acceptance criteria, pretty straightforward. Generally the acceptance criteria is, it meets all the sections of the test plan, acceptable. Pretty much what you'd expect, expect for techno's.

MEMBER RICHARDSON: What's that

mean?

MR. SIEBERT: What's that?

MEMBER RICHARDSON: So is it a -- Is the criteria perfection? Or is the criteria something else? I mean, sometimes you have tolerance levels, for example.

MR. SIEBERT: Well at this point, when you're talking about these types of tools, at this point it's talking a yes/no answer. Did it give you the answer that was requested --

MEMBER RICHARDSON: Right.

MR. SIEBERT: -- or not? So it's basically, I believe -- and, Keith, correct me if I'm wrong. But it's a yes/no, go/no go correct answer or not acceptance.

MR. MCCARTNEY Yes. Generally that is true. The only exception to that would be in instances where we have a Monte Carlo process. If you're looking for an exact answer you're never going to get one.

It will be, you know, a few

percent. But generally that's what -- It's a yes or no answer. Is this what you get coming out of the tool?

MR. SIEBERT: Okay?

MEMBER RICHARDSON: You're using -- you're running Monte Carlo with using a Crystal Ball add in to an Excel spreadsheet? Or is, how do you implement that?

MR. MCCARTNEY Right now the way we do it, we used to use Crystal Ball. But now we are using software from a company called Vose. They have a commercial product called Model Risk, which is also an Excel add in.

But for our purposes, and for us to be able to program the tools in the way that we need them, they've essentially created a DLL file for us that does all the things behind the scenes as far as simulating and fitting the data. All the random number generation. And so we've been using that product now for a few years.

MEMBER RICHARDSON: What's the name of the company again?

MR. MCCARTNEY Vose, V-O-S-E.

MEMBER RICHARDSON: V-O-S-E. And you can't explicitly specify a seed, and run the Monte Carlo twice, and get the same result out of it?

I mean, typically it's not a true random generator. It's got a explicit seed, you can run it and you should be able to come up again at the same place.

MR. MCCARTNEY Correct. But within the software we have, we are not able to specify the seed. That's auto generated within the DLL.

MEMBER RICHARDSON: And what was the advantage of moving away from Crystal Ball? Why did you use somebody else?

MR. MCCARTNEY Well Crystal Ball, as that product matured, and in the newer versions, they actually, for whatever reason, took out functionality that we were using in

our tools. So Crystal Ball became unusable for us.

MR. HINNEFELD: The CDC computers, there's a CDC computer security issue with Crystal Ball as well, a security vulnerability.

So it was not, for whatever reason, it fell off of the approved software list that CDC publishes for us. And I don't know why.

MEMBER RICHARDSON: Because they want to run these tools networked to the outside?

MR. HINNEFELD: The application of this specific tool didn't matter so much. CDC specifies software that we are authorized to use. And I'm pretty sure this is true, that Crystal Ball fell off that authorized software list at some point of evolution.

MEMBER RICHARDSON: Yes. You know, like a lot of things with software -- Because you're talking sort of about, I mean,

the verification side of this. The validation is your own in house decision about what it is you would like to get.

But the verification part, it seems to me like one way that software is verified is by letting there be lots of users of it, who have different aims and intentions. They try it out. And they provide feedback back.

Now that's not the case, as far as I know, with these tools. You hold them in house. And so how do we verify them? There are some software packages which are used more, and some software packages which are used less.

I know a number of people who have used Crystal Ball. Other people are running Monte Carlo using SAS, which is heavily verified. Other people are using packages which are written by, you know, group written, which I myself have found problems with.

And so I have different levels of

comfort and discomfort with different -- I mean, as part of the verification process. Now this -- I can see you've got a plan in place for verification.

But it's operating within the constraints of what you can do in house by not disseminating out any of this, I guess is what I'm saying. And now I don't know about Vose at all.

But I mean, I just, and that's probably purely my own ignorance. But I know that in the world of using Monte Carlo applications for arriving at solutions to complex numerical problems, there are different options out there for how to do that. I don't know.

I just, you got to speak in person. I found some of the things that people add in to Excel spreadsheets to be sort of quirky. That's not to say that all of them aren't right.

But they tend not to be the same

as those packages written by organizations which focus institutionally on statistical software programs.

MR. SMITH: This is Matt Smith. Keith, could you let everyone know the process that occurred when we switched over to Vose and did some benchmarking against Crystal Ball that was in place at the time?

MR. MCCARTNEY Yes, I mean, before we ever -- I mean, first of all, you know, going to a new product like Vose, that is for what we do, I mean, it's pretty straightforward. Because we just have two or more distributions that we're multiplying together with an end result.

And so that's very easy to benchmark using other programs. And we did that with both Crystal Ball and At Risk, comparing those to our results using our Vose software.

And so it was pretty easy to see that you were going to get, you know, in terms

of Monte Carlo the same results. You know, you would get, you know, the same distribution with the same dose, with a variance of just a couple of percent. And you're always going to have that variance, just due to the statistical nature of the Monte Carlo process.

But, yes, when we did, you know, use those it was definitely benchmarked against other commercial products, to make sure that we were getting the correct result.

MEMBER MUNN: Is there benchmarking activity that you know of, or a thesis, about the capability of the software that's being used in house?

MEMBER RICHARDSON: Yes, I don't know. No. I suppose not.

MEMBER MUNN: Is there something that can done that can ease your concerns?

MEMBER RICHARDSON: You know, I think the great thing would be -- there's not a way that the tools can be -- are there use, I mean, are there other people who would be

interested in using the tools, who can try them? Or is it really kept in house?

MR. CALHOUN: What, the dose reconstruction tools?

MEMBER RICHARDSON: Yes.

MR. CALHOUN: Those are all in house.

MR. HINNEFELD: I mean, are there other people who would have an application for this type of tool?

MEMBER RICHARDSON: I mean, that was the first question. Are there people who would use them? And what's the --

MR. HINNEFELD: I don't envision who else would want to do this. Having done it for ten years, why would anybody else want to do this?

MEMBER RICHARDSON: I mean, there are epidemiologists who do dose reconstruction. Who take internal external dose. And they use the IMBA program, for example. When you have a --

MR. HINNEFELD: Yes, sure.

MEMBER RICHARDSON: And you have a version of the IMBA program, which is your version of the IMBA program. Those people who use the IMBA program currently pay a high license fee for it. And that may be the obstacle to letting them use your version of it.

MR. HINNEFELD: Boy, I don't know what the -- I really can't speak to that in terms of the Vose licensing. And whether there would be a cost for doing something like that, or making it available.

But I would think that the dose reconstructions we do would be considerably different from a dose reconstruction that would be done for an epidemiology study. And that, I'm not so sure that our tools are flexible enough.

They're not built with the idea that, let's build this tool so that one of the options the person has is to do a dose

reconstruction like we would do for an epidemiology study.

So I believe that -- I just don't see the user population out there that would have an interest in using these tools for any purpose other than what we're using them for. You know, we didn't try to build them for epidemiology approaches.

MEMBER RICHARDSON: I mean, the nice things is, you have the option to use the tools for best estimates, as well as over estimates.

I mean, you can specify distributions around each annualized dose, in a way which is at a level of sophistication which is actually never done in epidemiology. But it's probably, it may be a better tool than those that I think that are often used.

MR. HINNEFELD: I think it would require an overt effort on the part of an epidemiologist, someone who does those reconstructions for epidemiology, to say, okay

if I were going to use this data set that we have and an approximation of these tools, what decisions would I want to put in here?

MEMBER RICHARDSON: Yes.

MR. HINNEFELD: And that, I think actually it's kind of an interesting idea.

MEMBER RICHARDSON: Yes.

MR. HINNEFELD: But probably not something we'll pursue on our dime right now. I just don't see that as our task, you know, as to what we've been trying to do with the program.

MEMBER RICHARDSON: I mean, this again, it gets to one of these things of, I think the more opportunity for interaction with, you know, academics who do the same sort of work that you're doing.

If there's cross exchange it would help with things it would help with my level of comfort with things like verification. That you have people who bring different tools and evaluate the performance of these. Or

different perspectives on them.

I don't know what all the obstacles are. But I mean, I'm just looking at Vose. It seems like there's David Vose, and there's somebody else who are involved in it. I mean, it's -- I just, I don't know, yes.

MR. SIEBERT: Well, and one --

MEMBER RICHARDSON: But the whole thing, the whole machinery is actually very black boxy to me. And so it's, you know, and it's a very, very complicated black box. And so how do you verify, I mean, without having people have a chance to look at it?

MR. SIEBERT: Well what I was going to say is, one of the tools that we are presently working on that's coming down the road is CLL, since CLL has been added as a grade in cancer.

And the precursor -- There's not an organ of interest for CLL, since it's the precursor cells to the blood. And it's moving

throughout the body and into the organs.

Based on that we are working with developing a tool for implementing the methodology for assessing CLL. And we are actually developing the tool under Vose. But we are benchmarking it against At Risk.

So there are different places where we are trying to do, and as we said, when Vose first came on line doing benchmarking against different software packages as well. As we run into those situations, yes, we're doing what we can to work on those type of benchmarks.

MR. HINNEFELD: Was Daniel Stancescu involved in that? He was involved in that, right?

MR. SIEBERT: Yes, Daniel's working on it, yes.

MR. HINNEFELD: That's our statistician. I don't know if there's more we can learn about and talk about more, you know, of that actual activity. I think if we're

interested in that, I think we might be able to get Daniel down there, or Jen to speak about it.

I don't know about today. But at some other meeting we could. So it's a thought. Because it wasn't, you know, this wasn't, you know, we were engaged in that, in that benchmarking process that we developed.

So we could, someone do what I'm not smart enough to know much about. But it wasn't something that ORAU did without any oversight from our people.

So, yes, I don't know where else to go with this. I understand your point. And a broad user base with who could then essentially send in bug reports, essentially.

MEMBER RICHARDSON: Right.

MR. HINNEFELD: With, you know, I am familiar with that sort of approach. I just don't see the user base. Because we didn't build it for any purpose other than this program.

MEMBER RICHARDSON: Which is a, you know, a strength and a limitation, right?

MR. HINNEFELD: Yes.

MEMBER RICHARDSON: It's like the first, you build a car the first time.

MR. HINNEFELD: Yes, I guess. I guess. Yes, it does provide, you know -- You're right. You don't have as much overall, you know, world wide review of it, as you may have on other things.

MEMBER KOTELCHUCK: And a lot's riding on it. A lot's riding on it, so --

MR. HINNEFELD: I know.

MEMBER KOTELCHUCK: And that's really --

MR. KATZ: Well do you want to see the benchmarking results? Because if they're using Crystal Ball and the other --

MR. HINNEFELD: At Risk. At Risk was the CDC authorized replacement for Crystal Ball.

MR. KATZ: If they're using, if

they're benchmarking against those, and they're getting the same results, where's the room for concern, really? I mean --

MEMBER RICHARDSON: Yes, I, you know --

MEMBER KOTELCHUCK: You worry in a very complex program that both efforts can be mistaken at some points. I mean, there are so many different issues that come up.

MR. HINNEFELD: The issue is that if it is particularly complex, if you're dealing with a complex system you don't benchmark every conceivable situation. So you have -- that's the issue.

MR. KATZ: But that's what I said. Do you want to see the benchmark testing?

MEMBER RICHARDSON: Well that's -- But the thing is, I mean --

MR. KATZ: The extent to which --

MEMBER RICHARDSON: -- he was describing like Explorer. But, you know, the convolution of two normal distributions. And

I certainly hope that, you know, that two random number generators can lay together that.

But this, I mean, actually a lot of the distributions that end up getting layered one on top of the other here are so complicated that it's really hard to kind of think through the possibilities. And to, you know, it's a hard thing to test that way.

MR. HINNEFELD: So then it sounds like it's --

MR. KATZ: Part of this is just sort of a limitation of the world as we have it.

MEMBER RICHARDSON: Well it is. Except that the more users there are of the --

MR. KATZ: Yes. No, I understand.

MEMBER RICHARDSON: -- who have been trying things that are questionable, it's --

MEMBER MUNN: But we don't have a Dancing With the Stars audience.

MEMBER RICHARDSON: No. But I mean, it's actually kind of surprising. There are so -- I mean, you look around the world, there actually are a lot of people who are dealing with uncertainties in radiation risk modeling. There are some very good groups.

MEMBER MUNN: And the middle serve the number generators generated who build a workshop. So if we don't know what can be done to help ease your concern it's hard to give directive to the agency though.

MEMBER RICHARDSON: Yes. I was just trying to clarify where we are.

MEMBER MUNN: Yes.

MR. SIEBERT: Okay. And where we are is -- and then of course we have the test suspension and resumption criteria. If a tester does find an issue with the tool we stop and work with the developer. And we get it fixed and get back to it.

Test deliverables. All the documentation goes along with it, input,

output, all the documentation. And require the coordination with other organizations.

Frequently we have to deal with IT, obviously. Especially if it's something that is production related, that we can't be testing a production tool in production.

So we have to have a test environment set up with IT. And they take care of all that kind of stuff for us. And then just a general listing of tasks.

And it's just a straightforward step through of, Step One, you're checking for this. You perform Step One, and here's your outcome. Verify that the outcome is this one. Verifying, you know, push this button and verify Step Two, and so on and so forth. This is a security --

MEMBER MUNN: Is it?

MR. KATZ: I don't know, it looks fuzzy to me. Is it fuzzy, or is it me?

MR. SIEBERT: It probably is fuzzy from the copy. Because if you look at the

text at the top it's not as fuzzy.

MR. KATZ: I didn't bring my glasses. That's the problem.

MEMBER MUNN: That's the problem

MR. FARVER: That is completed for each tool, right?

MR. SIEBERT: That is completed for every tool that rises to the level of using a test plan.

MR. FARVER: Okay.

MR. SIEBERT: We're going to get to that. And then a V&V deficiency report, what the testers found if there were deficiencies. And this just goes back and forth between the developer and the tester, until there's a verified corrected result, and it's implemented.

This is where you were getting into, Doug, the graded approach. The software integrity levels. The IEEE standard has various levels of integrity. The highest level is if someone loses their life because

of software fails.

Obviously we're not at that level. It's very important to everybody involved. But it's not at that level. So those are the type of levels in the IEEE. They didn't necessarily quite apply to how we were doing what we do.

So we put together our graded approach based on complexity of the tools and transparency of the tools. The more complex, and the less transparent, the more testing that has to be gone through.

And for the ones where we don't do a full test plan we have a Form 54. And that's basically a listing of the items that need to be tested. And the tester walks through it.

And I've got a couple of examples to show you, and walk through it. Just because it's not as complicated as a full test plan and required. Our full test plans are things like the CAD process.

We deal with a very, very complicated and very, to use your word, very black box type of tools. As soon as we pull Monte Carlo out of the external tools, they look really complicated. But you can follow from --

And I know Doug can attest to this. Because he's had to do it in some tools. You can follow from where the input is, through the steps, not matter where it moves in the tool. It can be complicated where it goes.

But where the final answer is, you can actually scratch it on a piece of paper and get the same answer. As long as we're not going into distributions. So they may appear complex and black boxy.

But when you go at a separate piece at a time, they're not as complicated as something like CAD, where you put in a number and all the IMBA stuff was pulled together.

And then you get a final answer,

which it's very difficult to verify separately. So when we do this -- And this is not just in the test plans, but also in the Form 54s. Obviously, independent verifications is a cornerstone for us. Very much like peer review.

It's an independent reviewer is going through anything that's not cosmetic, like, you know, color changes and font changes and things, things like that.

Any change we make to the tool is independently verified by a qualified individual, who's not the person who made the changes. As I said, same as peer review. Normally our independent reviewers, testers, are the dose reconstruction leads for the sites of interest.

So the Rocky Flats tool, it would be the person who is in charge of Rocky Flats, who would know it most intimately. Now there's times we have to get that individual involved in the development of the tool,

because it's very complicated.

Such as Rocky is a great example, because all the NRDB, how you deal with the neutron dose reconstruction data, along with the other data. What subtractions there are.

So we actually pull the site person into the development of the tool. So we have a separate individual do the testing of the tool. That's after that. Let me pull up --

MR. STIVER: Scott, before you start on that --

MR. SIEBERT: Yes.

MR. STIVER: -- the last slide. Do you have a kind of a generalized protocol that you give to these testers? Sort of trying to break it in this way using these types of techniques? Or is it because each site is, some of the little nuances that, like you say --

Like with Rocky you have to bring in, you know, an individual who really knows

that aspect of that tool? So you basically kind of let them go ahead and take charge?

MR. SIEBERT: Keith, feel free to jump in and tell me if I'm going off reservation here. But generally speaking, when we're updating the tools to develop that whole thing, we know what the specific issues are that we're updating, and what we're applying.

So the tester can have a list of what the issues were that were updated in the tool. So they can walk through each of those issues, and say, okay was this correctly identified? Was it implemented correctly?

Such as right here, I pulled up Lawrence Berkeley National Lab when we did an update to that. The person verifying 2X missed doses is now reported as 1X. That is sticking --

Back when we changed how we recorded things, missed dose used to be reported at the 95th percent confidence level

instead of 50th. Once we made that change and reported it, the 50th like everything else, the tools had to be revised to report the right value.

So the test will check that. And then verify the exchange value frequency, results in the correct LOD/2 value. Once we put the LOD/2 process into place.

So the actual issues are listed out and the dose reconstructor or the verifier walks through those and verifies that they all are implemented correctly.

MR. STIVER: Okay. Thank you. I was getting at kind of the present --

MR. SIEBERT: Oh, wait a second. Keith wanted to add something here.

MR. MCCARTNEY Yes. The only other thing I would add is that, you know, the dose reconstructor, that they've been using these tools for, you know, coming up on ten years now.

And like in the case of like the

external dose tools, they really haven't changed much. So the DRs are very familiar with the tools. And they know where to go and what things to check out when things are changed within the tool.

And that's part of what it makes it easier for the dose reconstructors is they have that, you know, they're so familiar with the tools.

MR. STIVER: Just one last thing.

MR. SIEBERT: Yes.

MR. STIVER: I would assume then that each tool then has like a V&V file where you keep track of all these changes and the test results and all that? That's available for somebody to --

MR. SIEBERT: Right. And that's all tied into TFS, right, Keith?

MR. MCCARTNEY That's correct.

MR. SIEBERT: That's in our configuration management system.

MR. STIVER: Yes.

MR. SIEBERT: And I have a old test plan here that we did for the CAD program. I'm sure you probably don't want to see it. But I'll throw it up, just saying that we actually did it. It's 80 pages.

So this is what we did back in 2009 when we were doing verification, including the CAD tool in that version of the doc map.

And it just walks all through those sections, features to be tested, verification for a single radionuclide, multiple nuclides, identifying the DC origin factors, all the snaps.

MR. FARVER: Scott, so what's the sequence like when a Site Profile gets updated, or gets changed? How, you know, how long does it take for the tool to get updated?

MR. SIEBERT: Keith, you want to address that?

MR. MCCARTNEY Yes, I guess that, you know, kind of depends. I mean, obviously

the dose reconstructors, they're aware of the new requirements as soon as the documents are published.

And then, you know, we'll get with the site leads to see if any changes need to be made. And time frame is generally dependent upon, you know, the workload in the group and what changes can be made. For a simple change, like a change in a dose value, you know, those can be done, you know, quickly, like an X-ray dose value.

But it's an entirely new process then we have to implement, you know, and we have to put in a new TIB-17 process for applying skin dose. That's much more complicated, and it will take quite a bit more time to put that into a tool.

MR. FARVER: Okay. So you don't try to make the effective date of the Site Profile and the TBD coincide with the effective date of the revision to the tool?

MR. MCCARTNEY Yes, we wait until

we have a finalized document that's published --

MR. FARVER: Right, but --

MR. MCCARTNEY -- before we make a change to the tool.

MR. FARVER: -- you could have a date that it's published. But then you would have an effective date, when you would start using it. I believe that's how it works.

MR. STIVER: What you're getting at is how you get, coordinate the changes to the TBD --

MR. FARVER: So you make sure everyone's using the correct version of the tool.

MR. HINNEFELD: The process would be the date of the change of the tool. You know, when the dose reconstruction process changes would be the date, the end date of the DRs you would have to consider on a PER. So --

MR. FARVER: Okay.

MR. HINNEFELD: -- you understand what I'm saying?

MR. FARVER: Yes.

MR. HINNEFELD: There may be a revised version of the Site Profile. And routinely, while we are revising the Site Profile we know that there are revisions underway on the Site Profile.

Sometimes we know there are going to be revisions. We don't even know what they're planning on being. Routinely, we continue to work dose reconstructions to the previous version.

Because the alternative is to just stop. And things would stop everywhere. Because so many DR, so many Site Profiles are in that situation.

MR. FARVER: I understand. But you're not working on the revisions to the Site Profile, and say revisions to the tool, so that they coincide?

MR. HINNEFELD: No, the tool work

follows when we know what the final dose, once we know what the final Site Profile's going to be. That's when the tool work's done.

MR. SIEBERT: And from the time that the TBD gets released until the time the tool is updated, we'll handle those differently depending on how much difference there is.

I mean, if it's just some very small specific changes that they made, the dose reconstructors may do the work with the present tool, and validate making changes either in IREP, or so on. That's pretty unusual for us to have to do that.

But if it's a minor change, we may do that. Usually we'll hold off until the tool is available to be used, so we won't be doing dose reconstructions during that time frame.

So when we go back and do a PER if we need to, there usually will not be any claims done in between that time frame. And

many TBD updates don't generate that change to the tool. It may be something else.

MR. HINNEFELD: Yes, we're holding on to, for instance, Hanford non-SEC cases from the last Hanford pass I was at. You know, that Site Profile has to be modified to essentially take out some things. Because they were deemed unfeasible.

So we're waiting. You know, those are collecting until that Site Profile is ultimately revised. And then the tool's ready to go, which is supposed to be next month, I think.

MR. CALHOUN: And those cases are physically dependent in NOCTS. So that they can't be revised until --

MR. HINNEFELD: Until the tools. And after case we stop those. And, you know, we know what the next product's going to be. And it should be a relatively limited amount of time before it's ready. And so we're waiting for those.

MR. SIEBERT: Okay. That's the V&V. That's the first one. And move on to the second one. Actually, the second and third are tied together, which is the evolution of the peer review process for documentation, and the tracking systems that we've created over time.

CHAIRMAN GRIFFON: So this is getting into the next item on the agenda, right?

MR. SIEBERT: This is the next point, yes.

CHAIRMAN GRIFFON: Are there any more questions on the --

MR. SIEBERT: Sorry.

CHAIRMAN GRIFFON: That's alright. Are there any more questions on the V&V section? Alright.

MR. SIEBERT: Okay? Now we will move on to evolution of ORAU team. So a pretty picture's always worth a thousand words. This is the general process we have

for our QA/QC process.

Starting in the top left, it's assigned. The dose reconstruction is assigned. The DR completes it or revises it, if it's a, if it came back from DOL with new keys, or whatever.

We do an initial QC review, which the last time we were together, which was what, August? Part of the August presentation that I put in there was discussion of the IQC process, and some of the tech editing and final QC that are showing up here in the middle, and at the end. So I really won't get specific on those.

But that's where we have a different process that takes care of all those initial and final QC type things. So once the dose reconstruction is complete it goes through that step.

And they're looking for things like comparing that the IREP sheet total dose meets the, is identical to the dose

reconstruction report, as well as that all of the documentation, everything that's in NOCTS is correct, and they claim all that kind of stuff as well.

Then we hit the peer review process. It's following Procedure 59, and following Form 41, which is the PR checklist that is near and dear to all of our hearts, because we talked about it a lot.

As I mentioned in the last process, peer review, it's independent senior dose reconstructors who are doing peer reviews. Somebody who's not been working on that case with the dose reconstructor is a fresh set of eyes, just like we do in software validation, or the same that Keith is doing with the blind reviewers.

So once peer review is complete, it goes to the center. And does it meet the PR standards? If it doesn't, then it gets kicked back to dose reconstruction. And we just work through this nice little cycle to

make sure all the errors that require revisions get fixed.

And it goes back to the same dose reconstructor to get changed. And the same peer reviewer reviews it again so that we have consistency in comments, and so on and so forth. And then once it does meet the process, the standards of the peer reviewer, we get to move down through the diamond.

So either that means there were no comments at all, or there was only feedback, which means they may, the peer reviewer may send a form back saying, here is how you assess it. Here's another idea you may want to look at.

It may be a professional judgment difference. There's no error involved. But they may make some suggestions, such as, clarity of wording. This might have been better handled. Here's a way to do it. Not an error.

Or if there's an error where no

revision is required, it goes back to the dose reconstructor. Small things like typos, the peer reviewer doesn't have to kick it back to the dose reconstructor for that. They can make small changes like that, as long as they check with the dose reconstructor first, so that they know all the changes that are being made.

Any time we hit the no comments feedback, or it's only small errors, that's when it gets pushed down to the peer review complete, which is also covered by Procedure 59, Form 42, which is the form that we document and keep, that states they followed the process of peer review in Procedure 59. And we have that document.

This is where we put information into the peer review feedback database that we have created recently. Then it goes to tech editing, as I said, final QC. And then the draft DR goes over to NIOSH. And they, Grady smiles because he has another one to look at.

MR. FARVER: Before you leave now.

MR. SIEBERT: Yes.

MR. FARVER: What exactly do they look at in the initial QC review.

MR. SIEBERT: Oh, boy. You were here last time. We talked about this in August. There's a procedure that's in place. I want to say Procedure 94, something. I don't remember off the top of my head. But that's where they do the comparisons to make sure all the IREP values are the same in the report.

And the IREP, they'll look for documentation that the names are all correct. That the correct origin of interest was used. Anything that they can simply compare to something else that doesn't line up, they look at that type of information.

MR. FARVER: But no one --

MR. SIEBERT: And that's on the process in the procedure.

MR. FARVER: What got me going on

that was that you said that they'll make sure that the IREP total dose equals the total dose in the DR report.

MR. SIEBERT: Right.

MR. FARVER: Yes.

MR. SIEBERT: Right. It's one of the steps. And same thing in final QC. And I know your next question is, well then how can it ever happen?

MR. FARVER: Well let's get to that.

MR. SIEBERT: Which is a valid question. And the question -- I can't answer that specifically, because they do look at that information, that you check that and verify it.

And I see -- Whenever it gets returned to a dose reconstructor, as a dose reconstructor manager I see the returns. So I know they're doing it and they're catching it.

MR. FARVER: But there's a form or something they check off saying they looked at

it?

MR. SIEBERT: Yes. They follow the process. As I said, there's a procedure for that. And there's a form. And that's all kept documented.

MR. FARVER: I think that's happened before, where those two numbers haven't matched.

MR. SIEBERT: Yes.

MR. FARVER: I don't, can't think of any case offhand. But I think it's happened. So if that does happen in the future, you should be able to go back and say, okay well you've had all these people look at it. They've all checked off that it matched up. But it didn't.

MR. SIEBERT: Right. And the only thing I can't control -- And I'm not throwing my client under the bus. This is all just checks within our house.

MR. FARVER: Yes.

MR. SIEBERT: This is before DCAS

or DOL or anybody else deals with the case. So --

MR. FARVER: Well, I was thinking of them too.

MR. SIEBERT: I can just state to that, this is all we're covering is our side of the coin.

MR. FARVER: Right. But then they go and they look at it. And they should be reviewing very similar items.

MR. SIEBERT: Right.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: Procedure 98? Is that what you said? I'm looking at the transcript.

MR. SIEBERT: That sounds right.

CHAIRMAN GRIFFON: Yes, it says --

(Simultaneous speakers.)

MR. SIEBERT: Yes, it's Procedure 98, you're right.

CHAIRMAN GRIFFON: -- from Form 59 for the IQC. It's all out of Procedure 98, it

says.

MR. FARVER: Procedure 98.

MEMBER MUNN: But 94 is the V&V process for the two experiments.

MR. SIEBERT: That's why it sounded familiar to me.

MEMBER MUNN: Right.

MR. STIVER: Scott, would it be possible to get a copy of that presentation?

MR. SIEBERT: Sure.

CHAIRMAN GRIFFON: Yes, that would be easy.

MR. KATZ: What was requested? A copy of the --

CHAIRMAN GRIFFON: A copy of the --

MR. SIEBERT: Of this enclosure.

CHAIRMAN GRIFFON: Hey, Wanda, did the Procedures Subcommittee review Procedure 98? I imagine you guys --

MEMBER MUNN: I'm not sure about 98. We've done -- 94's been on the Board's.

98's initial --

CHAIRMAN GRIFFON: And take a quick look at the --

MEMBER MUNN: -- QC, tech editing and final QC of the DR reports.

MEMBER RICHARDSON: Just curious.

CHAIRMAN GRIFFON: And while she's looking for that one, you used the term peer review feedback form. Is that 59, I mean 41 or 42? One of those?

MR. SIEBERT: We'll hit those a little bit further along here.

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: But to fill space, yes. Form 41 is the checklist. Form 42 is where the peer reviewer signs that they followed all the things. And that's what we keep as a specific record.

And then the peer review feedback log is what we're filling out as peer reviewers. So that's going into the new data base for tracking our peer review comments.

MR. STIVER: You've not reviewed 98? It's out of the system here?

MEMBER MUNN: No. I'm not seeing findings.

CHAIRMAN GRIFFON: And there is no Form 59, is there?

MR. SIEBERT: Correct. That's a procedure. Fifty-nine is --

CHAIRMAN GRIFFON: The last transcript says Form 59.

MR. STIVER: Just go to the procedures filter. Page 2, it should be the very last one. Initial QC, technical editing, and final QC.

MEMBER MUNN: Yes, I see that.

MR. STIVER: Showing no findings there as well.

MEMBER MUNN: No findings to display.

MR. STIVER: At least none at this point.

CHAIRMAN GRIFFON: So we haven't

reviewed 98 yet?

MEMBER MUNN: No.

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: Good? Okay. So the process. And this is what I know you guys were interested in the last time we talked about it, how it developed over time.

Back in 2003, we had an initial peer review checklist. I had to dig through my documents. Interestingly enough, it's the first month I was working on the project. I created one, and that kind of developed from that point on. So we were lucky that I have a copy of that originally. And it was just a one-page guidance document for myself. But then I shared it with the rest of the dose reconstructors at the time.

And it was just a simple checklist of verifying administrative information, cancer code and diagnosis date, and things in the report, things in the IMBA runs, things in the IREP runs.

And then generally at the end checking, verifying the CATI is incorporated if it was available, and verifying the OCAS comments were addressed if we had a rework, things like that.

So this is the very earliest form that I could track down. I know I was personally was using it, and then we spread it out. So that was 2003. And if you look at it, the germ of all the things that follow really start right there.

Overestimate, underestimate, verifying radionuclides, no death certificate reference if the person is still alive. That's a way to annoy somebody.

(Laughter.)

And it put that on there at that time because -- and this is really how we developed -- we don't put discussions of death certificates in there anymore, because that's exactly what it was. But originally DOL determined the organ of the cancer of interest

only from a death certificate. We had that in the report, but we changed that.

And then in 2005, that's when we created Procedure 59, which is the peer review of dose reconstructions. And also Form 41 and 42 came along with that, which is the checklist. It was issued in January of 2005.

And then we revised it right before Procedure 59 came out. Just some additional minor changes to add some things in for technical review and copy edit type stuff.

And when the peer reviewer was done, the peer reviewers would communicate with the dose reconstructors and DR group managers for correction purposes for the dose reconstructors. And also to give the DR managers information as to errors that they might be seeing repeated.

So even though we weren't tracking the specific errors on a one by one basis in a database at the time, the group managers were tracking with the peer reviewers, what are you

seeing? And we would handle those things and get that information out. So it was a little less formal at the time. And then I --

CHAIRMAN GRIFFON: Were you collecting that data anyway?

MR. SIEBERT: We were not.

CHAIRMAN GRIFFON: No.

MR. SIEBERT: And the checklist, I'll just talk to it real quick. But I know you guys have seen this numerous times.

MEMBER KOTELCHUCK: Some of us haven't.

MR. SIEBERT: Oh, okay. Well, these are always -- I'd be happy to show it to you right now.

MEMBER KOTELCHUCK: Right, well, you are. But could you also send that along with the --

MR. SIEBERT: Yes, forms review.

MEMBER KOTELCHUCK: -- presentation.

MR. SIEBERT: Yes, Form 41.

MEMBER KOTELCHUCK: That would be really helpful.

MR. SIEBERT: Yes, I'll just send you the whole thing.

MEMBER KOTELCHUCK: Great.

MR. SIEBERT: Get that over to Grady. But as you see when we walk, step through this, we started getting a little more specific on photon, neutron, missed photon, missed neutron, breaking out some of the things that we were seeing in the dose reconstruction reports, as opposed to just: "Is external handled okay?" Checkmark.

Now we were breaking down these specific pieces. Missed dose application, IREP total external dose, and then pulling in internal dose. Were all the positive bioassay samples considered, all the radionuclides? We've dealt with this before. IREP summary, input versus summary.

And this is comparisons of the input, the IREP input sheet, which is the

Excel spreadsheet, and the IREP output sheet, which comes out of the IREP program. Just verification that the number of rows of exposure is worked out, and so on and so forth.

That's really something IQC does a lot of that. So the peer reviewer looks at that information. But it is also reviewed in Procedure 98. That happens as well.

Is it a skin case? If it is, do we have ethnicity? And is it matching in NOCTS? A lung case, do we have smoking history? Does it match NOCTS?

And then discussion on cover sheets. We found this portion became rather onerous to fill out. We would be spitting back what the deep dose, shallow dose and neutron dose for each year was. It was put in here.

If you had a complicated case and you actually needed to deal with this information, you could put it in here and do

the comparisons to verify it. Oftentimes our tools have the information in it. So we can do the comparisons within the tool itself.

And then the copy edit stuff. Do you have the right site name, employment dates, cancer description, all that wonderful stuff, names, work locations, internal dose? Basically, you know, the eight-page form that we have. And you'll be seeing that as well.

So we brought that along in 2005. We also brought Form 42, which is the peer review declaration. This was issued the same time. The peer reviewer signs and dates that the peer review is complete. And it serves as a record; we maintain it electronically. And we have those as well. That's what it looks like.

And it's just documenting that we did Claim Number X in accordance to the procedure, the revision of Procedure 59, and which version of Form 41. And "to the best of my ability, I determined it meets the

requirements." And it's signed and dated.

MEMBER RICHARDSON: How many of those does a person peer review a day?

MR. SIEBERT: It would depend on the peer reviewer. You could easily do one or two in a day, depending on the type of claim. Some take multiple days to do, if it's a complicated case.

Some that are relatively straightforward, they may be able to do, you know, five, six, seven in a day. If it's something like, let's say it's an AWE, where there is an SEC during the time frame. So there's nothing we can assign except for medical X-rays. Those are relatively straightforward to peer review. So you may be able to get a bunch of them in.

But for an actual full case, we kind of work under a rule of thumb that a peer review should take about half as much time as the dose reconstruction took to finish. Because you need to pull all the same

information.

You may not be making the same decision making process.

But you should still be reviewing all the documentation in the DOL files and DOE files, and so on and so forth. And then last year, we hit the PR feedback tracking, because we were discussing a lot of things in here.

And we decided that we want to be able to start tracking that information as well. A little bit better than we were, or tracking it at all specifically. We implemented it in June of last year.

We had 14 issue categories and the tracking in the spreadsheet. So the log looked like that last year. And those are the 14 categories: general external approach, measured, missed external, coworker, ambient medical, very generic categories to put the things into. And then we pulled it into the Excel spreadsheet.

And a couple of things -- I don't

know how well you can see this. If you look down at this one down here. When we switched over from peer reviewers just sending a quick email message saying, "Here's some of the things that I saw," or "Great job."

Once we started using a log and putting things in here, we had to work on getting peer reviewers not to be as nice, which was kind of scary. Because oftentimes the peer reviewer would say, "You handled this great. You did this fine, you did this fine."

And they'd put on a form, such as the external approach, overestimating applied correctly, doses calculated correctly, applied correctly, and so on. It's great information to have.

But the problem is, in tracking peer review feedback if we're looking at just generic numbers, it looks like that case has one, two, three, four, five, six comments just on that portion right there.

Whereas, all the comments really

are, "Everything's great." So we had to do a little bit of getting people acclimated to do that. And it just continued on.

MEMBER RICHARDSON: So you track by date. But is this tied to a case, to a dose reviewer, and to a peer reviewer?

MR. SIEBERT: It's tied to a claim number. Because we have that information. We tie it to the claim number. Because otherwise, you know, obviously, it's specific to a claim. We have to tie it back to a claim.

MEMBER RICHARDSON: It doesn't lend itself to stepping back to see if there are problems coming from a particular individual?

MR. SIEBERT: Correct. We don't tie that specifically. Because what we're doing, we're tracking this information for a systematic -- we're looking for a systematic -- Are we seeing systematic errors? That's why we're tracking the system. So yes, it's

tied to claim number, but not any individual. That is --

MEMBER RICHARDSON: Why?

MR. SIEBERT: That is how we set up the system. It's systematic.

MEMBER RICHARDSON: Can you imagine problems which would arise because one person working in the organization is having a problem doing some task?

MR. SIEBERT: We wouldn't need this information right here to find that out. The peer reviewers let me know. As a manager I know what's going on with my folks.

MS. LIN: So are you concerned that this system should be set up as almost like tied to a performance evaluation?

MEMBER RICHARDSON: No, you know, I could imagine a report that says, you know, overall quality is improving. In these areas it's doing better. In these areas it's doing worse. There are, we've identified -- you know.

This all gets back to the same question of: how do you document that people are doing well, that the system's doing well, that there's progress every year? And I could imagine multiple ways in which you would want to describe that. And this is a step towards one of those.

MR. HINNEFELD: Well, David, I think with respect to your question: should the dose reconstructor's name be tracked in this fashion? What I probably would agree to is that the person doing that reviewing will know.

Because they know the dose reconstructor that you're looking at, whether it's on this form or not. They will know if a particular dose reconstructor is causing problems and not doing a very good job. And so the personnel management aspect of this, the personnel performance management aspect is handled apart from that.

MEMBER RICHARDSON: Yes, that's

great. I mean --

MR. FARVER: But you can also tie it back to site.

MEMBER RICHARDSON: Yes, I was thinking that.

MR. FARVER: See if there's problems at a site, which could be in the documentation, could be anything.

MEMBER RICHARDSON: Right.

MR. FARVER: Something might be confusing the dose reconstructors.

MR. SIEBERT: At this point we're not tracking at that level.

CHAIRMAN GRIFFON: Because it doesn't jump out. If you just have a case number --

MR. SIEBERT: Right.

CHAIRMAN GRIFFON: -- you don't see that, yes.

MR. SIEBERT: Well, and once again, it's not there's 400 million people working on it. You know, you'll have a site,

Rocky Flats, where there's really five to seven dose reconstructors who are really working that site, who know it very well.

And only a couple of peer reviewers, including the site lead. So it really narrows down to who sees specific information. So those type of things are --

You know, we have had times in the past where peer reviewers will say, "Okay, we are seeing people misconstruing how to deal with neutron dose reconstruction stuff at Rocky Flats." And we've gone back and corrected that.

But we're not tracking that specifically. So still back in last year, we put the database -- since we were finding the Excel wasn't quite as flexible for us, we had a database written for us. Put that information in starting September.

We then put the feedback and return types in the same 14 issue categories. And then we started looking at the data a

little bit more organically as a group.

And that's where, after a while, we started finding that with dose reconstructors, or peer reviewers making the comment of "Great job, you did this," it kind of skewed what our actual feedback looked like. So we had to kind of nip that in the bud, and look at it overall.

CHAIRMAN GRIFFON: Now wait, can you go back to this one too?

MR. SIEBERT: Yes.

CHAIRMAN GRIFFON: The change from June to September of 2011, what was --

MR. SIEBERT: In June, we were doing it on the Excel spreadsheet.

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: That's how we were tracking.

CHAIRMAN GRIFFON: And then you went over to --

MR. SIEBERT: And then while we were actually doing the Excel spreadsheet,

while we got the database in place is what it really --

CHAIRMAN GRIFFON: The categories didn't change?

MR. SIEBERT: Categories, same 14 categories.

CHAIRMAN GRIFFON: All right. Okay, okay.

MR. SIEBERT: And then this year we've updated, partially in response to some of the things we discussed in here, because I found them very helpful. We revised it yet again.

And now our peer review comments are organized by type of return, whether there's just feedback, as I mentioned before. Not an error, but here's something else you might have considered, or wording, or something like that.

Minor error, which is error: no return required. Maybe a typo, things like that. Or error, a return is required.

There's a substantive error of some sort the dose reconstructor needs to fix.

We don't want peer reviewers fixing substantive errors. Because there is not another review until it gets to NIOSH. And we don't want them to be that reviewer that catches that.

So those are the three categories, the types that we have, which you notice in the old one it was just feedback and return. We're trying to break that out a little bit more. And instead of 14 categories, now we've tracked it into much more specific categories.

This is what the feedback log looks like. It's pretty generic, because you fill out the comment category and the feedback type. We do have a checkbox for no comments whatsoever. And also a checkbox for no comments whatsoever. And also a checkbox if it's returned to the dose reconstructor.

And this information in the log is placed in the database. The categories we

have here, 14 didn't sound good, so we went to A through J, which is one, two, three, four, five, six, seven, eight, nine, ten. So we've broken it into ten major categories.

And each of those -- actually there are sub-categories involved in each of those. I believe I mentioned at the last meeting that we were putting this in place.

So with these categorizations, it would be more consistent across peer reviews and returns that we get from DCAS from technical returns, and other returns, and also comments eventually that we get from the Sub-committee, things like that.

So we'd be a little consistent across all three levels. That's why you see A and B in the peer review discussion here. Non-technical returns and no error misinterpretation of the approach.

Those are really things we use for when DOL or DCAS returns claims back to us. So peer reviewers don't ever use those. But

we wanted to have all the same categories for the different types of returns.

Non-technical returns would be there's a new cancer or things like that. And then non-technical report issues, policy guidance issues, that may be application of the SEC, things like that.

Data collection issues, where we see inconsistency or data's missing, or additional data, things like that. Claimant interview, claimant-provided documentation, external, internal tools, and IREP.

So we'll put these categories into all these sub-groups. And to give you an idea, I've pulled the actual form. There are sub-categories, and I will do this too. What the sub-categories are for, say, non-technical report.

Report language clarification preference, typographical error, formatting issue, incomplete electronic submittal, references not cited, things like that. So we

broke these down into smaller categories that made sense.

Now we tried not to get into so many categories that it wouldn't give us information, which is a balancing act, as you guys, I'm sure, all know.

So before I show you what we've been doing with the new database, I know some of the questions had revolved around: well, how did you learn from the peer review process if you weren't documenting it as such? So I wanted to show you some of the lessons learned during the PR process over time.

I broke it down into before we had Procedure 59. So 2003 to 2005. After we had that, but before we had the feedback tracking. And then since we've had the feedback tracking. Whether it was in the old database or the new database.

And all I did was pull the -- I talked to Joel Arana, the other dose reconstructor group manager. And he and I

looked at our old agendas from all our group meetings that we've had. And just pulled comments that peer reviewers had told us, that we put in our agendas for training purposes.

For example, early on, we included copies of all tools using the assessment. You would think you wouldn't have to tell people that. But, you know, in 2004 we did. We copied data in the tritium tool, using the Special Paste option instead of the Common Paste, so we didn't overwrite the formulas that are in there. The dose reconstruction report should allow the peer reviewer, the OCAS reviewer and other HPs to reproduce your results of the assessment.

State clearly all your assumptions and reasoning. Because we had had some peer reviewer saying, "I can't figure out what this person did. And it looks okay, but I'm not exactly sure of the decision making process." Same stuff we've dealt with here over time.

From 2005 through '10, after we

started the peer review process, the procedure itself, but before we were tracking the comments. Ensure the internal/external uncertainty descriptions or any uncertainty section.

There had been quite a few DRs come to PR with only external uncertainty defining in the section. This, actually because we had this comment from some peer reviewers, we determined it was a template issue.

So we updated the template to specifically get internal uncertainties instead of expecting the dose reconstructor to add them as well. So it's not just in the dose reconstruction process. But it may have some feedback to the tools as well.

Read the report, read the report, read the report. I love repeating things. We've been seeing some wording such as "doses were overestimated using efficiency methods in compensable claims." Obviously, you can't

overestimate a compensable claim.

Back in 2006, we mentioned this to the DRs again. Like specifically the bottom, don't assume that the template is correct for your specific claim. Read it completely after you're done.

All pretty common-sense stuff, but things we were seeing in peer review that we wanted to make sure dose reconstructors were reminded of. Different DRs for the wrong cancer organ had been cited in the report. And this was a cutting and pasting issue.

If you look at 2007, I know we discussed a lot in here, some of the cutting and pasting. You know, we were trying to be efficient with cutting and pasting and reusing paragraphs. But sometimes, dose reconstructors would miss the organ of interest in changing it to the correct one. And it would, you know, get to peer review.

This is when we started changing the templates more to be fed in by the tools,

and becoming a little bit more automated in the process. Be extra diligent when dealing with multi-cancer claims to ensure the IREP sheets and summaries are correct prior to submittal.

This came up -- I remember this. 2009, that's scary. I remember this. There was a claim with, I believe it was 51 cancers. And they're almost all skin cancers.

And when you're dealing with that, trying to keep all the IREP sheets and summaries clear and straightforward is a chore. So they have a numbering process, and so on and so forth.

And then what we've been doing since, doing your own reference checks. And I just basically walked an easy way for peer reviewers to do an external reference check, and dose reconstructors should be doing the same thing.

This actually came down -- some peer reviewers were doing this reference

check. They'd print out -- and this is all assessed.

They'd print out the final pages of the dose reconstruction report that had the references, and had it in their hand while they were reviewing the actual dose reconstruction.

And just check things off as they ran into it, to make sure all the references were there or there weren't additional references in there. Pretty straightforward kind of thing. But peer reviewers were doing it.

And we figured, well, if peer reviewers are doing it, let's just have the dose reconstructors look at doing the same thing.

This came up. Don't rely on a DCAS return sheet, the Form 35s, to determine all the issues. Always go back to the source documents.

We ran into a couple during peer

review where it came back on a Form 35 from DCAS, saying there was an additional skin cancer. But there was also some other changes that DOL had made that weren't called out on that sheet. They were in NOCTS, but there were other changes. But they weren't necessarily specifically called out on that sheet.

So we just reminded DRs, as they always should go back to the ANRSD, go back to the DOL, DOE files, all that kind of stuff. And just remind them, if it's near or after the last time the claim was worked on, it's a good chance it's new. Look at it.

And more recently we'd run into this as we get more and more SECs at various sites that we're dealing with. We're watching the wording on overestimate language applied in a non-comp claim and an SEC period.

Because during an SEC review, you cannot do an overestimate. It's only a partial. You can overestimate what you can

assess. But you can't call the whole thing an overestimate. We've run into this here as well.

And as we dealt with more SEC sites, we wanted to make sure that was very clear to the dose reconstructors to be thinking about that, as more claims ran into that SEC issue.

MEMBER KOTELCHUCK: I don't quite understand.

MR. SIEBERT: Okay.

MEMBER KOTELCHUCK: Could you clarify --

MR. SIEBERT: Yes. I'd be happy to. When a site goes into an SEC status, and people who have the SEC cancers are paid, the people who do not have those cancers, they have different cancers, we still assess them.

There may be something, say thorium, that we can't assess, because there's not enough data. So we will state in the SEC section that we cannot assess thorium. And

when we do the dose reconstruction we may be able -

Everything else we may be able to use OTIB-18 to overestimate internal, say for a prostate cancer, or something like that. We can't call the whole thing an overestimate. Because the SEC clearly states we can't overestimate thorium, because we can't bound.

So we have to be very careful with our wording that it's a partial assessment. It may overestimate everything we can assess. But it doesn't overestimate the whole case.

MEMBER KOTELCHUCK: Thanks.

MR. SIEBERT: Sure. It's not necessarily straightforward thinking here. And the last thing I want to do, and I'll leave it to you if you want me to run through a couple of the reports on the live version. Do you want to take a break beforehand? Do you want to --

CHAIRMAN GRIFFON: Yes. Why don't we -- I think it's a good break point.

MR. SIEBERT: Okay. It shouldn't take too long. But in case there's questions.

CHAIRMAN GRIFFON: Let's take -- back at quarter of? You can digest this, and then be ready for the live version.

MR. KATZ: I'm putting the phone on mute. And I think, Dr. Poston, have you been with us? He had a class to teach earlier this morning, which was why he missed it, but he was supposed to be on the list about quarter past nine.

(Whereupon, the meeting in the above-entitled matter went off the record at 10:33 a.m. and resumed at 10:53 a.m.)

CHAIRMAN GRIFFON: So Scott was about to take us live.

MR. SIEBERT: Live, large, and in charge. This is what we have as the live version of our database for our PR Comments. Since we've just created the new one with all the categorizations, it's only been live since mid-September.

And we've been building the different reports, and so on and so forth. So everything I'm going to show you is what we've done so far. And we're still coming up with ideas of things that's useful, and so and so forth.

So that you have an example of a relatively reasonable period, we actually went back into the old comment database, pulled all the comments from August 1st, through the beginning of September when this went live, and back-fitted those to the new categories, so that we'd have August, September, and October. We'd have a full quarter for you guys to see here. So I'll pull up the detail report.

And this is what it'll look like. We can pick our time frames, our dates, and so on and so forth.

But this is just pulling in our data into specialist, puts this in and puts in the claim number, the version, the date that

the peer review was completed, the type of comment, category, description, and a little bit of text as to what the actual comment is. And it's all the stuff that's off that other form that we discussed. So it's not really --

MEMBER RICHARDSON: So you've got multiple lines per signing?

MR. SIEBERT: Correct.

MEMBER RICHARDSON: And the next column, what's that mean, the version --

MR. SIEBERT: The version and revision are: the version is the last time it went over to DOL. And the revision is the last time it went over to NIOSH.

From our point of view, you can have a Rev 0, which means it's never been to NIOSH for review, and it's never been to DOL. Or we may actually have a Revision 1, Version 0, Revision 1, where it has not gotten to DOL yet. But NIOSH had a comment for us.

And we have a new revision that we made that comment, we made that change. And

then it's approved and goes to DOL. The next time DOL returns it to NIOSH, it becomes Version 1.

MEMBER RICHARDSON: So the next claim there went to NIOSH five times?

MR. SIEBERT: It may have gone back and forth five times.

MR. HINNEFELD: Now on that --

MR. SIEBERT: Maybe.

MR. HINNEFELD: Yes, that's a function of our system. Version and Rev are a functions of our system. So when you go above Version 1, that means DOL has returned it to us.

So in other words, we have sent DOL Version 1. They returned it to us and it becomes Version 2. So when we send it over to ORAU, we get it back. We send it to ORAU.

That increments that revision, the first one. So it's not like it's been back and forth. They're probably on their second time preparing it back to us. Because --

MR. SIEBERT: You won't see versions to Rev 0.

MR. HINNEFELD: Those revision and version numbers are incremented by tasks in NOCTS, as the claim is manipulated through NOCTS. And since a Version 2, or higher, comes to us first, and then we send it back through this system over to ORAU, that increments the revision at that point.

So don't put a lot of stock in revision numbers for higher versions. It's not like it's been back to us five times.

MEMBER KOTELCHUCK: Right. So it's one, three, five, seven.

MR. HINNEFELD: Something like that.

MEMBER KOTELCHUCK: And 2.1 means that you sent it over, or they sent it over, and you're awaiting action.

MR. HINNEFELD: Yes.

MEMBER KOTELCHUCK: The first number --

MR. HINNEFELD: 2.1 would be our movement to them.

MEMBER KOTELCHUCK: That's right, your movement.

MR. HINNEFELD: Because Version 2, that's the first movement in the system, is us to them.

MEMBER KOTELCHUCK: Good, okay, thanks.

MR. HINNEFELD: I think. I'm not entirely sure of the incrementing. But the incrementing is off on the higher versions because of that earlier step.

MEMBER KOTELCHUCK: Yes, okay.

MR. CALHOUN: And so many things can cause that to go up.

MR. HINNEFELD: Yes.

MR. CALHOUN: Whether it's a modification or a re-work from Labor. Labor drives more of that than we do.

MR. SIEBERT: And then from that point, let's look at some of the overall.

These are percentages of the types of comments we've had in peer review over time, on a monthly basis: August, September, October, and we're in the middle of November, almost finishing that up. We see the key down there. And right at the top is the error return, which means there was a substantive error that needed to be addressed by the dose reconstructor. And this would represent a specific claim.

Yellow means it had feedback, and at least one error that didn't necessarily necessitate return to the dose reconstructor.

The green ones are feedback only. It means there were no errors, but they may have had a comment of some sort. And then blue is: there were no comments whatsoever.

So the reason we put this together like this is: if you look at blue and green together, basically, those are the ones where there's no errors whatsoever. This is on a percentage basis.

And red are the ones where we need to look into it a little bit more. But over time, and obviously we have a very small selection for the Supporter Plus. But we're working on getting people understanding the process and working through it.

So for the overall error rate, it seems to be coming down. But once again, with a quarter's work, it's hard to really say what you're really seeing.

We did that on a percent basis. And we also did it on a total basis. So this would be action by number of claims, as opposed to percentages breakdown, same color in the scheme. So we can track that, based on if we have more claims less than, so on and so forth.

MS. LIN: Is there a reason why you didn't have it in a pie chart?

MR. SIEBERT: Because pie charts were making me too hungry. Because we save the pie charts for fun stuff.

(Laughter.)

MR. SIEBERT: And this one right here -- let me make this an actual full quarter. So starting August 1st, and I think the weekend of October, okay.

These are all the Level 1 categories, the major ten categories that we were talking about. As you can see -- as you probably cannot see, but the green -- and it looks really pretty and green on my screen.

The gross olive green up there is the non-technical report issues. And as you can tell, that's the lion's share of things that we're seeing. Then the policy guidance issues, data collection issues, so we can really focus in and see where the largest amount of comments are coming.

And when we pulled the old database, we don't have the reports for that online any more, but when we pulled the old database it was almost always identical, that most of the comments were report-type

comments, misspellings, typos, wording.

And it may be numbers need to be corrected and things, but specifically in the report. So that's where we're finding most of the issues.

And then, if we want to drill down a little bit further into reports, we can pull down -- let me get the date range. We can drill down here at the Level 2, the next levels down, for the technical reports.

And this shows that the majority of them are report language clarification preference. Maybe the use of the glove box factor could have been explained a little bit better. So they made a suggestion on how to make that wording, things like that. So once again, the lion's share is language and clarification, preference type stuff.

CHAIRMAN GRIFFON: Well, this is Level 2.

MR. SIEBERT: Yes. This is pulling down the next level under non-

technical reports.

CHAIRMAN GRIFFON: And can you just show us one of the other ones, like internal dose or external dose?

MR. SIEBERT: Sure.

CHAIRMAN GRIFFON: One or two.

MR. SIEBERT: Here's internal, there's Pac-Man. And the green is, Number 3 is: "incorrect DR methodology used for determining dose."

And then there's actually a breakdown under those. Internal and external, there's additional levels which we didn't drill down to pulling these in the charts. Because there was not enough information to really be relevant. But we can pull it if we need to. But we didn't do that.

CHAIRMAN GRIFFON: Just out of curiosity -- oh, you don't have that on the charts like that. I was just curious what the next levels were, below like this level.

MR. SIEBERT: Like what they

represent, what would be the options?

CHAIRMAN GRIFFON: Yes. What are the categories for that? That was on your sheet before, I think.

MR. SIEBERT: Yes. That's okay. I can pull that up here. So for internal, under three, there's internal fitted dose, missed dose, unmonitored, and environmental. So any of those would be rolled up into three.

And the same thing for external. Here we broke it down into photons, neutrons, shallow, and then measured, missed, coworker, ambient, and medical X-ray.

So, as I said, a work in progress, but I believe it's starting to generate the information that we're wanting to see.

Now it looks like external, it's more spread out. It's not one specific thing that's really dominating everything. We see the light blue. Medical X-ray dose.

And sometimes we'll see that, honestly, in a time where we're changing

processes. For example, during this time frame -- and that may be what a lot of this medical X-ray dose stuff is -- during this time frame is when DCAS gave the official word to us that we were going to start using best estimate information for medical X-rays, and zeros for missed dose for badging, for external.

MR. CALHOUN: As a result of this meeting?

MR. SIEBERT: As a result of this meeting. So when we implemented that, claims that were presently in the process, a lot of those got kicked back to the dose reconstructor to change that to meet that requirement.

So some of these may be a process issue that we're dealing with at that time, so we'll have to drill down and get the information on that.

MEMBER KOTELCHUCK: Do you correct organ selected? There seems to be a large

category.

MR. SIEBERT: It's this one right here.

MEMBER KOTELCHUCK: Oh, I'm sorry, no, no, the one above it.

MR. SIEBERT: This one right here, that's the medical X-ray.

MEMBER KOTELCHUCK: Okay.

MR. SIEBERT: I'd like everybody to look at my screen over here. Yes. This is the OTIB-5 organ selection.

MEMBER KOTELCHUCK: Okay.

CHAIRMAN GRIFFON: OTIB-6.

MEMBER KOTELCHUCK: That's good.

CHAIRMAN GRIFFON: Five?

MR. SIEBERT: It should say five. It does say five. It's just hard to see. And then DR methodology for photons and breakdown.

So this is, as I said, since it's only been in progress for the last quarter, I know Joel and I are really starting to start to dive into this, to see where these kind of

things are. So I think it's been very helpful. It's good for us, kind of tracking these type of things.

MEMBER RICHARDSON: One of the things that jumps out, I guess from the histograms, is 50 percent of the issues or so, maybe more, are communication, language issues, it seems like, where you were --

MR. SIEBERT: Report issues.

MEMBER RICHARDSON: -- report issues. And it's almost like there's two flavors of issues. There are types of issues where maybe you would like a senior experienced dose reconstructor to focus their time on.

And then there's the type of issues they're probably not the best suited to -- in a way, they might be. But also a communications specialist or a technical editor could also go through and see whether the information's consistent between two things and whether the language is expressing

clearly, flagging places where there's complicated language, where it could be clarified.

MR. SIEBERT: And the technical editors would obviously technical edit it, they do that type of review as well, after the peer review process, which is part of Procedure 98. So there's another level of looking at that.

But we still have the peer reviewers working through that. Because a technical editor may understand the wording, what might be more eloquent wording.

But they may not necessarily understand the full technical knowledge of what the thought process is behind it, such as when you're talking about NRDP, or --

MEMBER RICHARDSON: You have lots of things flagged there that seemed like spelling issues, right? Weren't those --

MR. SIEBERT: Yes, there were some in that area, non-technical issues. You'll

see some of those. He/she.

MEMBER RICHARDSON: Right.

MR. SIEBERT: Things like that. And that seems to be the majority of what you run into.

MEMBER RICHARDSON: Yes. I was just wondering if there was a way to save their brains for the hard stuff.

MR. SIEBERT: Well, the process we have in place right now is very organic. The peer reviewer and the dose reconstructor are intimately involved with the full part of the case.

So I would hesitate to say, to peer reviewers, "Don't look at wording." But once again -- and this is something I've realized over the last week and haven't had a chance to have our IT folks put in yet -- I'd like to look at, say, that big olive green color right there, how many of those were feedback and how many of those were errors? Typographical errors versus wording

suggestion.

We haven't pulled out recording that yet. And we're going to look at it, and we're going to pull that kind of thing out. Because every technical writer is going to have a slightly different style.

And realistically, some peer reviewers are better writers than some dose reconstructors, and vice versa. So those are the kind of things that we can, those fall under feedback.

But we can cull those out and look at them. And if there is some wording that is more eloquent, we may be able to pull that into the template, and use that as such. So we're looking at that kind of stuff as well.

But I'd be afraid to have the peer reviewers not look at the whole report as an organic portion. Their brains can handle it. We'll spoon water over them to cool them off.

(Laughter.)

And that's basically how we're

looking at that. We're breaking those kind of things down. I pulled out, I'm not sure how helpful it is yet, but one of the things I wanted to look at was an average number of comments per period.

So over each of those months, like in August, there was about a little over 0.6 comments per peer review. So it's just -- the total number of peer reviews that were done is the denominator. And the total number of comments that we had is the numerator for this, straight out.

And we kind of look at: are there trends that we're seeing? More comments, less comments, things like that. Once again, I don't have them pull it out by feedback and area. We're looking at doing at that.

Let's see what else we put in here. Peer review comment logs, where there were no comments at all by month. So it's an increasing number. And I flagellate the PRs to make sure it's not because they're being

lazy, but because they're not finding as much.

So those are the kinds of things we're looking at. And as I said, as Joel and I see how useful the data is, what we can pull out there to be pulled into the reports, and so on.

But I have found it very helpful already. So it's good. And that's where we are with the live comments tracking and recording. And that's everything that I have, and then some. Any comments, questions on that?

MEMBER CLAWSON: Scott, this is Brad. I think you hit on it, but you've kind of found this a little bit useful, too, haven't you?

MR. SIEBERT: Sure.

MEMBER CLAWSON: Being able to see where everything's kind of laying out?

MR. SIEBERT: Oh, yes. I have found this helpful, sure. Having additional data, as long as we have the resources and our

client wants us to devote the resources to that, is very helpful. And we're happy to do so. So, yes.

To tell you the truth, so far, and like I said, with a quarter's worth of information, I haven't seen anything that surprised me.

As I said, from the old versions, and even before we started tracking, we knew that wording was usually the largest issue that we ran into.

And we fixed things. We had information from peer reviewers that we amalgamated and gave to the dose reconstructors during our meeting. So nothing is a really huge surprise to me. But it has been good to narrow in on some more specific things.

MEMBER KOTELCHUCK: It's satisfying to see the changes. And at least Board people can see what you believe was the case.

MR. SIEBERT: Right.

MEMBER KOTELCHUCK: Which is important.

MR. SIEBERT: And that's it for me.

CHAIRMAN GRIFFON: And I'm just thinking: where does this Subcommittee go with this? I think this is useful. The one thought I had was, when you gave your presentation, that all those pieces everyone just can look through the categories themselves and see if you have any feedback in that regard. But I think the real powerful thing is to see in a year or whatever --

MR. SIEBERT: What the trends --

CHAIRMAN GRIFFON: -- what kind of trends you'll have. Yes, yes.

MR. SIEBERT: And for the categories --

CHAIRMAN GRIFFON: The sub-categories --

MR. SIEBERT: We tried to pull the

categories and make them line up with SC&A's categories somewhat, as much as we could. Because we wanted to tie that process in down the road as well. So we're trying to be much more organic with the whole process.

MR. KATZ: So again on this, if you have Subcommittee Members or SC&A staff, whatever, but if you have comments on categories or sub-categories, if you'll at least copy me, I'll make sure that they all get to DCAS.

MEMBER KOTELCHUCK: On the other hand, if we make too many changes in your categories, then you can't track them.

MR. SIEBERT: Yes, please put some thought into: what changes do I want to change?

MR. KATZ: And here we're at the outset, so --

(Simultaneous speakers.)

MR. SIEBERT: If there's something huge missing.

CHAIRMAN GRIFFON: Right.

MEMBER KOTELCHUCK: It may be worth the comments coming in at the end of the year.

CHAIRMAN GRIFFON: And I would ask, not only for Subcommittee Members, but also SC&A --

MEMBER KOTELCHUCK: That's what I said.

CHAIRMAN GRIFFON: Oh, I didn't hear you say that, okay. Just like Scott said, to look at what you're looking at and compare it to their categories, and see if there's any glaring -- you know, if they're going to work well together, and if there's anything missing. I think you can probably --

MEMBER KOTELCHUCK: Like I said, I think you need to stick with these categories --

CHAIRMAN GRIFFON: Right.

MEMBER KOTELCHUCK: -- even if there is disagreement, you could do better if

you did, or added this, that you should stick with these for a while so that you can see the trend.

MR. SIEBERT: Right.

MEMBER KOTELCHUCK: And then make a change-over after a year, and then do the changes. And then you won't have this year to compare -- then it could be comparable with this year.

MR. FARVER: Would it be helpful to see like a side-by-side comparison, so you just know who's looking at what? Would that be --

CHAIRMAN GRIFFON: What do you mean side-by-side?

MR. FARVER: Well, in other words, you take their items that they're looking at, and you have the items we're looking at.

CHAIRMAN GRIFFON: You're looking at, right.

MR. FARVER: If we just put it together so you can kind of see and compare

the things that they're looking for and what --

MR. KATZ: No, you don't need to do that. If you have comments, though, about suggested categories, provide them.

MR. STIVER: You can do additional breakdown and look at how that might be useful.

MEMBER MUNN: They look pretty well thought-out to me.

MR. STIVER: Yes, they look really good.

MEMBER RICHARDSON: So, Doug, when you were saying what you look at, you're talking about SC&A's reviews?

MR. FARVER: Yes. Our checklist for Table 2, I believe.

MEMBER RICHARDSON: Yes, Table 2.

MR. FARVER: And really, not to say that one is better than the other, just to show you what is alike and what is different.

MEMBER RICHARDSON: The other

thing that I was thinking is: the side-by-side comparison is -- in a year's time NIOSH will have 50 or 70 of the blind reviews that have been randomly sampled.

And you'll have identified places where there's more or less concordance or places where there's disagreements. And you'll have a report of what you found internally through the peer review process.

Because I'm thinking there's two ways that you may flag things that go back to your peer review. One is more things may be flagged because there's more problems there.

Another one has more things maybe flagged on areas that the peer reviewer tends to focus more on. So NIOSH's review is looking at what's passed through, and fallen through the cracks, and the peer reviews have not picked up, I assume.

And to see whether those categories are categories where there's chronic problems where there's a lot of

problems coming in to the peer reviewer -- and they're calling out most of them, but not all of them -- or whether it's simply a category or problem that the peer reviewers aren't focusing on at this time, and they're coming through and ending up on NIOSH's desk.

So to the extent that you can set those side-by-side, I think it might understand where, in the flow, those are coming from. Stu, are the categories such that that sort of comparison could happen?

MR. HINNEFELD: Well, I'd have to actually go look. Our blind review list follows relatively close to SC&A's dose reconstruction review checklist. So it follows pretty closely to that. I think you could make some approximations. But I don't know exactly if it's --

MEMBER RICHARDSON: No. I don't think it has to be like everybody uses the same tool, but to try and figure out the story about how are things ending up that you're

finding them in blind reviews?

MR. HINNEFELD: If we find something here, it might be interesting to see what the peer review history of that case was. I'll leave that to Grady.

(Laughter.)

MR. HINNEFELD: I think that would be something we could use, to go back and study -- or on a case we commented on. It will not go in a blind review, but we would re-review or we make a comment on the case. What has the peer review missed here?

CHAIRMAN GRIFFON: Okay, anything else on this issue?

I think really the only action going forward is if we have any major comments, get them to Ted now, or as soon as possible. And then, occasionally, I think we should ask for an update on the Subcommittee.

MEMBER RICHARDSON: I think it's great, though. You can sort of imagine this as being where you've got a series of gates in

place. And we're collecting information on those and seeing where are these problems that we've been seeing, tracking them back, and seeing where there could be an intervention in the peer review process early on at ORAU to catch those before they go out the door.

CHAIRMAN GRIFFON: Yes.

MS. LIN: Mark, couple of things. So Scott's presentation has a lot of lessons learned. And those are really the business information of ORAU, after ten years of experience as DCAS contractors.

So even though we're in the public meeting, I think the Board Members and SC&A and people around the table listening in should be conscious about who they talk about this information to -- to whom they distribute this information, or to whom they talk about this information. Does that make sense?

CHAIRMAN GRIFFON: Yes.

MS. LIN: And the second piece of that is: it's great that SC&A and the Board

get to look at ORAU's work process. But then keep in mind that the agency still has to direct the work of ORAU.

And all the comments, all the revisions, whatever, still has to come from the client, which is DCAS. And obviously the agency would need to think about the resources that they need to spend --

CHAIRMAN GRIFFON: Yes, right.

MS. LIN: -- to accommodate the changes to the Board wanted to make.

CHAIRMAN GRIFFON: That's a good point. We're not advising ORAU, really, we're advising NIOSH. So, yes.

MS. LIN: Exactly, so just keep that in mind while you're making your suggestions.

CHAIRMAN GRIFFON: Okay, right. That's fine.

MR. KATZ: And I'll be sending what comments I have to Grady, not to Scott --

MR. SIEBERT: I get everything

from Grady.

MR. KATZ: -- about how to dispense.

CHAIRMAN GRIFFON: Okay, with that legal advice, I think we can talk about the next item before lunch here, at least one item. SC&A blind reviews.

MR. STIVER: Okay, that was ours. And Kathy Behling is on the line. She is the author of the blind DR reviews, and also the comparison that we recently submitted as our Methods A and B in comparison to NIOSH's methods. So Kathy, if you would like to lead out the discussion on that.

MS. BEHLING: Okay. Let me just tell you, the file was -- the date that we sent this data out was on Tuesday, November 20th. Last Tuesday, we sent the file to everyone, hopefully.

And I will give you a portion of the title: Draft SC&A-TR-DDR2012, and then the case number. We also included in that file or

in that email, the actual first blind dose reconstruction review.

Now, SC&A started, we were tasked with doing two blind DRs. And I actually went and made a comparison of two independent methods that SC&A used.

Method A used all of the same information and spreadsheets that NIOSH uses. And Method B was more of a manual, should I say, practical approach. We still used all of the Technical Basis Documents. But we didn't use DR tools and that type of thing.

Now, I'm going to ask the question as to whether you would like me to go through each element of the doses, the reconstructed doses.

I was not one of the dose reconstructors for either Method A or Method B. And I'm independently looking at this comparison and comparing Method A and B to NIOSH's methods.

So I guess, Mark, I need to ask:

would you like me to go through each of the elements of the internal and external doses, or do you want me to go to the summary and bottom line issues?

CHAIRMAN GRIFFON: Well, maybe just give us the summary first, Kathy. And then maybe we can go back, if we have questions on the -- when you talk about the line by line, that's on Page 5 of this file. Is that correct, Table 1-1?

MS. BEHLING: Yes. And I'll give you a brief overview.

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: Table 1-1 is a comparison of the recorded and missed externals, and we'll go into this. One of our methods, Method B, also assessed a potential skin contamination dose for this case. We also looked at -- everybody agreed that there was an unmonitored period of employment.

And each of the two SC&A methods and NIOSH calculated a monitored dose based on

coworker model. They also calculated an occupational medical dose and internal dose.

And this particular case, there were several skin cancers. I'll be a little bit vague on some of the details, just so that I don't cross over any lines here.

But in this particular case, there were several skin cancers. And we also calculated a red bone marrow dose for a bone cancer.

I will also just point out to you, on Table 2-2, which is on Page 8 of our report, is a comparison of the different assumptions and parameters that were used by the different methods.

Overall, the dose reconstruction method, SC&A's Method A used the best estimate approach. Method B is what they considered a reasonable claimant-favorable approach. And NIOSH, at least in the up-front information, indicated that their approach was more over-estimating.

And all of the other parameters that were used for the different methodologies are identified in this particular table.

Now, we'll go to the back end here and I'll take you to the summary. And if we have any questions, and you want to go into details of any of the doses, we can do that thereafter, as recommended by Mark.

And if we go back to Page 14 on the summary conclusions, this table gives you total external skin doses for Methods A and B from SC&A, and NIOSH's doses, the internal skin doses, and also the internal and external doses for the red bone marrow.

And let me just point the primary differences in this table, and what we have concluded caused or was the result of those differences.

First of all, you can see that SC&A's Method B, under the external skin dose, is significantly higher than NIOSH's doses, and SC&A's Method A.

That was primarily due to the fact that Method B selected for its unmonitored period of exposure -- which was about -- I think an eight, no, nine or ten year period -- when they went into the coworker model, which is OTIB-40, they selected the 95th percentile value, as opposed to Method A and NIOSH selecting the 50th percentile value for the coworker model.

As you can see under the internal skin doses, they were not calculated under Method B. They were assumed that they were going to be fairly insignificant. Method A and NIOSH's values are very close.

And then if we go to the red bone marrow doses, as you can see, again the Method B for SC&A has a significantly higher external dose. Again, that's the result of selecting the 95th percentile value from the coworker model.

And the internal dose for the red bone marrow, you can see that NIOSH's internal

dose was significantly higher than both methods for SC&A.

That really resulted in the way everyone interpreted the bioassay data. There were quite a few bioassay samples. And what NIOSH did in their assessment, they assumed a chronic intake throughout the entire employment period.

And then, in evaluating the records, they realized there were several bioassays using urinalysis taken in a row in the 1977 time frame.

And those bioassays, even though they were just over the limits of detection, they considered that a potential incident. And so they went and calculated, on top of their chronic dose, an acute dose, and went back to a date that was halfway between the previous bioassay and the date of these multiple bioassays.

So that's how their internal dose resulted in a significantly higher amount than

what SC&A's approaches were. SC&A's approach assumed a chronic bioassay. And most of the bioassays were below or right at the levels of detection.

So I guess in summary, as you can see on my Page 14 and 15, for the external doses, the selection of either a 50th or a 95th percentile value played a big role in the differences in dose.

Also, when it came to selecting the organ DCF values, throughout the external dose process and reconstruction, NIOSH chose to assume that the DCF was one.

Where in both the SC&A methodologies, we went into the external implementation guide and selected the actual organ DCF value, which was significantly below one.

In addition, it was somewhat interesting. On the occupational medical dose, everyone used the same procedure, and selected, obviously, the site occupational

dose Technical Basis Document.

But each method did a few things different. Method A assumed that there was an annual X-ray exam procedure, which is specified in that procedure.

Both Method B and the NIOSH methodology assumed, they went into the records and simply counted the number of X-ray exams that were in the DOE files. And so they calculated their occupational medical dose not on an annual, but on what was in the records.

There was also some differences regarding, for some of the skin cancers, what surrogate organ was selected for pulling off the data from the table in the Technical Basis Document.

Now if we go into the internal doses, again, as I just specified, there was a difference in methodology because of both NIOSH using both a chronic -- I'm sorry, a chronic intake throughout the employment period. And they also assumed an acute on top

of that.

One of the other things that we did a little bit differently than SC&A did in Method A, where we looked at the bioassay data, rather than assuming a maybe more claimant-favorable absorption type F.

When we plotted that data and fitted the data that we used, we realized if we introduced a chest count that was done later in the process, we would have likely overestimated the dose by using an absorption type F.

So we fell back to an absorption type M, which seemed to fit the data more appropriately, taking into account that chest count.

And so that's the summary in a nutshell. And if you have any questions, I'll attempt to answer them. And I'm going to maybe call on Doug because he was the Method A SC&A dose reconstructor.

CHAIRMAN GRIFFON: I'll start off

at least one question. And you alluded to this, I think. But the skin doses, part of the differences from Method A, I understand the difference with Method B versus NIOSH.

But with Method A versus NIOSH's numbers, you said one of them might have been the surrogate organ selected. But NIOSH's numbers are supposed to be -- maybe they're not overestimating in this. Well, yes, you said they were, using an overestimating DCF for that, right?

MS. BEHLING: Right. I, quite honestly, found it seemed like a bit of a hybrid to me, which often happens during the process.

I think they started out with the overestimating approach by using the claimant-favorable DCF value of one. As the process went on, things such as counting the number of X-ray exams, as opposed to just assuming an annual -- typically, for an efficiency measure, they would just assume an annual.

They didn't do that in this particular case. Same with the internal dose. I think there were things that they did that were claimant-favorable.

I will also point out, and again NIOSH, you can correct me if I'm wrong here, but generally when there are many or any kind of overestimating techniques used in dose reconstruction, if that PoC were to go over 50 percent, they would take a second look at this case.

And I think if this PoC would have been over 50 percent, they most likely would have gone back and used actual DCF values. They may have also gone back and reassessed their fitting process for their internal dose.

And I hope, if you've had time to read the document -- I tried to be as clear as I could throughout the process to say in each step why there were differences -- and hopefully the report does explain that.

But if there are comments or

questions down the road, feel free to contact either Doug or myself or John Mauro.

CHAIRMAN GRIFFON: Others have questions?

MS. BEHLING: I will also say there is a second blind dose reconstruction, that we will be submitting a second report for that. And we should have that prepared for the next meeting.

CHAIRMAN GRIFFON: As we're looking at this case, and the other one, part of our challenge is to decide to what extent we want to use blind cases going forward, and whether we want to increase the number, whether we wanted to use methodology similar to what SC&A used here.

I kind of like the Method A/B idea. I can see John Mauro in Method B, of course. But I think that, yes, that's a good gut check kind of thing.

But the afternoon discussion is going to revolve around the dose

reconstruction methodology. So I think we want to think about whether these blind reviews are useful and how we can use them going forward.

MS. BEHLING: The other thing I would point out, which is somewhat of a unique concept, although John Mauro has mentioned it before, I know, in Work Groups that he's in.

And so in Section II, 0.2.8, John has written a fairly extensive assessment of potential skin contamination. And his feeling was that since these skin contaminations were on the face, and neck, and that type of area, and considering the person's job function, that there could have been, and also at this particular site, there is a section in the Technical Basis Document which discusses the potential for skin contamination.

He felt that it would be interesting to see if he could actually make some broad assumptions and calculate some doses, which he did.

And I included that in our up front table. But it might be interesting reading for some, our original report, which was sent with this comparison, as to how he went about calculating those doses.

CHAIRMAN GRIFFON: Yes, he's raised this issue before. And it's one of those that's interesting. In your Table 1.1, it demonstrates that this is an area that's not accounted for otherwise. And that's how John raised this issue, I think.

MS. BEHLING: Yes.

CHAIRMAN GRIFFON: It's how can we account for --

MR. KATZ: While people are thinking, Kathy, can I just get clarification from you? What is this second report that's going to be coming for the next DR Subcommittee meeting? When is that? Because -- go ahead.

MS. BEHLING: I'm sorry. We were tasked with doing two blind reviews.

MR. KATZ: Right.

MS. BEHLING: This is a comparison of the first. And I was going to prepare a comparison of the second one also.

MR. KATZ: Okay. Because didn't you present both of these previously?

MR. FARVER: We presented the blind --

MR. KATZ: Right, the blind reviews.

MR. FARVER: But this is a comparison of our blind reviews versus the actual NIOSH dose reconstruction.

MS. BEHLING: Correct. What we presented --

CHAIRMAN GRIFFON: I think we asked him to go back and give more detail on this, on both of these.

MR. FARVER: See when we did the dose reconstruction, we did not have access to it. They just gave us the original files. And we went through and did a dose

reconstruction. And that's what we presented to you, our dose reconstruction.

MR. KATZ: Oh, so you didn't compare your results to --

MR. FARVER: No. That was not part of it.

MR. KATZ: Okay, I thought that was part of the discussion.

MR. FARVER: -- we were just doing a blind review.

MR. STIVER: Yes. That was tasked at the July 2011 meeting.

MR. KATZ: Okay, thank you.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: And then this is a comparison of what NIOSH came up with, with what we came up with.

MR. KATZ: Got it, thank you.

CHAIRMAN GRIFFON: So my interest mainly, from this information, is to think about how it can affect going forward. What can we glean out of this? What's the

usefulness in terms of our overall dose reconstruction effort here?

I think the other DR reviews strictly focus on, we'll get down to this this afternoon, but it tends to pull out the quality questions, the quality issues, the quality findings. These blind reviews could look at different aspects. Wanda wants to say something. I can see it.

MEMBER MUNN: No, it's just -- determining what value, if any, this kind of focused attention will have for us, is not an easy task. And it's one that probably requires more deep thought than deep discussion, really.

And I personally haven't had an opportunity to absorb the material here. I'm looking forward to hearing Kathy's helpful blow-by-blow of things that will heighten my personal attention when I'm spending more time thinking about these. I guess what I was trying to say is it's hard to discuss it right

now.

MEMBER KOTELCHUCK: This particular one came out on Tuesday. By Wednesday night, I was out of town for the holiday, and came back on Sunday evening. So I had yesterday. So I really also didn't get a chance, particularly on this one, to absorb it.

MEMBER MUNN: And I was traveling all day yesterday.

MEMBER KOTELCHUCK: But that's the particular of this particular week.

CHAIRMAN GRIFFON: Right. I understand.

MEMBER MUNN: And I'm not begging off, I'm just saying that deep discussion is --

CHAIRMAN GRIFFON: It is something we need to figure out. That's what I'm saying. I'm not saying we can do it in an hour.

MS. BEHLING: And I apologize for

not getting this into your hands earlier. But I will hopefully get this next review or comparison into your hands in plenty of time before the next meeting.

So perhaps you'll be able to digest that, and will be able to have a more meaningful discussion of maybe even both of these, at that point in time.

MEMBER KOTELCHUCK: Normally a week's time is fine, if it's a regular week. You just happened to send it in a very particular holiday week. That made it difficult for us. Otherwise, if you sent it a week, or of course two, in advance, that's fine.

CHAIRMAN GRIFFON: That's pretty good for us too, a week in advance.

And I think the other thing that I'm realizing is that, because I know it's come up on the Board meetings, and the overall Board has asked about why have we just done two blind reviews.

And so I think there's certainly some interest in having the additional blind reviews. But I want to see, before we just assign a bunch of them, let's think more deeply about what are we going to get out of them.

And to that end, I'll also say that I think we probably need to -- and I'm sure Ted will agree with this -- probably need to schedule our next DR Subcommittee meeting a little sooner. Because we're falling behind on the overall case work too. So I think we might be able to more deeply discuss this, but have a meeting early January or something like that, right after our next Board meeting. Because it's not a matter of waiting for SC&A or NIOSH to get more work done. I think we've got enough work on our plate right now that we need to just probably schedule a meeting sooner than that.

MEMBER CLAWSON: I'd like to make one comment about this. From the layman's

term, I know that you guys understand the fundamentals of the dose reconstruction a heck of a lot better than what I do.

But I really found this useful, the comparison of going through and actually seeing what the process was and why the differences were in there.

And I really found it quite interesting, just to help me understand it better. And I think there are a few other people on the Board that are similar to my case.

I thought this was quite good. I like the breakdown of where we were at, and why they did what they did. The conclusion was quite good.

CHAIRMAN GRIFFON: And I think part of our hope is that we could identify instances where the guidance isn't clear enough, certainly comparing Method A to NIOSH.

Method B is a little different thing. But comparing Method A to NIOSH, I

think hopefully the findings we would expect out of that would be: well, why did we select this, and NIOSH select it this way? Well, the guidance wasn't clear. So findings like that might come out of the process.

On the other hand, now NIOSH has instituted their internal, so it might be just as valuable for the Board to oversee their internal blind process, rather than do a whole set of redundant blind processes. I don't know. Maybe a little redundancy might be useful, but those are the things I'm thinking about, as I'm sitting here.

MEMBER MUNN: The bottom line question is: what does all this focus buy us, really? Are we getting something out of it that tells us that something does need to be changed, or is inadequate? Has been? That's the basic question.

MEMBER CLAWSON: Well, and I guess I've got to look at it from the claimant's standpoint, because I've always looked at

these dose reconstructions, and how come we had so much difference in them, and everything else. And to tell you the truth, in reading through this, it helped me better understand what the process was and how they went through it.

I really, and this is just me, though, I really found it very useful. And I think it'll bring a lot of closure to a lot of other people, seeing that we are watching. And we're doing an independent review of this. And we have double-checked what's being done.

MS. BEHLING: I found it interesting also that people can be using the same documentation, but maybe interpret the DOE files a little bit different, and maybe make a few judgment calls differently.

And so I thought -- even as well as I think I understand the process, I thought that it was interesting to see how three individuals would assess the guidance and assess the data in different ways, even using

the same documentation, the same guidance documentation, the same DOE files.

MR. STIVER: This is John Stiver. I've got to agree with you on that, Kathy. I think this is probably the most valuable lesson we've seen here. Just thinking of the different decision points that allow some professional judgment on which way to go, you can see that the end results of that can be at least factors of two or more, for the final dose number, using the exact same numbers.

And I think that's probably the most important thing to get out of it. I'd also tend to agree with Mark, that there may be a bit of redundancy here now that NIOSH is actually doing their own internal reviews.

And to be honest, I think that would be the logical place for that to occur. But you know, we have been attached with this. And we have an ongoing commitment to do it.

And this afternoon we may decide that there are other aspects of these that

might be beneficial, other than just a check on the implementation of the guidance and the decision process.

CHAIRMAN GRIFFON: Let me ask this. I don't see any findings related to this blind case.

MR. STIVER: This is really a comparison.

CHAIRMAN GRIFFON: Yes, I know. But what I mean, can you boil it down to: did you find where the guidance, or where there was too much leeway, and left to professional judgment in a certain -- I don't think it's going to come out of this one case. But I'm just asking.

MR. STIVER: Yes. And I don't think it was either, it was more of a comparison to expose here, and the first time we've actually seen the side-by-side comparison of both.

MEMBER KOTELCHUCK: But even the decision of 50 percent versus 95 percentile

coworker, that's a model. And there should be an instruction and, more importantly, a decision, collectively, about what should be the proper number to use. That has to be resolved. Maybe I don't understand coworker models, though.

CHAIRMAN GRIFFON: One aspect, when we were talking at the last meeting is: where, in the dose reconstruction audit, is the science reflected anywhere, if at all? Because the basic reviews are just that. They're looking at the implementation and the quality side.

But one thing that has arisen, kind of through an interaction of the Site Profile and dose reconstruction processes, the notion of when to pick up the full distribution, or a higher percentage for a given coworker model. And what categories of workers would that go into. So it kind of illustrates the subtle interplay between the two different components there, which is very

valuable.

MS. BEHLING: In fact, it's interesting, for this coworker model, if I can just take a minute and read a portion of, I think, why the decisions that were made on the 50th percentile and 95th percentile.

Actually, from OTIB-40, it says, "In general, the 50th percentile dose may be used as a best estimate of a worker's dose when professional judgment indicates the worker was likely exposed to intermediate low levels of external radiation.

The 50th percentile dose should not be used for workers who are routinely exposed. The routinely exposed workers, i.e., workers who are expected to have to be monitored, the 95th percentile dose should be applied."

And actually, in our Method B, that quote was included to state this is why we felt, from under Method B, that the 95th percentile would be the applicable dose to be

included for the coworker model.

So just based on that statement, you can understand whether, as I said, with SC&A's Method A, and Doug, you can speak to this, you were looking at this as a best estimate approach. And I assume that's why you selected the 50th percentile dose. Not to put you on the spot, but just in reading that sentence --

CHAIRMAN GRIFFON: And Kathy, that quote you read, where is it within you report? Is that --

MS. BEHLING: That is not in my report.

CHAIRMAN GRIFFON: Oh, okay.

MS. BEHLING: It's in the actual review that was also sent along with this paragraph. It's on Page 50 of our review, or actually our dose reconstruction of this case.

CHAIRMAN GRIFFON: This whole review, yes. Page 50 or 15?

MS. BEHLING: Page 50.

MR. HINNEFELD: There are a couple of things I think that, Scott might want to swat me here, but there are a couple things that may factor into the decision of between 50 and 95 percent.

There's a person's job title, and I looked at this. This person's job title is reported here. And that indicates to me that this is probably someone -- it is a foreman, and it's not a production foreman.

So to me this indicates someone who maybe is not as heavily exposed as the monitored population in general. Because the second part of the question is: how full, how complete, a monitoring record do we have from this site during this year, or the years this person worked there?

If they have a very robust monitoring program, and this person was not included, then that improves the chances that he was not one of the most eligible people, which would move him to the 50th percentile as

the proper selection, rather than 95th percentile.

So there are a couple of things that factor into it, neither of which I know the facts of, other than job title. And the job title, to me, the 50 percentile sounds like a reasonable, just going on job title, it sounds like a reasonable choice to me.

CHAIRMAN GRIFFON: But then you might get back to what John was saying. The interpretation of that guidance, just listening to that phrase that Kathy read, I can see how three people could interpret it in three different ways. You know, monitored and likely exposed to, and so --

MS. BEHLING: Well, it's also a bit interesting. During the period that he wasn't monitored for external, he was monitored for internal.

MR. FARVER: And see, I'm looking at the report that apparently I wrote. And it says that he was monitored for photon/electron

dose from '67 through '69, and from '80 through '89. And then from '70 through '79, there was no monitoring, external monitoring.

So I wrote that he was assigned a non-construction coworker dose at 50th percentile. Because I felt that he was likely exposed to intermittent low levels of external radiation. So I interpreted differently.

MR. CALHOUN: That makes sense.

CHAIRMAN GRIFFON: Seems reasonable, yes.

MR. SIEBERT: That's how it was interpreted in the original assessment from us.

MR. FARVER: But I don't know. I could argue and also see it the other way. How do I know that, that it was intermittent low levels? I don't know.

CHAIRMAN GRIFFON: Did his job title change from those three different periods?

MS. BEHLING: No.

MR. FARVER: I don't think we have information on that.

MR. HINNEFELD: We may not know.

CHAIRMAN GRIFFON: Right, may not know.

MR. HINNEFELD: Sometimes we don't have the last job title.

MR. STIVER: And also there's that uncertainty about what really a production foreman is doing.

MR. HINNEFELD: He was not a production foreman.

MR. STIVER: I mean, with the particular job title.

MEMBER CLAWSON: You know that's what's always bothered me. Because working in the industry, usually nine times out of ten I have a foreman right alongside me that is an independent overseer of what I'm doing, for security reasons and also for other things.

That's why I really always shy away when they throw out somebody's job title.

Because, boy, there's a lot of interesting ones that fit into it. And that's why it makes me nervous. Because usually he's got as much or sometimes more than I have in dose.

MR. SIEBERT: And one other thing that we take into account is looking at, in a case like this, where the individual actually was monitored for a significant portion, on either side, what coworker dose looks reasonable compared to what he was getting when he was being monitored.

Because it seems like if the individual's being monitored, and he's getting 20 millirem per year, and then he has a ten year non-monitored period, we're not going to give him three rem per year.

MR. STIVER: Yes. Assuming his exposure scenario is essentially the same --

MR. SIEBERT: Right. But once again, putting all these things together, that's another piece of the puzzle we need to look at.

MR. FARVER: Is that type of wording in the documentation, the guidance about: they should look at the surrounding doses? I think it's a good idea.

MR. SIEBERT: We do look at that. Matt, do you happen to know if that's in OTIB-20? I know we updated OTIB-20 to put some of this wording in, when we discussed it ad nauseam before. Putting Matt on the spot.

MR. SMITH: Yes. I'd have to go pull it up quick. And I don't know that we talk about comparing the dose levels. That may be encompassed in one of the procedures, however.

MR. FARVER: I think it should be included somewhere, just because that's just another check on the system.

MR. STIVER: I may be wrong, but I think I recall seeing that in the external implementation guide.

MR. SMITH: It might also be in Procedure-6.

MEMBER RICHARDSON: Kathy, could I ask two questions? I'm still trying to get caught up. This is David Richardson. Maybe the first one is: characterizing Method A and Method B, are they on equal footing? Is one preferred over the other?

MS. BEHLING: Well, what we were trying to do, and again this was somewhat of John Mauro's philosophy at the time, Method A is supposed to be equivalent to what NIOSH is doing. We are comparing apples with apples.

With Method B, John used to call it -- and I don't believe John Mauro is on the phone here. He thought he might be able to join later in the day. And I hope I'm going to explain this correctly.

But John would always talk about: let's go in and let's use a single basis document which gives us a history of the site, so I understand what this person was exposed to. But then let's do that practical health physics back-of-the-envelope type

calculations.

However, when John actually got into this, it went a lot further than that. He realized he couldn't just do back-of-the-envelope type calculations with some of these things. But that was the initial philosophy. And, Doug, you can maybe expand on this a bit.

MR. SIEBERT: Yes. That helps. That was what I was looking for.

MS. BEHLING: Okay.

MEMBER RICHARDSON: On Page 9 of the draft, SC&A-TOR-DDR2012/CN016 -- the document that you sent us. It lays out for the medical doses, occupational medical doses.

It struck me that maybe SC&A had switched around. Because in a sense the Method B was conforming to what NIOSH is doing. And Method A looked more, to me, like a back-of-the-envelope approach. It's dividing by a factor of 1.3 to account for the uncertainty. Whereas Method B and NIOSH were entering in a dose and assuming a distribution

with some uncertainty around it. Am I right about that, or not understanding?

MS. BEHLING: No. You're correct. And again, this was one of the areas that, if you go into the procedure, Method A went into the procedures that we are going to select an annual X-ray frequency. Because the procedure indicates that that would be appropriate to do.

Now with Method B, he went in and actually looked at the 12 X-ray exams that were in there, and decided that he was going to calculate a dose for only those 12.

In actuality, NIOSH correctly used ten of those X-ray exams, because two of them were on the hand, and they were from an injury. So really only ten of them were associated with the test injury.

MEMBER RICHARDSON: I guess I'm focusing not so much on the counting of the number of X-ray exams as the handling of the uncertainty in the estimate of the X-ray dose.

Taking an assumption, I guess, a historical assumption about what a dose from an X-ray exam is, and dividing it by a factor of -- or multiplying it by a factor of 1.3, to account for that uncertainty, because you actually haven't measured the X-ray dose, versus entering it in as a distribution.

MS. BEHLING: Multiplying by 1.3 is in keeping with the procedure, I believe.

MEMBER RICHARDSON: In keeping with the --

MS. BEHLING: With the procedure and with the Technical Basis Document.

MEMBER RICHARDSON: So NIOSH didn't do that correctly when they entered it in as a -- what, a normal distribution with a standard deviation of 30 percent?

MS. BEHLING: I believe you can do either one.

MR. SIEBERT: Yes, I'd like to point out the best estimate is to use the actual value with a normal distribution with

30 percent, as an overestimating assumption.

It's multiplying by 1.3, just to take the high end of the distribution in mind. So when it's an overestimate non-comp claim, multiplying by 1.3, rather than doing the whole distribution, was a common practice.

We don't do that anymore. We do them all now as best estimate, with the actual value and the 30 percent normal distribution. Both are acceptable. One is an overestimate, only taking into account the positive uncertainty, as opposed to giving it the distribution.

MS. BEHLING: Thank you, Scott.

MR. SIEBERT: Sure.

MR. STIVER: So it was kind of in line with using the Monte Carlo methods and calculations.

MEMBER RICHARDSON: Right, wanting to do less Monte Carlo sampling, so you enter it in as a constant, and a constant at one standard deviation above the mean of the

normal distribution. That's what you're saying?

MR. SIEBERT: Right.

CHAIRMAN GRIFFON: 84th percentile.

MEMBER RICHARDSON: So that's a different percentile, again.

CHAIRMAN GRIFFON: Yes, it would be.

MEMBER RICHARDSON: It's a quirky percentile. Okay. And can we go down and look at the -- still I'm just trying to understand -- the appendices list all the values that are entered in. This is the appendices of the other document, first blind DR, January 2009. If you go down to Page 20 you start to get these appendices, where all the doses are entered in.

MS. BEHLING: The IREP run.

MEMBER RICHARDSON: And now that's the IREP input data for A, B, or NIOSH?

MS. BEHLING: For A.

MR. STIVER: That would be A.

MS. BEHLING: Yes. The report that we initially did was a dose reconstruction using two methods, Method A and Method B. And none of that data in there reflects anything that NIOSH did.

NIOSH's data is only included in the comparison. And so halfway through the report, you will see the IREP input data for Method A at the end of the report. You'll see -- now let me be sure I'm correct here.

MR. STIVER: Beginning on Page 44 is the Method B.

MEMBER RICHARDSON: So if we start at Method A with Table I-1, there's a series of rows in the table about dose values that are entered. And this is, again, just for my understanding.

The first row, Exposure 1, there was a recorded dose in 1969 for this worker. There's an assumption about the energies. And the value that's entered in is a constant distribution with a value of 0.194.

So under Method A here, under your idea, you've done some correction again for the dosimetry, a correction dosimetry response, I guess, angular response or energy response. But why is that value entered in as a constant there? Because it's a recorded dose, right?

MS. BEHLING: Yes, it is. We generally entered it as a constant as a claimant-favorable assumption. Doug, I'm going to look to you for --

MR. FARVER: And I'm trying to think if that's something we did, or if that was something that was in the workbook.

MR. SIEBERT: Well, I would guess that's because we're using the overestimating DCF of one, versus an actual DCF.

MR. FARVER: It probably wasn't for that one.

MR. SIEBERT: Not for that one?

MEMBER RICHARDSON: That's up earlier in the page, where you get the 1.94.

MR. STIVER: It can be kind of confusing, because a lot of these dates represent different types of exposures.

MEMBER RICHARDSON: So it's on Page 12? You've a recorded dose of 0.1.39 rem. And you've got a series of factors that it's multiplied by, dosimeter CF uncertainty.

So you're saying because you've taken an uncertainty factor of 1.1 and multiplied it by it, that you enter it in as a constant?

MS. BEHLING: I'm looking.

MR. FARVER: I'm looking too.

MS. BEHLING: I think we used the actual DCF values on these, Doug, didn't we?

MR. FARVER: We did. We took the dosimeter value times the dosimeter correction factor times an uncertainty factor times the organ DCF. And for the skin dose DCF of one.

MS. BEHLING: Correct.

MEMBER RICHARDSON: So is NIOSH convinced that it's claimant-favorable to

enter in values as a constant at one standard deviation, as opposed to allowing a normal distribution with tails? I have a hard time with the intuition about whether that is or is not claimant-favorable.

CHAIRMAN GRIFFON: We've had this discussion with Jim Neton a couple of times.

MR. HINNEFELD: It seems like Jim was involved in that one before.

CHAIRMAN GRIFFON: Because we raised the same issue earlier on it.

MR. HINNEFELD: It seems like we demonstrated a long time ago that the issue exists in a variety of situations.

CHAIRMAN GRIFFON: I don't recall seeing a final sort of --

MR. HINNEFELD: I don't recall specifically.

MEMBER RICHARDSON: Part of this gets back to this question earlier about how the Monte Carlos are being done. And you've got 140-odd records.

A lot of them are entered as constants. There's actually no uncertainty of distribution around them. None of them are normal distributions.

And you've got a few triangular distributions. It's always rubbed me the wrong way. They rub me the wrong way because they're not claimant-favorable either. They're truncated.

But I didn't see any of what I was expecting of normal distributions around values. Maybe I shouldn't expect them. It wasn't what I was --

MR. HINNEFELD: I don't know, David. I don't recall if that approach, in one batch or another, has been there forever, as it is acceptable to use this particular -- multiplied, particularly in medical doses rather than the actual dose with the distribution. And I'm not 100 percent sure why it was ever adopted. But it's been there forever. It seems like there was some work

done initially to convince ourselves it was okay to do that. But it's been so long I ago I don't recall.

CHAIRMAN GRIFFON: You might check back with Jim on that. Because we have raised this question since early on.

MR. SIEBERT: And once again, we don't do that now. Now we use the actual data.

MR. HINNEFELD: Yes, we don't do that anymore. It'd probably be the historical, for historical --

MR. FARVER: It looks like the workbook tool put in distribution time as constant. And I'm looking to see if there was anyplace up front to change that, to add uncertainty. In that workbook, I do not see anywhere included.

CHAIRMAN GRIFFON: And when you say you don't do that now, Scott, that's in this instance? Or I think there's other instances --

MR. SIEBERT: For medical X-rays, we use the actual value. It's an across the board, and we use actual medical X-ray records to do that.

CHAIRMAN GRIFFON: But David's broader question, there's other instances where you may just use a value constant, right, as opposed to a whole distribution.

MR. SIEBERT: Generically, we're getting away from doing that. And this kind of speaks to Doug. Honestly, I'm going out on a limb guessing here. But it's a pretty educated guess.

The tool was written for overestimating assumptions, if we had to do a best estimate case, which would include Monte Carlo calculations and include all the distributions.

We would have used the best estimate tool, which would have then been a Crystal Ball calculation. That is much more user-intensive, takes much more time.

So if we can use the overestimating tool, and it's a non-comp claim, we would, which would have those overestimating assumptions in them, rather than the full distribution.

MEMBER RICHARDSON: I have another question. Let's say that you've got medical doses. You just assume that the person received annual medical exposures over a 20-year period.

So the spreadsheet's going to have, am I right in thinking about this, 20 lines of doses of a certain energy. And now you're --

MR. SIEBERT: Right, 1960, 1961, right.

MEMBER RICHARDSON: -- you're entering them in as a distribution under the new way of handling this. So there's a mean and an assumption of a variance for standard error around it.

Do you know, or how those are

being handled to get the post-year distribution? Do you do a unique draw on each one? Or do you assume that there's correlation in the distributions around them?

MR. SIEBERT: Who wants to handle an IREP question?

MR. HINNEFELD: Well, that would be for Jim.

MEMBER RICHARDSON: Because in a sense you could do either. You could imagine each one is a unique draw. It's computationally intensive, but it could be done.

On the other hand, you could also argue intuitively that there's correlation. If the X-ray machine at that facility tended to be delivering higher than average doses, compared to some survey of doses from X-ray machines in that period, then those would be correlated.

It just has different implications. I don't know, I'm just curious

how this is being done.

MR. HINNEFELD: There have been pretty extensive discussions with Jim and the statisticians about that question, about correlation and its impact on your sampling strategy, when you do Monte Carlo. And I don't know that I could understand them if I listened to them.

MEMBER RICHARDSON: And then a follow-up question is: do you know, is there any way to know that it's implemented? Are these chained samplings, are they correlated samplings, are they independent draws? This, again, is part of the black box.

MR. HINNEFELD: There is a way to know. I don't know it. The people who designed it were the people of SENES.

MEMBER RICHARDSON: Yes.

MR. HINNEFELD: And they designed it to sample in a particular fashion.

MEMBER RICHARDSON: With Crystal Ball, I think. I remember Owen used to use

that.

MR. HINNEFELD: Probably, probably it was designed that way. So they've designed it, and they know how they designed the sampling strategy.

Jim probably knows. I don't. So there is probably a way to know that. And I believe there have been discussions about this issue. So if we want to put that on the agenda, I'll have to get Jim down here to talk about it, or whoever he designates.

MR. KATZ: What do we want to call this?

MR. HINNEFELD: Correlated uncertainty.

MR. KATZ: Correlated uncertainty, thank you.

MR. HINNEFELD: Right. Jim refers to it as "correlated uncertainty."

MEMBER RICHARDSON: And although this blind DR review was done relatively recently, the answer to some of these

questions is: this is not how ORAU's doing the reconstruction now?

MR. SIEBERT: This claim, on ORAU's side, was done in 2006. So yes, there would be differences on how it would be assessed now. I don't know if I would be sharp enough to know exactly how we assess things. But any of those changes would have been caught in the PER process, from the TBD and things like that.

MR. FARVER: And I remember we have discussed this, about the medical exposures and the 30 percent and the 1.3, and so I believe that has been changed.

So I don't think you even used to do Monte Carlo calculations for skin doses. Because you just would assume a DCF of one.

MR. SIEBERT: Right.

MR. FARVER: Right. So you wouldn't do a Monte Carlo calculation.

MR. SIEBERT: Right. As we get further down the road, and honestly Monte

Carlo techniques become more robust in our tools, we can use them with much more simplification.

In Crystal Ball, as I said, it was very user-intensive to run that tool through Crystal Ball. So we had a very specific number of dose reconstructors who knew how to do that.

And if it had to go to best estimate, we had those people do those types of cases, and run them that way. So realistically, just from an efficiency point of view, if we didn't have to go down that road, we wouldn't.

We would overestimate, if we could get away with it, from an efficiency point of view. Because it was just more efficient for the client and for the claimant. Now that our tools are becoming more robust and it's much more straightforward running it, we are using those methods more frequently.

Not in all cases; not everything's

going to be run as a Monte Carlo best estimate. But we are implementing those things more consistently, because it is just easier to do so than it had been in the past, and more consistent to do so.

MR. KATZ: Does the Subcommittee want to meet with him and talk about the correlated uncertainty in DRs?

MEMBER RICHARDSON: I don't know if he needs to come, at least be available, just to answer that question.

MR. KATZ: Or be on the phone, whatever.

MEMBER RICHARDSON: Yes, on the phone. Yes.

MR. KATZ: But you would like to discuss that at the next meeting, is the question?

MR. HINNEFELD: Okay, so I want to make sure I've got this, because I think I understood it. You're asking, for instance, if you have 30 years of medical exposures, how

does IREP do its sampling when it propagates?

Are you going to do these 30 years of medical times some other distribution for each of those years? How does it draw a sample as it works through those 30 years, right?

MEMBER KOTELCHUCK: This is a much broader question. Long experience tells all that the medical X-rays play a substantial role, eventually, in the PoC.

MR. HINNEFELD: Actually, long experience would indicate to me that, in general, they don't.

MEMBER KOTELCHUCK: That's what I would guess as well, and yet we go through the details with great care. Yes, and a lot of things we do with great care. And then you wonder: does it really matter in the end decision?

MR. HINNEFELD: Yes. David's question isn't specific to medical.

MEMBER KOTELCHUCK: Yes.

MR. HINNEFELD: But, yes, we have spent a lot on --

CHAIRMAN GRIFFON: I was going to say, because it comes up in other instances. That's why I was asking the broader --

MR. HINNEFELD: But to your comment, you were exactly correct. We have spend a lot of effort on doses that generally don't get very big.

MR. SIEBERT: For the most part, for most work. For some very specific cases, it can make a big difference, in skin cancers with PFGs that are in the beam. That can be a significant dose.

So we're always trying to look at the whole picture, not just the piece that we're looking at, just like the Subcommittee does, looking at the wider piece.

MEMBER KOTELCHUCK: It raises -- I assume that, in some cases, after things are "finished," quotes, or near the end somebody goes back and said, okay, let's drop this

category, this external, this internal, this medical, and see what is really driving this.

Because that would help. Or it may suggest, okay, if this is what's driving it primarily, let's take a look back and see. Maybe we ought to look at that more carefully. Or: were we in agreement? Were ORAU and DCAS in agreement there?

Because it may not matter very much if you're in disagreement in other areas that didn't count much anyway. It would be an interesting look back. If it isn't done now, you may do it informally, or you may do it formally.

MR. KATZ: I think that's reasonable guidance for the Board's scrutiny, as well as the program's, absolutely. Focus where the money is.

CHAIRMAN GRIFFON: Well, on that note --

(Laughter.)

CHAIRMAN GRIFFON: We're at a good

point to take our lunch break. And we can come back to this to start off after lunch, if we need to wrap up anything on reviews. But let's break for lunch and come back at 1:30.

(Whereupon, the above-entitled matter went off the record at 12:23 p.m. and resumed at 1:36 p.m.)

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

MR. KATZ: Good afternoon. This is the Advisory Board on Radiation and Worker Health, Subcommittee on Dose Reconstruction Review. We're just getting started again after a lunch break.

Let me check on the line and see if we have Dr. Poston. Dr. Poston, are you on the line?

Okay. Nonetheless.

CHAIRMAN GRIFFON: Well, where we left off was on the item on the blind reviews, SC&A's blind reviews. And I don't know that we have anything more to discuss there. I mean, I think they're going to deliver one more similar sort of product.

MR. FARVER: Next one will be a little different because it's a single cancer. Now this was multiple skin cancers.

CHAIRMAN GRIFFON: Oh, okay, yes, yes.

MR. FARVER: So the next one's a

little different.

CHAIRMAN GRIFFON: Alright.

MR. FARVER: I don't know what it will show, but it'll just be a little bit different.

CHAIRMAN GRIFFON: Right, right. And I don't know that we have anything more to discuss on that case, but I think it does roll into --

MR. KATZ: How soon will we have it? Commence testing?

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Oh, gosh. We'll have to ask Kathy.

MR. KATZ: Kathy, you on the line already?

MS. BEHLING: Yes, I am. I'm sorry, I didn't hear the question.

MR. KATZ: I'm sorry. How soon do you think you could have the second case to us for comparison?

MS. BEHLING: You could get it in

two weeks.

MR. KATZ: Oh, great, okay. Okay, so --

CHAIRMAN GRIFFON: So it'll be ready for our next meeting.

MR. KATZ: Plenty of time, yes.

CHAIRMAN GRIFFON: Alright.

MR. KATZ: Thanks.

CHAIRMAN GRIFFON: And then let's do this next item, because I think that also plays into the overall dose reconstruction procedures for review, so it leads into it nicely, which is the resolution of the Rocky Flats cases. We were going to do a look-back, as we were calling it, at the Rocky Flats cases and Doug sent us out a document, and I guess John or Doug will took the lead on that.

MR. KATZ: We have two documents.

MR. FARVER: There's two documents.

CHAIRMAN GRIFFON: Oh, there's two, that's right, yes.

MR. FARVER: And they're completely different purposes and content. I mean, it's --

CHAIRMAN GRIFFON: First, tell us what the documents are.

MR. FARVER: The first document is what's called the look-back review, and it goes back and it looks at the Site Profile issues that have been updated and changed. It talks about PER and it talks about some SEC issues, and all the things that have been changed since the last time we reviewed the Site Profile. And then the second document is specific to the Rocky Flats findings from the 10th to 13th sets.

CHAIRMAN GRIFFON: I know I've seen the first one, but could you tell me when you sent that first one out, just so I can pull it up?

MR. STIVER: I think it was, gosh, second week in October? I'd have to check, it might have been like October 1.

MR. KATZ: I have a good explanation for this, because I sort of interceded with this which is why you got a second document. The intent, when we were discussing this look-back, was to see how well the case reviews reflect or may catch issues that are relevant for SEC matters, PER matters, in other words, how well they're catching procedural problems, potential procedural problems with dose reconstructions.

I mean, that was sort of the question Dr. Melius was raising, whether there's a gap between these processes and what we wanted to know from these cases is: if a case could potentially have indicated a problem that later resulted in addition of an SEC or issuance of a PER improving the procedures, did it do that?

If it could have, did it do that? Because we're trying to see how well are these cases capturing those issues where they might. So those were sort of my general instructions

after they issued their first report, back to them for what we needed that was really not covered in the first report was --

MR. FARVER: I don't think what you just mentioned there is going to get covered in a DR review. In other words, it's not going to be an issue that's going to generate an SEC. It's not going to be an issue that's going to, I don't know, be a big procedural change.

Because those type of issues would get identified either in, you know, the Procedures Subcommittee or a Work Group or through Site Profile reviews where we identify the scientific issues.

I understand what you're saying --

CHAIRMAN GRIFFON: Well, that's part of the discussion of the scope. That's why I said it leads into the next discussion.

MR. FARVER: It probably is not going to get identified in the DR review, which I think is kind of what was shown here

in the second report, and we can talk about that.

MR. KATZ: Yes, that may be the result of analyzing this, but the issue that Dr. Melius was concerned about was, well, if we're doing case reviews, shouldn't they be identifying such issues where they -- when they reside in the case, in effect? So if they should have revealed a problem with the Dose Reconstruction method and didn't, that would be an issue.

MR. STIVER: Well, we have to keep in mind that the basics and the blind DRs as they're done today, are basically doing three things: whether the data that was captured from DOE and from the CATI are in fact used in the proper way; whether the procedures were followed, and the directions; and at certain junctures where there's enough leeway in the procedures that would require professional judgment, an evaluation of how that was done.

But what we're looking at, the

case reviews were never intended to look at the big science issues or to go back and try to capture if the procedure -- they follow procedure, but to rule out the procedure -- and that was going to be done and I think should be done in the venue of the Work Group for that particular site, because otherwise you'd have a situation where you're trying to replicate again and again. Every time you do a case, you have to go look at these science issues again.

And so I think the only time I can recall when a particular finding resulted in a procedural change was, I believe, in the overestimating approach used in the very beginning. One case was used to compensate another case when in fact it shouldn't have been. And I believe that was what gave rise to TBD-6000. But there's never, in my mind at least, I've never seen where a DR finding resulted in -- or an SEC arose from a final --

MR. KATZ: Well, I think a lot of

DR case reviews have raised issues that went beyond the case itself and I think --

MR. STIVER: Well, usually in the sense of: is the coworker model being applied in the correct way? So that's what I was talking about earlier, kind of the subtle interchange between --

MR. FARVER: A lot of them have resulted in procedural changes, just update the wording, additional wording, things like that.

MR. STIVER: Yes, you're probably going to find more procedural updates. Some way to feed back into the PER process and that situation.

CHAIRMAN GRIFFON: I think it's strong -- too strong -- to say never intended. Because I think Ted's right. In the early, in the very early -- before your time, John and Doug, that's where we identified a lot of the big issues.

But we didn't have all of these

other Work Groups going out, so it's evolved into -- the bigger issues we push off into the Work Groups, and now the Work Groups are established, so they're kind of, you're right, they're set.

MR. STIVER: I guess the way I see it, and correct me if I'm wrong, especially Mark and Ted, that where we seem to have a problem is at the back end of the DR review, and then integrating that with the science changes per Site Profile discussions and also in parallel with that, the SEC determinations and PERs.

How does that all then feed back into the final product? So when you go to the Secretary, you know, actually present, we did 400 dose reconstruction reviews and they all look great. Yet, at the same time, we've got all these SECs and Site Profile changes. So I wondered --

CHAIRMAN GRIFFON: Yes, that's exactly what Jim was considering.

MR. STIVER: Yes, so how do you then integrate all that back into the process? And that's where we need to kind of, you know, put our heads together and think of a way to sort of do that. But I think John Mauro's first look-back report, what he tried to do in that was, you know, kind of really capture the changes that have occurred.

Basically, the DRs, they're a snapshot in time. So what he did, he looked at -- because, you know, we selected Rocky Flats because the TBDs has been completely revised, the tools had all been updated.

And so here we have a case where you ought to be able to look at that, see what, at the time that we did the Dose Reconstructions, what the issues were, and then, you know, what are the revisions that have then taken place, and how many of those are still relevant for the reconstructions?

And that's kind of what we gathered was the -- our charge going forward,

although, reading through the transcript, there was a lot of discussion about this idea of integration. So I think we tried to cover both bases here as best we could. I don't know, Doug, would you like to walk them through the --

MR. FARVER: Which one?

MR. KATZ: Just before we leave this, just to clarify, it's not, I mean, the issue isn't so much are the cases integrators. The question is: are the cases sort of canaries, or whatever, in the mine? Are they a useful tool, for indicating if there is a fundamental problem with the dose reconstruction procedures?

And I'm not sure, I can't think of all the matters that have been addressed on the SEC plane with respect to Rocky Flats, and certainly all the other sites where we've had SECs. But I wouldn't assume a priori that a dose reconstruction case review couldn't identify an issue that was in common with what

ended up being an SEC matter.

MR. FARVER: No. It could happen.

MR. KATZ: Yes.

MR. FARVER: It may have, I don't know.

MR. KATZ: Yes.

MR. FARVER: I think you would have to look at all the SECs and what prompted them, and the time frame, but --

MR. KATZ: But just to clarify, I think the intent is that, to the extent that a Dose Reconstruction case might do that, perform that function, is it doing that? So that's it. Not that it's a be-all and end-all and that you don't need -- obviously the Site Profile reviews dig deeply into the site issues and so on, but to the extent that a dose reconstruction case review does, you know, have potential for identifying issues, is it, at this point?

And that will also be useful for thinking forward. How do you want to design

your Dose Reconstruction case reviews in the future so that, if they don't do that to any degree, they might?

MR. STIVER: One area where they might have actually done that, to some extent, would be in observations that we've made. Not formal findings, but issues that arise that really aren't within the current purview of the audit. But that may nonetheless still bear on the scientific issues, and we've kind of captured those in terms of observations, because they really, to this point at least, haven't been considered something that needs to be addressed in the DR review, but nonetheless, can be brought up for these types of discussions.

MR. FARVER: So which report would you like to go through first?

CHAIRMAN GRIFFON: We'll do it in any order that you think.

MR. FARVER: John, are you on the phone?

CHAIRMAN GRIFFON: Go through the look-back.

MR. STIVER: Yes, let's go through the look-back first.

MR. FARVER: Okay. Do we all have the look-back report?

MEMBER MUNN: November 20, right?

MR. FARVER: No. October 4.

MR. STIVER: Yes, I've got October 4.

MEMBER MUNN: Oh, okay. All right.

MR. STIVER: Actually, you know, in this one, there's a pretty good executive summary that kind of lets us know what the issues are here. Let me know when we're ready.

MEMBER MUNN: Go right ahead.

CHAIRMAN GRIFFON: Yes, go ahead.

MR. FARVER: Okay. We can start by going through the executive summary. Basically, what prompted this report is: when we do our DR reviews, we have a section in there, 1.3, where we list previous findings

that may be applicable to that case that weren't previously identified during a Site Profile review. So since the Site Profile had been updated at Rocky Flats, we chose to go through and see what had been changed and also added in information on SECs and PERs.

So that's the basis of this. And we can glance down at the first table, and it just shows that there were eight cases, in these sets from 10 to 13, for Rocky Flats.

And six of them out of eight were compensated by the SEC. It shows in the final column what DR version was used, and in many cases, it was the revised DR review. Not the -- I'm sorry, it shows the date of the DR, which then will relate back to what version of the Site Profile was used. Table One basically shows eight cases, six of which were compensated.

In Table Two, for each of the cases, we will go through and identify findings from the Site Profile that will be

applicable to the case. We identified 11 findings during our Site Profile review, and those 11 columns in Table Two represent the 11 findings.

And for each case, you can see that they would be impacted to a certain extent by most of the findings. So that was the purpose of Table Two.

Table Three looks complicated.

CHAIRMAN GRIFFON: Wait, that's Table ES Two, right?

MR. FARVER: Yes, ES Two and ES Three, yes.

CHAIRMAN GRIFFON: Yes, this is kind of a complicated table.

MEMBER MUNN: D means it's a duplicate. That means it's not addressed elsewhere.

MR. STIVER: Even for the two cases that were uncompensated by the SEC in Table ES Three on Page 12, those letters show that an R would indicate that really and truly, the

Site Profile explicitly addressed the issue.

P would mean that it partially addressed the issue, and then D refers to duplicate, because the issue was already addressed as part of another issue. And the letter N meant it would not be addressed in any of the revisions to the Technical Basis Documents.

Issue 11 was the only one that was not addressed in any of the documents. There were two that were duplicative. Number Seven and Eight for both cases. And now it is a partial address, if you want to call it that, for issue number two for both of them.

And so with the rest of this report, what we've done is: it just takes a look at all those issues that were open and addressed to the extent to which, just like in the tables, how those findings could possibly be, what their impact might be on those cases today using the current revisions of the TBDs.

And which of those could then be

closed out for the purposes of the dose reconstructions. To give you an idea, to kind of bring everything up to the current times, given the fact that these were done several years ago.

I don't know if there's really a lot more to say about that. It was really the intent of this particular exercise here.

Alright, Doug, if you'd like to -- if we want to go down to the end of this thing, it might be the best time to -- let's see.

MR. FARVER: I think one of the key things of the whole document is: you go through and you can see that there were 11 issues identified through the Site Profile review, but I believe there are still many that have not been addressed.

There are some that have, but also many that have not. And a lot of that is summarized on Page 35, Table 2.3: "Summary of the Status of SC&A Site Profile findings."

And that gives you the gist of it. It says, you know, a lot of them were included in Revision Two, some were addressed on another issue, and some were unaddressed.

And so, you know, there's a few here that should probably, may want to be looked at at some other time. If you just glance at Table 2.3, under internal dosimetry, go down to, you know, ingestion, recycled uranium, you know, those items were unaddressed in the second revision.

MEMBER MUNN: They were addressed in other findings, though. The ingestion pathway and recycled uranium were.

MR. FARVER: Those specific ones for Rocky Flats?

MEMBER MUNN: Yes.

MR. FARVER: Okay.

MR. STIVER: Ingestion has been addressed as kind of an overarching issue.

MEMBER MUNN: Yes.

MR. FARVER: Okay. And you see in

the next column, the path would be to reevaluate this issue, so we'd have to go back to the text and find out why we felt it was not addressed and needs to be reevaluated. And really, I am not the best person to go through this because I had almost nothing to do with this report.

MR. STIVER: John Mauro is the principal author of this report. Unfortunately, he wasn't able to call in today. But, you know, the broad brushstrokes of the thing is that, you know, while some of these issues have, in fact, been addressed and are no longer pertinent to the dose reconstructions, some of them still are, there are certain aspects that need to be incorporated.

Even though the revision has taken place, the dose reconstruction has identified this as a potential problem that still needs to be resolved.

But also -- oh, go ahead, excuse

me.

CHAIRMAN GRIFFON: I was going to say, Finding Three, if you're looking at Executive Summary Three, Finding Three in the body of the report is the neutron finding, right? It's got a couple of elements to it, but MP ratio and assignment, I think of people not monitored by NTA film, whatever.

I mean, it became a neutron issue as we evolved in the SEC discussions. And your next -- I mean, maybe I'm transitioning to your next report that Ted asked -- but it seems to me that was identified in the Site Profile review, correct?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: That issue? It wasn't really identified in any case.

MR. FARVER: Correct, so because it was identified in the Site Profile review, we would not make it a new finding.

CHAIRMAN GRIFFON: But was it mentioned when you did your individual cases?

MR. FARVER: It was contained within 1, 2 and 3 --

CHAIRMAN GRIFFON: It was mentioned in the top section where you said --

MR. FARVER: -- where we talk about the findings.

CHAIRMAN GRIFFON: -- previous findings, right?

MR. FARVER: yes.

CHAIRMAN GRIFFON: But those are never captured in our matrix process.

MR. FARVER: Those are not, because that would be double-tracking the finding.

CHAIRMAN GRIFFON: That's fine.

MR. FARVER: You know, one, it's a finding under Site Profile.

CHAIRMAN GRIFFON: So, I mean, you were at least acknowledging that that issue remains on the table?

MR. FARVER: Right.

CHAIRMAN GRIFFON: But you're not going to drill down to it in each and every

case?

MR. FARVER: No.

CHAIRMAN GRIFFON: Because it's in process, right?

MR. STIVER: Yes, it's identified that these are issues that would be pertinent to this case.

CHAIRMAN GRIFFON: Right.

MR. STIVER: They're still, you know, under review in the Work Group.

CHAIRMAN GRIFFON: Right. I'm just thinking, going forward, how these gaps can be, how we can be sure we don't have gaps and stuff.

CHAIRMAN GRIFFON: Right.

MR. FARVER: So for this set of cases, none of those would show a deficiency or a finding under neutron dose about the NTA finding?

CHAIRMAN GRIFFON: Right, because that was under review under the other -- right.

MR. FARVER: So it would not identify an SEC issue for these cases that we're going to look at.

CHAIRMAN GRIFFON: Yes.

MR. STIVER: It's really to notify the Subcommittee, you know, that these things are still in play and could impact these cases.

CHAIRMAN GRIFFON: Yes. It did more or less identify it by saying, in your report, in the body of your report, that these are outstanding issues.

MR. STIVER: That's right, and really this was one of the first things Dr. Melius wanted us to do is kind of look back and see, you know, are there still issues at play in the Site Profile that might bear on these cases at a later date, that they have in fact been addressed.

And that's why it was put in that Section 1.3 to begin with. And it's kind of, from there, we've kind of expanded on this

whole idea of how the different components are working together.

MR. FARVER: I can speak in more detail about the cases in the next report.

MR. STIVER: Unless you want us to discuss this more, I think we could segue into the next report.

CHAIRMAN GRIFFON: Yes, go ahead to the next report. Or go ahead, Wanda.

MEMBER MUNN: Well, I'm not sure I understood what that last exchange really said there, because I was reading the last paragraph of Finding Three here in the report. That says, "In addition, the publication record that introduces the TBD states that many of the revisions explicitly address neutron exposures more importantly.

"An SEC was granted primarily based on issues related to the inability to reconstruct neutron exposures with sufficient accuracy. In light of the SEC, it appears that this issue can be closed, as it applies

to a given DR, except to confirm that the case was, in fact, appropriately reconsidered in light of the SEC."

That gives me a slightly different impression than what I got when I was looking at the table. It looks to me as if this was considered and handled appropriately.

MR. FARVER: Oh, I see what you mean. So you're saying --

MEMBER MUNN: See, it looks to me like it's done, and done correctly.

MR. FARVER: Whereas, when you look at the table and you see Finding Three --

MEMBER MUNN: Yes, it led me to believe that it was --

MR. FARVER: Well, what it says is, it was addressed in Revision Two --

MR. STIVER: And/or SEC.

MR. FARVER: -- and/or SEC and the next action would be "reviewed under a PER-21." In other words, you get a PER-21 review just to make sure that the case fit into the

SEC.

MEMBER MUNN: Okay.

MR. STIVER: PER-21 is basically a one-pager that basically says we've revised all these TBDs and it's pretty open-ended, and that's the one we kind of put on hold.

MEMBER MUNN: Okay. Didn't seem to jibe to me.

MR. FARVER: Do we want to start the second report?

CHAIRMAN GRIFFON: Yes, let's try that, let's go to the second report.

MR. FARVER: Alright. This is called RFP Issues from 10th to 13th sets. And probably went out not too long ago. And this refers specifically to the eight findings or the eight cases, Rocky Flats cases, from the 10th through 13th sets.

And that's pretty much what the introduction states, and we go down to the first Table One, Summary of the Findings, it just shows that those were eight cases, the

cancer, and the date the DR was completed.

There was 14 findings in the eight DRs and one of the cases did not have any findings. So really, there were 14 findings out of seven reviews.

Table Two just lists a summary of the case findings. One of the things I like to point out is: even though they may have the same alphanumeric ending on them, referring to the same plan in the Table Two checklist we go by, they are for different items. They are not similar in any of the cases. They just wound up getting grouped under the same general criteria. But those are the 14 cases, and those are just the basic titles of the findings.

At the bottom of Page 5, we talked about the SEC and pretty much state the SEC, and the SEC pretty much has to do with the neutron data, as we're all aware.

Table Three shows what cases were compensated by the SEC and the reason they

were not compensated. There was one case that was initially not compensated, and I give a basic description of what happened.

There were some objections filed to the final adjudication branch and they went through a process of reviewing records and affidavits, and finally they determined that the individual met the SEC requirements. And so the individual was compensated by the Board, the Final Adjudication Board. It's a little different, that's why I had to kind of explain that there in the paragraph.

While our case reviews did not specifically identify the quality of the neutron dosimetry data as a deficiency, it was previously identified, as we saw, in the SC&A review of the Site Profile.

And, if you go back and look at our review of the Site Profile, it gives a lot more information than was even contained in the previous report. About the neutron, about our concerns about the neutron data.

So the first question is: Did we identify any SEC issues in these cases, in our findings? And the answer is no. Okay.

Next thing we're concerned about: Program Evaluation Report issues. There are three PERs issued, did any of our findings identify PER issues? So Table Four lists the three PERs, lists the effective dates, and a description of what the concerns are.

The first one is PER-10, and it's really for claims that were after August of 2005. All of these eight cases that we looked at were completed -- oh, that's okay, make sure I got that wording right.

MEMBER RICHARDSON: Completed after 2005, I think that's right. Aren't you 2006, `07 and `08?

MR. FARVER: Yes. The description should say for claims before August 31, 2005.

MR. STIVER: Yes, I think that was just a typo there.

MR. FARVER: Because all our

claims were after the date of the PER, so none of the PER -- or none of our cases are applicable for the PER-10, is the bottom line. So we didn't have to worry about PER-10 issues on the claims that we looked at.

So now we move on to PER-12. It's for claims that were not evaluated for OTIB-49, which is the highly insoluble plutonium. OTIB-49 was issued in February of 2007, so it would really be for claims that were -- is it showing four?

Four of the cases we looked at were completed before OTIB-49 became effective. So in each of those reviews, the SC&A did note that the case should be evaluated per the guidance of OTIB-49.

We have one little mistake in our one review of the one case. We recognize it should -- on our initial report, we did not have a reference to OTIB-49, but this is one of the benefits of having our one-on-one conversations with the Board.

During the discussions at that time, it was asked, well, gee, should this be looked at for, you know, highly insoluble plutonium? It was determined yes. So we went to modify the case and we went and modified it incorrectly.

We put the wrong wording in our report. Meant well, just executed poorly. Overall, OTIB-49 did not have an impact on any of the four dose reconstructions we looked at, since all of those four were included in the SEC.

The four remaining cases were all completed after OTIB-49 was issued, and two were included in the SEC, were not impacted by OTIB-49. One of the cases, we did perform calculations of Type S and Super S plutonium and found M plutonium to be the best, the product who had the most dose in this case, which showed our conclusions were consistent with what they found in the DR.

There was only one case that was

impacted by OTIB-49, and the DR did modify the Type S plutonium dose according to the techniques in OTIB-49 and assign the plutonium dose to the breast from Super S plutonium.

So they did it correctly. So they evaluated it and did it correctly. That pretty much tells the story of each of the eight cases and how they relate to PER-12.

MR. SIEBERT: Hey, Doug? Just to verify -- I'm sorry to interrupt, just to verify for you, I looked at PER-10 and it is before August 31st, instead of after.

MR. FARVER: Before?

MR. SIEBERT: After.

MR. FARVER: Oh, thank you.

MEMBER RICHARDSON: Okay, good.

MR. SIEBERT: Sure.

MR. FARVER: The final PER was PER--21. And it was for claims that needed to be reviewed about new issues in the TBD, after the TBD was reissued. PER-21 was issued after the SEC designation for claims that were not

determined to be a member of the SEC.

It's an effective date of September 20 of 2007, and it determined which previously completed claims required evaluation for the effect of revising Rocky Flats TBDs and TIBs. Since five of the SEC cases reviewed were determined to be included in the SEC, PER-21 did not impact those.

The remaining three cases were completed before PER-21 became effective, therefore those DRs were reworked according to the revised Rocky Flats TBDs and TIBs. The SEC review in those three cases, we did not specifically identify that the TBDs or TIBs had been revised.

Because what we were looking at is, did they use the correct -- the revision of the document that they specified in their DR? So if the DR goes through and specifies, you know, we reviewed according to revision two, then we're going to go to revision two and see that they followed the appropriate

guidance.

Since the whole purpose of this PER was to go back and incorporate TBD revisions, we reviewed it to the actual TBD that changed, so we would not identify any TBD issues at that point.

And in those three cases, we determined that the dose reconstructor followed the approved revision to the TBD, so it was pretty uneventful from the PER point of view.

The final issue is procedural issues. We looked at the 14 findings and kind of made a determination: is our finding the result of a error in a procedure or guidance document? Did the dose reconstructor make a mistake? Did SC&A make a mistake? Or just not sure? And I entered that final section in because I went through these 14 and I just wasn't sure about one of them, and I didn't have a category for it.

And Table Five kind of lists the

findings, the type of error, the category I placed it under, and the description. Now we went through and I think our next step is to go through the Rocky Flats Los Alamos findings and NIOSH's responses and go through that.

I didn't include all that in this document, because that also included the Los Alamos, so I couldn't incorporate everything into one document. So you'll probably have questions on these, and we can discuss them in our next segment.

Well, we can go through. The first one, assigned missed photon doses were not consistent with the DR report. I say that's a DR error. And really it comes down to two items. The DR report states that the missed external dose was assessed as a best estimate, but it was an overestimate.

So it gets a little wording issue. And also, the DR report states that 238 zero readings for missed dose were used, when actually only 196 were used. I kind of look at

this as a quality error. You know, you say one thing, you did another. On the second one, this is a little tricky one, and NIOSH gives a very good description in the -- when we go through their responses of the findings, but for a year, 1958, there was a dosimeter reading.

Well, it was a little confusing on our part because they assigned a shallow dose in 1958, but didn't assign a deep dose until '59. So we're going through and trying to do the bookkeeping, it didn't add up for the year, individually.

And we thought that was a little unusual. The third finding, inadequate information --

CHAIRMAN GRIFFON: Can I just interject?

MR. FARVER: Sure.

CHAIRMAN GRIFFON: I'm wondering, just from a process standpoint, we're starting to go into the individual findings, and I

think that might be better served at a different point in our agenda.

MR. FARVER: Well, yes, it's how much you want me to go into these.

CHAIRMAN GRIFFON: Right. And at some point, these are, I mean, you start grouping these, these are matrix 10 through 13 findings from Rocky Flats, and we have responses from NIOSH on all these?

MR. FARVER: Yes.

MR. STIVER: And we have an updated matrix and all that.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: And you updated the matrix?

MR. STIVER: Yes.

CHAIRMAN GRIFFON: Alright. So I mean, I think right now, I'd prefer to speak to the larger purpose of this report.

MR. FARVER: Okay, the format for this document was to go through and give a basic description of the deficiencies and how

it all related to PERs and SECs and so forth.

CHAIRMAN GRIFFON: For instance, I mean, I'm looking at the -- you know, this whole question of: were issues that were identified as SEC issues later, were they identified in the reports or whatever? Looking at Table Three, I'm trying to, you know, figure out, out of the eight, you have five that ended up in the SEC; of those five, in each one of those documents, did you, in that summary section -- first of all, I don't know when we started, SC&A started implementing that 1.3 or whatever section John referenced, where you would say the findings were sort of in process at the Site Profile level? Did all those five cases have that identified in their report that's been issued?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Yes, so it was on the table, right? So, in terms of gaps or stuff missing, it's not necessarily that you missed it. You knew it was there, you knew it

was an issue. It's just, it might not be in our matrices, and that might be where, you know, we, as the Subcommittee, sort of miss it, because we pay more attention to the major findings than the body of your reports.

You know, I mean, that's just something that we need to figure out how, going forward, we don't lose that information, you know?

MR. FARVER: And it may be my fault, because I was under the impression that the Site Profile findings were being handled by the site Work Group.

CHAIRMAN GRIFFON: Yes, and I think you're right, and we'll, I think that's the next discussion moving forward.

MR. FARVER: And that's the basis why I didn't want to track them in two separate groups.

CHAIRMAN GRIFFON: Right. I just sort of want to, I think it's important that, you said, "Did we identify any of these cases,

did we identify SEC issues?" The answer is no, you said.

MR. FARVER: Well, that's not quite correct. From our findings, we did not.

CHAIRMAN GRIFFON: From your findings, you did not?

MR. STIVER: Yes, the findings didn't describe what was the basis for the SEC.

MR. KATZ: Right, but the dose reconstruction case review did.

CHAIRMAN GRIFFON: Did capture it.

MR. KATZ: It's just that issue that we're talking about here. I mean, it wasn't in your findings, and that -- we can think about that because that's just a consequence of the fact that the only findings that you resolve here are a different set of findings, not the findings that are being dealt with by a Site Profile group.

CHAIRMAN GRIFFON: Right.

MR. KATZ: SEC group. But they

were captured in the case review and that actually is kind of heartening.

CHAIRMAN GRIFFON: Right, right.

MR. KATZ: But there's a balance there.

MR. STIVER: And if we get a case review that has, like a partial reviews, where an SEC has been granted, that will be in the description with the dose reconstruction.

CHAIRMAN GRIFFON: Right. So I mean, I think that's yes, like Ted said, that's a good thing that we did identify it in all cases, realize that it was in process, but you know, the question going forward is how to communicate this information to the external world, and also make sure amongst all our Work Groups and Subcommittees that we know where all these things are.

They're in different bins, but we know what's going on. But I think part of Jim's concern was: you know, are we giving a sort of misrepresentation of how, you know,

like when we say there were no findings that changed the compensability of these cases, you're saying, well, in fact, there's seven resulted in SECs later, is that sort of, you know, misleading --

MR. FARVER: I think part of it is: the DR reviews are just a piece, the Site Profile reviews are a piece, and when we do SEC reviews, that's a piece.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: And so, you know, if you want to go and look back and say: have we already identified any issues that have turned into SECs? That's a separate question and you have to go look at all the pieces.

CHAIRMAN GRIFFON: Right, exactly. Well, that's what I'm saying. When you say you didn't find any of these things, that's true in the spirit of the revision of the findings. But you did acknowledge that it was --

MR. FARVER: Just a small piece.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Okay, we don't have to go through all these findings, and I mean, you kind of get the gist of it. We'll be revisiting them shortly.

CHAIRMAN GRIFFON: Any other questions on the bigger -- the look-back and these two are picks, not the individual findings?

MR. FARVER: Yes, I think in, you know, in the broader sense really, the conclusion we're drawing is that there has to be some mechanism in place for, you know, the different components that are measured to inform, you know, this Subcommittee of the current status and some way to incorporate all that into the final product.

CHAIRMAN GRIFFON: Well, I think the struggle we've had, you know, from the beginning, was that a lot of times, we didn't want to hold up all these reviews to wait for one global issue to be resolved, which was in

another Work Group or another Committee, so we pushed forward, understanding that these issues were being worked on, not necessarily within the case reviews.

And I think it's just a matter of, like you said, making sure we acknowledge what's happening at all levels. I guess the other -- I mean, another challenge we've had is always that these case reviews are ahead of bigger work.

And the resolution for something like the NDRP issue at the SEC level, you know, took a while, so we're closing out cases before we have resolution on some big issues. You know, so that's the --

MR. KATZ: I think one thing you can do to handle this better and to reflect that sort of integration, is that when the Dose Reconstruction Subcommittee reports out in the future -- in the past, it's focused just on the findings. And so it misses these instances where there are other findings in

effect, but they're on hold because they're being dealt with in another venue.

So the report could acknowledge not just the findings, but also these other pending matters where a case review has identified, you know, a potential concern that's being resolved elsewhere. You could have a section of the report that addresses those methodological issues that are being --

CHAIRMAN GRIFFON: I'm thinking that could cover every case, though, don't you think?

MR. KATZ: Yes.

CHAIRMAN GRIFFON: I mean, every case that we -- if we have a lump of 30 cases and they cover 10 sites, almost every Work Group is still in process, you know, with outstanding findings to be resolved.

MR. KATZ: But the cases may not capture all that. I mean, that's what we -- again, we want the cases to capture that. We want the cases to identify those issues, but --

CHAIRMAN GRIFFON: Yes, but I mean, if we report out on 30 cases and say, you know, these 30 cases, in all cases we resolved all findings, no major findings. Except that all 30 of these cases have pending issues in other Subcommittees, I think that's kind of like -- why even issue a report, you know?

(Laughter.)

CHAIRMAN GRIFFON: No, I mean, I'm not trying to be --

MR. KATZ: Yes, but that's not what you would say, I guess.

CHAIRMAN GRIFFON: Okay. Well, how would we say it?

MR. STIVER: I don't know. We've been sensitive in terms of binning these cases by site and looking at what are the site issues that are still at play that are going to eventually impact these cases.

CHAIRMAN GRIFFON: Yes, binning them, I think that we all agree that's

something that's --

MR. STIVER: Yes, it might make organizing this report a little easier.

CHAIRMAN GRIFFON: Yes.

MR. STIVER: And more informative to the Secretary.

CHAIRMAN GRIFFON: But still, if we bin, you know, we do LANL next, then do you delay reporting out on the cases until the Site Profile Group is done with the work on LANL? You know what I'm saying? Or do you still have some of these? Because the pending issues are usually some of the bigger issues. They usually impact a lot of cases.

MR. STIVER: Well, I guess it depends on what you expect to get out of the cases themselves. If we were looking at --

CHAIRMAN GRIFFON: Well, that's why --

MR. STIVER: -- the quality aspect of it, then you can go ahead and report as to what we find, you know, go ahead, there's

still issues at play here that are not going to be reflected in these cases because they still haven't been resolved.

But at the time that the case was done, this was the snapshot in time, and it's kind of a limitation of the process as it's evolved.

CHAIRMAN GRIFFON: Again, I'm thinking of what we might want to do going forward.

MR. STIVER: Yes, I was looking at Lew Wade's Phase One report and he kind of separated out these different elements in a way that seemed pretty reasonable as maybe a template for --

CHAIRMAN GRIFFON: What do you mean? Can you elaborate?

MR. STIVER: Just looking at, this is from back in 2011. The ten-year Phase One report, this is kind of the summary of it. But it talks about how the different types of dose reconstructions, the reworks, partials,

the Site Profiles and procedures, the aspects of, you know, the SEC that comes into play.

In trying to develop this going forward, a lot of this looks like it's kind of been laid out, you know, there's sort of like a template, if you will, that maybe we can build on. Like I said, if we do it right --

CHAIRMAN GRIFFON: Oh no, no, no, I'm just trying to figure out what new was in there that hasn't been said already.

MR. STIVER: Yes, there's nothing really new in there, but you still have the issue of what is to be expected from the DR audit.

MR. KATZ: Let me just take back some of what I just said we wouldn't say. We could have, I think you could have a report to the Secretary that lays out what you already lay out in terms of findings and so on, and then says, you know, "Within these 200 cases that have been reviewed, we have seven sites for which we have procedural issues, we have

concerns, and we're exploring, you know, through these other means."

And you could say it pretty succinctly, but it would indicate that there are outstanding procedural issues about how best processes are done that impact on the quality or validity of those dose reconstructions for those, whatever they are, seven sites, five sites, whatever it might be that's implied.

I think that would be a more accurate picture to give to the Secretary than simply the accounting that we do now, which is just based on this sort of narrower band of findings.

CHAIRMAN GRIFFON: Right.

MR. KATZ: I think that would then reflect the state of the quality --

CHAIRMAN GRIFFON: Well, I agree, I wasn't completely making a joke about it, I think that's more accurate to put it that way. At least it puts a -- well, it's not really a

qualifier in there, but it at least says there are still outstanding issues, but then it does, and it will, I think it will come out that what we're doing here is more on the quality type of issues.

And the bigger science issues tend to be playing out on the Site Profile committees.

MR. STIVER: And it's acknowledgment of the status of each particular site.

CHAIRMAN GRIFFON: Right.

MR. KATZ: And it wouldn't just be site-specific, it would be procedure-specific, too, because, for example, for a long time you had the ingestion issue. That was still sort of under resolution.

MR. FARVER: It might be important to point out what the different groups do. You know, because you have the Site Profile reviews, you have procedure reviews that impact multiple sites.

MR. KATZ: I think the Secretary isn't interested in much process, the Secretary is just interested in results, but again, you could do that very succinctly, address those issues that are still on the table being examined by the Board.

The Secretary doesn't care what part of the Board is doing that, the Secretary would just be interested to know that, you know, for so many sites or for so many particular issues, you know, the Board is working on those with NIOSH.

MR. FARVER: It might be worthwhile to consider --

MR. KATZ: I think that's sort of innovative.

CHAIRMAN GRIFFON: It might be the best we can do, I mean.

MR. STIVER: But having said that, it might be a good idea to have at least some process information out there so they would understand why all these things are in

disparate states of completion.

MEMBER KOTELCHUCK: Is this what you want to report to the Secretary, or do you want this to be internal document for the Board and staff to just keep an eye, I mean, so that we, you know, three weeks from now, will I remember what we were trying to keep in mind, what balls are up in the air?

Honestly, I won't, and it would be valuable to have it somewhere on paper so that or in the computer so that I can double-check it and that will help a lot. That would help certainly me a lot.

MR. KATZ: I mean, there's different parts of the Board dealing with different pieces. No one Board Member is going to know, and I'm probably exposed to more than most individual Board Members because you're all spread across different Work Groups and Subcommittees, but I think it's nice integrating for the reporting to the Secretary, which is something we have to do as

a Board.

And the other thing you can do, also, is to address in those reports, not just issues that are still pending, getting resolved, but those that have been put to bed. So, I mean --

CHAIRMAN GRIFFON: Sure.

MR. KATZ: -- it would be nice, also, for example, the ingestion which has been put to bed, finally, I think, or just about. You know, that'll be a good place to report and consolidate that, too, that these improvements have been made in the NIOSH program.

MR. STIVER: Yes, there's been quite a few of them.

MR. KATZ: So I guess what I'm saying is, I mean, you could just sort of broaden this dose reconstruction review report. It was focused just on the case review alone, and you could broaden it a little bit so that it covers, really --

CHAIRMAN GRIFFON: The report can be broadened?

MR. KATZ: Yes, exactly.

CHAIRMAN GRIFFON: Yes, yes.

MR. KATZ: Because again, the Secretary, you know, that's what the Secretary wants to know. This program, how's it doing?

CHAIRMAN GRIFFON: Yes, and it always is generated as a report from the full Board anyway, it's not a Subcommittee report, so. No, that makes sense.

MR. STIVER: What kind of a timeline are we looking at as far as --

CHAIRMAN GRIFFON: For a report?

MR. STIVER: Providing a report to the Secretary?

CHAIRMAN GRIFFON: Oh, I don't know. We haven't done one in a while. I think that was the pressure, you know?

MR. KATZ: And I think from the last Board discussion we had, I think there was considerable pressure to get to that state

pretty soon, which is why we tried to consolidate and fast-track some of this.

We're on this 10 to 13 sets and maybe want to be thinking about, as you close out Set 13, that being a good place to report out.

MR. STIVER: Yes, that might be a good spot to stop. Within the next six months or so, hopefully?

MR. KATZ: Yes, I would hope so.

CHAIRMAN GRIFFON: We've reported on one through five only?

MR. KATZ: Yes. Our first hundred cases, whatever that was.

MR. STIVER: I think it was the first five sets.

MR. KATZ: So yes, I think within the next six months to have a report to the Secretary would be a good thing, yes?

MR. STIVER: Yes.

MR. KATZ: Sort of nice, thinking of the new administration, too, so good timing

that way.

MR. STIVER: Along the lines of what Dave was saying, as far as informing some of the Board Members who might not have the broad spectrum, it might be a good idea to have some kind of internal presentation.

MEMBER KOTELCHUCK: I'm not sure what some of the other Subcommittees that I'm not on are doing, like the Procedures Subcommittee.

MEMBER MUNN: As much as possible, given the limitations we're --

MEMBER KOTELCHUCK: And that would be useful.

MR. HINNEFELD: It's optimistic to know what the Subcommittees you are on are doing.

MEMBER KOTELCHUCK: Right, but if we do it for the various Subcommittees.

MR. STIVER: If you're not intimately involved in these things, it can slip away really quickly.

MEMBER KOTELCHUCK: Well, okay.

MR. KATZ: Or Stu was saying, even if you are.

CHAIRMAN GRIFFON: I'm just trying to think of a way that you can, now that we're binning the cases, you know, doing Rocky Flats, doing -- although, as we get the smaller sites, obviously we're still going to have some single case reviews.

But as you do that, is there a way, since oftentimes when we're working on these, we're looking at the matrices. Is there a way to capture that Section 1.3 in the Rocky Flats matrix? Maybe if you're binning them by site --

MR. STIVER: If you're doing them by site, it certainly makes it a lot easier. Also, communicating with the Work Group Chair to get the information you need for updates.

CHAIRMAN GRIFFON: Right, because that would be helpful just to keep us abreast of, you know, these are all Rocky Flats

findings. Remember, in Section 1.3 of all these reports we included, these are still open findings, or whatever.

MR. FARVER: Well, we don't know if they're open. We don't know what has been closed or what has been opened until we go back and look at revisions that have been made.

MR. STIVER: So that was the value of John's report, because he was able to show the status of where we are now relative to where we were.

CHAIRMAN GRIFFON: So you don't know, you'd have to look back.

MR. FARVER: We'd have to go back and look at each one.

CHAIRMAN GRIFFON: Because these cases were done a while for you, yes. Oh, right. Yes.

MR. FARVER: That was the reason we found it might be useful to do one of these look-backs for each of the sets we discuss,

and if that was part of the Subcommittee discussion.

CHAIRMAN GRIFFON: It does add another layer of work, you know?

MEMBER MUNN: A rather extensive layer.

MR. KATZ: Yes, I don't think we want to do that, I think we really just want to just answer the question with however many we had to look back at. We just wanted to answer the question at this point, how are these cases kept --

CHAIRMAN GRIFFON: Yes, I agree. But if we're going to report out at the end of the 13th set, I think we'd want to know sort of at this time, here's the remaining open issues at these sites.

MR. STIVER: Right, right. Here's our progress to date, here's what still remains.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Now, if you could

task that to each of the Work Groups to look at those Site Profile findings and report back to us how many have been resolved.

CHAIRMAN GRIFFON: Yes.

MS. LIN: And then start with LANL?

MR. STIVER: Doug, you're taking work away from us?

CHAIRMAN GRIFFON: Start with LANL, yes, assume they're all standard.

MR. STIVER: Yes, and Rocky is one of those few examples where, you know, there's been extensive revisions and all the workbooks and so forth have been updated. It's made it a good candidate for a trial, a pilot, I think.

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: This is Kathy. I hate to add this to the mix, but I have to say, it would have been nice if we could have had a database like Wanda's procedures database where all of the Work Groups could

have fed in their findings --

CHAIRMAN GRIFFON: I knew that was coming from Kathy.

MR. KATZ: Stop, stop.

MR. STIVER: I'm glad you said it, because you saved me the trouble.

MS. BEHLING: I'm sorry, but that would certainly be helpful for everyone, if you had a database that all of the Work Groups could feed into and we could all look at that database and see where is that Work Group and where is the findings?

MEMBER MUNN: And how many things are closed.

MS. BEHLING: Having a database is a lot of work, but it has certainly, I think, paid off and, I think, Wanda can comment on that, if she'd like.

MEMBER MUNN: I wasn't going to say anything, Kathy.

MS. BEHLING: Sorry.

MEMBER MUNN: It's all right.

MR. STIVER: Well, the Board Review System gets us about 90 percent there, it's working magnificently in the Procedures Subcommittee.

MEMBER MUNN: Yes, catches it very well. Makes it easy to check anytime. By anyone.

CHAIRMAN GRIFFON: So yes, I'm not sure where we are now with that, other than the sidetrack of my brain going to thinking about the database issue. I mean, I think part of my concern with the database was that you lose exactly that, when you start talking about pie graphs and the closed 90 of 101, and therefore we're almost successful -- you know, you got an A for a grade.

You know, and people lose the -- you're not reading the findings. Maybe the database has evolved a little bit, but initially, I remember, you couldn't even get to the documents in the database.

MR. STIVER: You can have

attachments and links and it's really quite nice. A list of the findings, who made the comment and when it was resolved and so forth. If we could have a situation where Work Group Chairs could feed in as findings are resolved in their Site Profile reviews, could go in and it would be a situation where ideally, you'd be able to open up a case and look through the relational database, see every issue and document that pertains to that and how it's been addressed.

MEMBER MUNN: It's not the flexibility of the program that's now the issue, the issue is whether it is considered usable by the people who could be using it.

MR. STIVER: Right.

MR. KATZ: What we talked about doing in the Procedures Subcommittee for the rest of the Work Groups is having SC&A staff, at least, start using it for each Work Group instead of doing these independent matrices, start using it as the matrix generator, et

cetera.

CHAIRMAN GRIFFON: And I think you're actually -- didn't you start to construct one for the DR Subcommittee?

MR. STIVER: Well, we haven't actually done it, we're still using the matrix and working back and forth with Scott and folks over at DCAS.

CHAIRMAN GRIFFON: No, but I thought you initially --

MR. STIVER: We haven't actually generated a separate database. We have the old database, the old access database.

CHAIRMAN GRIFFON: Oh, okay.

MR. STIVER: Which we used to use.

CHAIRMAN GRIFFON: Yes, yes.

MR. STIVER: But we could easily resurrect that. It still wouldn't be something that we'd dovetail into the --

MR. KATZ: The DR Subcommittee, we talked about in the Procedures Subcommittee, is the least good fit, right, for the --

MR. HINNEFELD: DR is probably the least good fit, they would have to design some business rules, because it's the -- the procedures review is sort of document-based, you know, this is the document we reviewed, here are the findings of that.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And so then when you get to dose reconstruction, you have to draw some rules about: what is the thing we reviewed? Is that thing we reviewed the Set 1 report or, you know, say the Set 11 report, or a group of dose reconstructions to go over?

Or is each reviewed case a document that was reviewed? I think that's the fundamental business rule to this decision that has to be made. Once we do that, if we said, for instance, each case reviewed is its one own, quote, "document," from then it seems pretty analogous to the procedures process.

Because you have a series of findings under that document that get loaded

and then the conversation and resolution can occur. I mean, if that's the business rule we make, then that can be done.

Now that puts some 300 additional documents into the system, and there'd have to be some sort of naming convention that we would stick to very rigorously, so that everything would work.

But that seemed to me to be the easiest fit to get that process to work, that application to work on these.

MR. STIVER: Okay.

MR. KATZ: One thought I had that might be a consolidating rule for that, but it has an issue with it, would be if you did it by site, case sets by site, as opposed to case sets. But the problem is: some cases, of course, cross numerous sites, so I don't know if that works, but otherwise -- I mean, especially now that we're going down the track of reviewing Rocky Flats cases and then reviewing LANL cases and sort of work with

that, but --

MR. STIVER: I wish we had a -- we could have a category for multiple sites, but I don't know if that would work in real practice, but I was thinking, when Stu was talking, that that would be a good idea for, you know, looking at it by site, because a lot of the findings are going to be similar.

So you want to track all these findings for all these different documents that are essentially the same thing, or do you want to look at by site? Here are the findings of these cases, you know.

MR. KATZ: Yes, it'd make the relational issues much easier, for that matter, right?

MR. HINNEFELD: If you want to pursue this, we should have a design meeting with our developer group. And whoever wants to be engaged in this design meeting can let me know, and we'll try to set something up.

Doug should definitely be there,

Wanda, since you're common to both, you'd be a good one to be there. Mark, yes. And John.

MR. STIVER: And possibly, I don't know who you would want from IT, we have a very good database person at SC&A, Don Loomis.

MR. HINNEFELD: If we're going to use our application, our people are going to want to do it. I mean, I've got no knock against it, and the people I've worked with on your side, the database people that I worked with, I've got a lot of respect for.

Our data people are going to want to do it, so if we're going to build it, make it a module, what it would be would be a module of what we call the Board Review System. It's not called procedure review system, it's called Board Review System.

You make a module there, you design it so then when you select one of the drop-downs of which Work Group you want to look at, then you would pick "Dose Reconstruction Subcommittee" and it would pull

up then the documents that were reviewed by the Dose Reconstruction Subcommittee. And that would be --

MR. STIVER: And you could put all the other Work Groups in, too, ideally, right?

MR. HINNEFELD: Most of them are already on there on the menu. So, okay, and then we'll bring probably Laurie, because she's familiar with the other one. But we'll bring some folks from our side, and then we can set this up, and I guess we'd do this telephonically, although sometimes it works better in person.

MR. KATZ: Well, we could travel to the facility, too, you know.

MR. HINNEFELD: Up to our place.

MR. STIVER: We've done that before.

MR. KATZ: Yes, and then people who can't travel can connect to the phone.

MR. HINNEFELD: Okay.

MR. STIVER: I want Kathy to be on

it, too.

MR. HINNEFELD: How about timing-wise for the design meeting? What are we looking for? The Board meeting's in two weeks, you want to try to get it in before then?

MR. STIVER: No.

MR. HINNEFELD: Okay.

MR. STIVER: After that we've got the holidays.

MR. HINNEFELD: After that we're getting into the holidays, so we're looking at the start of --

MR. STIVER: Early in January.

MR. KATZ: When it can be arranged.

MR. STIVER: Do what we got to do, yes.

MR. HINNEFELD: Okay, I think that we'll take that, we'll start looking for potential dates in January, and I'll include Ted in any correspondence, and the people I

can think of who should be there. I can copy off, I'll copy all Subcommittee Members so whoever can chime in to be there or not.

And then we'll start looking for available dates in the calendar in January. I don't have a lot of January to work with. First part of January, kind of available. Okay --

CHAIRMAN GRIFFON: The design process should be faster since Wanda's worked most of the bugs out, right?

MR. HINNEFELD: We've got a --

MR. STIVER: Actually, it's pretty amazing.

MR. HINNEFELD: We've got a system that we'll want to be making this a module of, so there'll be some constraints, and we'll be working within those constraints. But, okay. We want to come in with the ideas of what we want to be able to do with, you know, when we have all these findings in there, how do we want to look for them, how do we want to grab

them?

Because there could be some data fields we're going to have to add in order to be able to do what we want to do.

MR. FARVER: Would this also incorporate the Site Profile findings?

MR. HINNEFELD: Yes, it's built to. It's built to.

MR. FARVER: Aren't those pretty much covered in the procedures, the Site Profile issues?

MR. HINNEFELD: Actually, no.

MR. FARVER: Are we going to have any TBD issues in there?

MR. HINNEFELD: No.

MEMBER MUNN: You have TBDs --

MR. HINNEFELD: Most of the Site Profile reviews are not in there because the findings on the Site Profile Reviews are dealt with in matrices by the individual Work Group.

MR. FARVER: But we want to do that.

MR. STIVER: Eventually we'd want to migrate that over to the --

MR. HINNEFELD: And the system was built with the idea that those would all be moved in there, also.

MEMBER MUNN: That it would all eventually be encompassed.

MR. HINNEFELD: Yes.

MR. STIVER: So limit this meeting to just the cases or try to tackle all the issues?

MR. HINNEFELD: I think the first step would be, if we want to move this Subcommittee there first, the design meeting should be this Subcommittee. We want these findings in there. And then we'll have an additional group of Board Members who are familiar with the application and we'll have maybe more, maybe some of these Board Members on site-specific Work Groups they're on will say, we think this is worthwhile, let's move this design into now our -- now the design

should be less once you get to one site.

Once you do one site, you would hope that all the rest of them would be in position --

MR. STIVER: The rest of them should fall in line.

MR. HINNEFELD: Right, you've got a design for all of them.

MEMBER MUNN: Yes.

MR. HINNEFELD: So, but this would be the hard design.

MR. STIVER: The first one is the tough one.

CHAIRMAN GRIFFON: Well, I mean, I think the big factor convincing me is that you have the other site Work Groups. I mean, I think if those aren't there, I still don't see the great improvement.

MR. HINNEFELD: It's all built.

MR. KATZ: There's nothing else --

MR. HINNEFELD: Nothing prevents us from working today. I'm sorry, Ted.

MR. KATZ: Sorry.

MR. HINNEFELD: Nothing prevents us from working today except -- I'm sorry if I want to talk over top of you anyway. Nothing prevents us from doing that today, except loading in what the most current matrix is, and then I don't know how much history we can reconstruct to put in there, but we could get in where we are today on maintenance.

MR. KATZ: So what I was going to say, which is consistent with what Stu was saying, is what we agree is that we would start doing this going forward, not retrospectively, but there's nothing stopping us now.

The system's built to use for a Work Group that's reviewing, for example, a Site Profile. That's a document. That goes in, there's no trouble putting that document in, the Site Profile, all those TBDs.

There's no problem putting in the reviews from SC&A, that's all set up and ready

to go, to pop it in. And there's no problem, then, beginning to use the matrix that's built into the system already to capture findings and their state of resolution and all that. That's all built in already.

So it's really just starting to use it. That's all that's needed. For the Work Groups that -- I mean, the one limitation will be that, for a lot of Work Groups that already covered, you know, a lot of water under the bridge, that won't already be put into the system, all of that history of what's been resolved. That won't be there. But going forward, it would be easy to start up using it tomorrow for any given Work Group, I think, right?

MEMBER MUNN: Any site-specific Work Group.

MR. KATZ: Right, that's what I'm talking about, site-specific.

MR. STIVER: And really, how hard would it be to load up the history? Once you

have the module in place, then you can populate it with all the documents pertaining to that particular site.

MR. KATZ: Yes, absolutely. Documents are not a problem. It's all the issue resolution, some of that history would be harder to --

MR. STIVER: Yes, it'd be tough.

MR. KATZ: But yes, it can all be put in, it's just it's a good bit of work. It's a lot of loading.

MEMBER MUNN: It would be, and it would be very time-burdensome for someone to be --

MR. STIVER: Well, at least to have it going forward, we certainly have that --

MEMBER MUNN: Well, yes, but site-specific Work Groups, as Ted said, can drop into it immediately.

MR. HINNEFELD: Steve Marschke would be a good attendee.

MEMBER MUNN: Yes.

MR. STIVER: Oh, absolutely.

CHAIRMAN GRIFFON: Well, we can have, this may be more detail for the design discussion, but for the DR segment, I think starting at the 6th set of cases going forward would be helpful. Even though we closed out the six and seven, we haven't reported out on those, so it would be nice to have them.

MEMBER MUNN: Well yes, but we have records of them, our records are good. It just will have to be a slightly different mechanism for input, that's all.

CHAIRMAN GRIFFON: And on those, you won't have the history of the back and forth, but you'll at least have the final -- okay. All right, I think we're on the next item. Maybe we should take a ten-minute break.

And then come back, and we want to talk about the DR method going forward.

MR. FARVER: You want to do that

first and then go into the specific findings later?

CHAIRMAN GRIFFON: Yes.

(Whereupon, the above-entitled matter went off the record at 2:51 p.m. and resumed at 3:04 p.m.)

MR. KATZ: We're back on line, Subcommittee on Dose Reconstruction Review.

CHAIRMAN GRIFFON: Okay. Moving on to the next agenda item, which is the one I wanted to start right after lunch, revisiting the Board's Dose Reconstruction case review process. Identification of options for path forward. And you've sent us this -- this got circulated to everyone, right? No, okay. Have you circulated anything to everyone?

MR. KATZ: No.

CHAIRMAN GRIFFON: No, okay. All right. Okay.

MR. KATZ: No, I haven't.

CHAIRMAN GRIFFON: I thought everyone had those documents.

MR. KATZ: No. And we can't actually. We cannot have them.

CHAIRMAN GRIFFON: Okay. Alright. The thing I'm speaking of is the, it's got some of the background on the, from our past approach and some possible ways to modify that. So --

MR. KATZ: I mean, Mark, you have distributed to everybody the old language on the dose reconstruction methods, dose reconstruction review methods. And, Mark, you, before the last meeting you distributed those to everybody. I don't if everybody has spent any time --

CHAIRMAN GRIFFON: Does everyone have those or?

MS. LIN: Mark, I think you need to add me to your distribution list.

CHAIRMAN GRIFFON: Yes, I don't know that I just, I think I sent it to Ted last time.

MS. LIN: Yes, if it's from Ted,

then I should have it.

MR. KATZ: So that goes back a good deal of time.

CHAIRMAN GRIFFON: Was it in the June meeting or I think we had an August meeting, didn't we?

MR. KATZ: Yes, we had an August meeting and so it would have been before that.

MEMBER MUNN: And so this was August, you said?

(Simultaneous speaking.)

CHAIRMAN GRIFFON: I just thought it would be something, you know, to initiate the conversation. Okay. This isn't the right document, this is ranking file.

MR. KATZ: No.

CHAIRMAN GRIFFON: Alright. So let me, I'll just give an overview of what we did initially and then sort of the idea going forward or any of our ideas going forward. And I think part of what we want to do is update our internal procedure just on how we

do these things. If nothing else, to reflect the reality of what's going on right now.

I saw Doug's, no, I want a look of concern because part of it was the, I think the initial procedure was written when we first started the Board two years in maybe. And the process has evolved on the Subcommittee. So what we're really doing now is not exactly reflected in the initial procedure. So at the very least we should update our own protocol to reflect what's happening.

But initially we had envisioned something called an advanced review, a basic review and blind reviews for the three types of case reviews. And I guess what sort of ended up happening was that a lot of the questions that would be taken up in what I was envisioning as a more advanced review, ended up going to the Site Profile process.

So the questions of data integrity or the questions of, you know, larger issues

on like neutron dosimetry. Those type of issues ended up going either to Site Profile Work Groups or to, I don't know where we ever been with things like ingestion or --

MR. KATZ: Procedures.

CHAIRMAN GRIFFON: Yes, I think they ended up in Procedures, right.

MEMBER MUNN: Right and they're in our, they're now incorporated in our process as overarching issues we're tracking. Many of them -- I shouldn't say many of them. Some of them lie in the Work Groups of one sort or another where they're actively pursuing them rather than in Procedures but that's where we're tracking them.

CHAIRMAN GRIFFON: Right, so, you know, the question is, to consider is, you know, I think the vision of advanced and basic sort of evolved into, as Ted said earlier in our side discussion, a hybrid of the two where we weren't necessarily doing what I had envisioned as an advanced, except in the case

of the mini Site Profile type reviews.

I think those I would consider as what I was originally thinking of as advanced reviews because those are the cases where we have an AWE site, we pull one case and there's likely never going to be a, well in a lot of those cases there is not a Site Profile anyway. So we treated them as like, you know, do the Site Profile and the case review all in one, as one function. So that would be sort of falling under the category of advanced review.

The other ones tend to be more, as we've seen a lot of the findings we're having are more quality related and we may acknowledge some of these bigger issues just as we just discussed. But a lot of those are being taken care of in the Site Profile process.

And then there's the question, which was our two agenda items ago, of the blind reviews and where they fit into this

process. So I guess that's what we want to flush out. Do we think the current model should be unaltered?

Do we, how do we want to, since we really haven't done a lot with the blind reviews, do we want to continue that? Do we want to have more blind reviews, to what end, what are they going to be, what's the utility of them? And I guess that's the question on the table.

MEMBER MUNN: Well my question would be whether our current process is illuminating any problems that we see that we feel should be addressed that aren't. Or it seems to me we've done a pretty good job of identifying what we need to be looking at; whether we're looking at it in the correct way may be another issue for consideration.

But I'd be interested in hearing what anyone might feel is a shortcoming in our current approach. Revising what we're doing is always a good idea if we see that we're

leaving something significant out of our process. If we're not then --

DR. MAURO: Wanda, this is John Mauro. I've been on the line for a little bit.

MEMBER MUNN: Well hi there, John.

DR. MAURO: Hi, and I've been listening in. And I was just going to listen. But it turns out I have, I'm doing something right now that goes right to the question, at least part of it that I wanted to just mention to the group.

I'm actually reviewing a case right now that comes out of Dow Chemical. And you know the section in our DR reviews where we call it Section 1.3, where we list all of the issues that were identified by SC&A having to deal with the Site Profile. And I think everyone's familiar with that, it's what I called Section 1.3. And we list the issues.

What I've just done that I think goes a little bit toward what we're talking

about is instead of just listing the issues, since I'm so familiar with TBD-6000 and with the various appendices that go with it, it turns out Dow is part of that process, I put in a paragraph under each of the original findings that were associated with our review of TBD-6000 and Appendix C of TBD-6000, which deals with Dow.

And I put a paragraph in saying where are we with regard to each of those issues. And it turns out that an awful lot, at least in the case of Dow and TBD-6000, all of the original issues that we raised all the way back since, you know, our first review that we list in Section 1.3 now, have been resolved.

And I put a little paragraph saying this issue, you know, was resolved by the, it could be the TBD-6000 or the Dow process. So all I'm saying is that it might be worthwhile when we do our DR reviews and we put in the list of issues that deal with the

Site Profile, in Section 1.3, that with a little bit more homework and it wasn't that difficult to do by the SC&A people working with the other SC&A people saying okay, where are we.

For example if it's Rocky, I get in touch with Joe Fitzgerald. Joe, where are we on issue number one? And you add a paragraph so that right there in the DR review, you know, in addition to doing what we always do in putting in 1.3 issues, a little paragraph saying what the status is of those issues.

And that would bring, that would make every one of the case, the DR review cases, current and it would also alert the, your Subcommittee to perhaps interact with the, let's say the Rocky Subcommittee if there are issues there that are still, either they may have been addressed in a more recent version of a Site Profile, but they have not yet been resolved or they may have been

addressed and resolved.

And all of that could be captured when you do the actual DR. And I think it could be done pretty easily by SC&A people just simply talking to the other SC&A people that are involved with that particular site. And I would offer that up as at least a piece of one way to sort of capture the current status of affairs and marry Site Profile work with DR review work.

CHAIRMAN GRIFFON: You can say database now if you want. John, I don't know if you heard. We were just discussing the possibility of migrating the DR data to the database, similar to the Procedures Committee. So and then if we also did that with the Site Profile, you know, that would make this marriage maybe even easier, you know.

DR. MAURO: And you guys are way ahead of me. Wonderful, beautiful, thank you.

CHAIRMAN GRIFFON: So you haven't been on the call very long because we did that

just before break.

DR. MAURO: I did catch a piece of it. But I was thinking more in terms of that 1.3. But you folks have gone way past 1.3.

CHAIRMAN GRIFFON: I'm just thinking of billable hours, you know. Anyway, okay.

DR. MAURO: Okay, anyway. I had my say, thank you.

CHAIRMAN GRIFFON: Good point, John. We miss you at these meetings.

DR. MAURO: I miss you guys too. Are you kidding me?

CHAIRMAN GRIFFON: So that is one point and that's, yes, I agree with that completely. But you know, I think the challenge, I was talking with Ted a little bit on the break and before this meeting was that, I guess the, for me some of the gray area is this area of you're doing a DR review and you, you know, you I guess we don't want to get it so narrow that it's only looking at the number

in the NIOSH, you know, just a strict procedure review.

You know, in other words did they follow the procedure and their numbers match our numbers that we got using the same protocol. If something looks awry, it should be noted in the report. And I, that might fall into the things like John was saying, the observations, you know, that you're, that you make that, you know, might bring up other issues that aren't really in the Site Profile. You know what I mean, yes.

MR. FARVER: No, I don't. Could you give an example of what you're getting at?

CHAIRMAN GRIFFON: Well, you know, I guess, you know, if you're just looking at, if it's just a strict I look at the DR Report, this would just be another peer-review if you're doing it, if you're going to have a checklist and you're going down and saying, okay, if I use procedure so and so as they've prescribed and I put in this number I get the

same number they got, check, right?

MR. FARVER: Well I mean that's a big part of it.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: There's the other part is --

CHAIRMAN GRIFFON: That's the part I'm interested in is the other part. What's the other part, right?

MR. FARVER: The other part is can you get the guy in the right building? Neutron dose comes to mind.

CHAIRMAN GRIFFON: Yes, that's a good one. That's a good example you just gave my example.

MR. FARVER: -- neutron dose. So we do look at those things.

CHAIRMAN GRIFFON: And the CATI stuff is an example.

MR. STIVER: Yes, those are the three elements really. You know, and that last one is, you know worker placement and

scenario development, that's probably the biggest in terms of size. Those are the category a, b and then the c and d were the models, whatever those were.

MR. FARVER: And it's also things like --

(Simultaneous speaking.)

CHAIRMAN GRIFFON: But I can think of another one might be the assumptions on the internal dose. You know that when you follow procedures, you know, and according to procedure their numbers work out, we got the same numbers, however, we have some question about the assumption for using Class N, you know, and those kinds of things.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: And they may fall into Site Profile, but they may not, I guess.

MR. FARVER: And we've had this combative discussion before about whether it's chronic or is it several acutes or how should

we consider this? And so those things do come up.

MR. STIVER: The only concern I have about that is once we, you know, if we were to get into those issues here it would be basically, essentially replicating what would be going on the --

CHAIRMAN GRIFFON: Well that's what I'm saying. There's this --

(Simultaneous speaking.)

CHAIRMAN GRIFFON: -- little bit of a gray area.

MR. KATZ: They don't have to be resolved here, but the issue is wanting, making sure that they're identified in the case. Whether they get resolved, they probably would get resolved in the Site Profile Work Group. But we'd want to capture that in the case.

(Simultaneous speaking.)

MR. STIVER: Otherwise it might just slip off the radar scope altogether and

never get back.

CHAIRMAN GRIFFON: See my fear is if you, I mean, part of the reason for doing individual case reviews is that it might open your eyes to something that people weren't thinking about when they were designing the bigger profile. So if you see something that says, wait a second, you know, we know there were, you know, they've sort of resolved this but this brings new light onto this. This doesn't really fit into this model that they've adopted before.

MR. FARVER: We try to mention things that we're not sure about or don't really make sense to us. And I think you'll see in some of the findings we talked about we're not necessarily so concerned about, that they did it wrong.

It's why did you do it that way? And if you want to do it that way we don't really have a concern, but let's put it in the documentation so that everybody knows to do it

that way.

DR. MAURO: This is John again. Let me second that. That's exactly what happened to me about a day ago when I was reviewing this Dow case. And I noticed they used a particular dose conversion factor. And something that, you see when we do a Site Profile review we operate at a certain level of granularity.

When you do a DR review you're actually going in and matching the person's numbers one by one, every number that's in that, you know, the IREP input. And all of a sudden you don't realize it, but you're really getting down into the bowels of exactly the procedure down to the finest level you could imagine. And things start to emerge that didn't emerge before. And you try to, well I document that in the case. What I'm saying is --

CHAIRMAN GRIFFON: Such as, yes.

DR. MAURO: Yes, no I mean,

actually I have things brought up more of observations, they follow the rules but all of a sudden we realize, wait a minute. This rule, it never really dawned on us that, you know, until you really get down to using it, it's a funny sort of thing.

You think when you do your Site Profile review, you know, you really capture everything. I hate to say this but, you know, when we do our Site Profile reviews we go vertical on certain issues. But other things we leave alone. You have to make a choice, make a choice as to where you're going to delve.

But when you get to the DR review I can't tell you how much you realize this, well this has happened to me anyway, when I actually try to match numbers then I really get this complete rich understanding of the exposure matrix that's in the Site Profile of all the procedures that are referenced, whatever they are and actually implement them

myself to see how they were actually used in this case.

What I'm getting at is the DR review process is the most powerful tool that, you know, and of course the SEC, that's another thing all together. But I'm saying the DR review process, it is a driver that gets you right down into the bowels of everything that's going on in this program.

And it's not until you actually do a case that the complete understanding of how everything is being done and where things may be, you know, not entirely consistent, where there are judgments being made. So I, in my mind, I think the DR Subcommittee and the things you're talking about right now are the most powerful, important things going on other than SEC issues.

Everything is subservient, the procedure reviews, the Site Profile reviews, they're all subservient to the DR Subcommittee activities and looking at cases.

MEMBER MUNN: Well I certainly felt subservient.

DR. MAURO: Remember what the Site Profiles are there for. They were originally invented as an idea to help do better DRs. And so they do, in my mind, the DR Subcommittee, I'm sorry I got, you hit the subject so near and dear to my heart that this is where the action is.

CHAIRMAN GRIFFON: I've always said that, John. This is where the action is.

DR. MAURO: Other then SECs. I realize everyone understands the importance of --

CHAIRMAN GRIFFON: As I recruit new Members that's what I say. This is where the action is.

MR. STIVER: And how has that worked out so far?

MEMBER MUNN: You see how that's worked for you don't you?

MEMBER CLAWSON: That's why we all

have caffeine.

CHAIRMAN GRIFFON: Let me, here's what I'm trying to get at in terms of sort of maybe modify, not modifying but being a little more specific in the procedure that we have. And I think we just raised a few. But what are some of the examples of this other category that was mentioned earlier.

And I think worker placement, the CATI findings, the professional judgments on, you know, internal dose type of, or you know, fitting internal dose data, that sort of thing. Can you give me other examples that fall under those?

MR. STIVER: Really CATI findings are pretty important. Those really do spell out and help you develop a scenario in the placement of those.

CHAIRMAN GRIFFON: Right.

MR. STIVER: And probably the two biggest issues in terms of determining dose.

CHAIRMAN GRIFFON: Yes. I guess

that's --

MR. FARVER: -- problems of large areas.

CHAIRMAN GRIFFON: That's some of the pretty large areas anyway. I mean but that is the idea is to not, you know, I'm trying to put some language in the procedure just that reminds us all that we're not just narrowly looking at does this number match the number we got and going down a checklist.

You know, to keep in mind that we're, and I'm not saying you're not doing it. I'm just saying going forward and outlining the information that we're taking. I think it would be good to document that, you know.

MR. STIVER: Maybe we should start talking about the observations in the evenings. Oftentimes those --

CHAIRMAN GRIFFON: Yes, we glean over those.

MR. STIVER: Yes, but basically there was no response required. We capture

them, we never talk about them. They're in the matrices. You know oftentimes those are things like John Mauro was talking about.

I've made comments about let's say how a certain radionuclide was treated. It's in accordance with the TBD. But when you do a TBD it could be improved. So I think that is an observation. So at least it gets in there at some point. It's not lost completely.

CHAIRMAN GRIFFON: Right. And I mean the other one, since John's on the phone, I mean in the blind review and that whole idea of skin contamination contributing to the skin dose, you know.

MR. STIVER: Well that's a good thing because then you can really see --

CHAIRMAN GRIFFON: That's an issue that I don't think we've ever really, we've brought it up, John brought it up, you know, many meetings ago. But it's sort of like, I don't think it's being handled anywhere. I don't know that there is a way to -- I think

we had that discussion like how do you --

MR. HINNEFELD: Well I really want to read what John wrote in that Roman numeral I or II or whatever it was on there.

CHAIRMAN GRIFFON: And I haven't looked at it yet either, right, right.

MR. HINNEFELD: -- going in is that once you start inventing an exposure that you don't know can happen or not, you stop --

CHAIRMAN GRIFFON: Maybe that wasn't the best example, but I mean I'm just thinking of these other issues that come up that are not, you know, just simply quality issues and --

MR. FARVER: Now for example, when you talk about the skin contamination, we would probably raise that if you read through it and let's say the guy's a roofer and there's something in his CATI report about they replaced the roofs on the contaminated building so and so and he's got skin cancer on the hand or something.

We would probably bring that out saying that that's possible. I don't know how to resolve that, you know. That's either hot particle or something on the skin and what size, how big, how long was it there? But I mean we would probably bring that out. I know we have in the past.

MR. KATZ: But again, you don't have to necessarily resolve it with that case. So it's like, we have these two categories. Were the procedures followed? And then are the procedures adequate in light of this case? And that's sort of the second part. Does this case shed light on a possible problem with the procedures?

MR. FARVER: Yes, and then are there just errors?

MR. STIVER: Well the errors in the quality --

(Simultaneous speaking.)

MR. KATZ: They're either followed or not. And if they're not, there are errors

in there. That's where the procedure's followed part. That's the slavish part that Mark wants to be, is saying --

CHAIRMAN GRIFFON: I'm not saying it's not important.

MR. KATZ: No, but it's an element. But that's sort of the basic part of the review. The advanced review is does this case shed light on any weaknesses in the procedures?

CHAIRMAN GRIFFON: And how do the blind reviews fit into this model?

MEMBER RICHARDSON: Well one second before we move on to that, are you imagining that this new database is going to somehow increase our ability to keep track of these things which are called observations because they're not pointing out to problems of implementation. But they're kind of the bigger issues in a sense, kind of philosophical issues about whether the rules that we're playing by are the best rules that

they can be.

And are we supposed, I mean, I agree with that, that we've collected a number of them and we haven't --

CHAIRMAN GRIFFON: Sort of gleaned over them.

MEMBER RICHARDSON: Yes. We've had a lot of focus on quality issues recently, I think. And that's maybe distracted us from making the full use that we could of those. So I don't know if by tracking them more within a database that's useful or we're supposed to give them to Wanda.

CHAIRMAN GRIFFON: Well I think those are observations.

MEMBER MUNN: I would care not to have any more what ifs. I've dealt with enough what ifs.

MR. STIVER: If it's something you think might impact a procedure then, you know, it should be flagged and sent on to the appropriate Work Group.

MEMBER RICHARDSON: Are they, right now are they, do they all have like an address where they're to be sent?

CHAIRMAN GRIFFON: No, sometimes. I mean I think lately though we've been saying no action required because they're observations.

MR. STIVER: Yes, an observation we don't require --

CHAIRMAN GRIFFON: So I want to look back at those.

MR. KATZ: I mean, I think the reality just because again, it sort of helps sitting in all the different venues, I think the reality of what happens right now is that there's no formal system. So we don't have this database where they get automatically put in this database and then they can be referred easily to the Subcommittee on Procedure Review or what have you.

But what we have is SC&A staff who are familiar with the issue, like John on the

phone here. He's familiar with the issue from one venue and he brings it to the other venue. So we have a lot of that that's happened in this program, a ton of it I would say that's happened.

So I'm not, I don't think we have a program so far that's sort of completely defective on this at all. I think a lot of it has happened. But it'd be good to develop a more formalized and sort of gap free system so that this, we know this happens.

CHAIRMAN GRIFFON: But also even though we know it's happening we don't necessarily know the current status on some of these.

MR. KATZ: Yes and we can't, yes.

CHAIRMAN GRIFFON: You can't just pull it up quickly, right.

MR. FARVER: We could do away with observations and turn them into findings. But the problem would be that they don't always fit under one of our categories.

MEMBER MUNN: They don't really rise to the level of a finding. And they aren't something that we need to see as being pursued and "resolved." It's just an observation.

MR. FARVER: I'm looking at a couple here to try to get an idea of what they are.

CHAIRMAN GRIFFON: Yes, give me an idea.

MR. FARVER: This is one where we point out that one of the tables in the TBD, the headers, they're the wrong time periods. You know, it goes from let's see, pre-1970, you know, before 1970 to post-1970.

CHAIRMAN GRIFFON: Neutron dose.

MR. FARVER: Should that be pre-`70, post-`71 or, so we do point out things that we come across different things in documentation. I remember this one, I forget the document it was in, there were two tables in there with the same number.

So it gets confusing when you try to refer to a table when there's two tables with the same numbers in them. So we'll point things out like that even though we can find the actual value they used because we can search both tables.

CHAIRMAN GRIFFON: Now see those aren't the overarching --

MR. STIVER: Yes, those are kind of niggling little details.

MEMBER RICHARDSON: Although those are all observations which do have an address to which they could be sent and corrected, and acted upon very easily. And we probably should do that because it's, you use your energy to observe it and it should, we just sat on it.

MR. STIVER: Yes, there should be some outcome.

MEMBER MUNN: There usually are.

CHAIRMAN GRIFFON: Yes, I think we usually say refer to Site Profile, but how

well that's linked and how, yes, the database --

MR. STIVER: Once we have so there may be some place --

CHAIRMAN GRIFFON: But I'm thinking more of the broader ones. Early on I know at least those broader issues were recorded as findings. And I think part of the reason that we stopped doing that was it was showing up in every case and this is kind of --

MR. STIVER: There was a replication.

CHAIRMAN GRIFFON: Yes, right.

MR. STIVER: There's so many replications you're going be showing these same types of things that we can't resolve.

CHAIRMAN GRIFFON: Although we have a fair amount.

MR. FARVER: That was another reason for making a new observation because it was already being tracked.

MR. KATZ: I mean an observation does sound kind of innocuous. You could call them by where they fit, potential procedure issue, potential TBD issue. I mean that's not, I mean that's what they are and then you know it's there. And that's, and you also know sort of who's supposed to be addressing it.

MR. STIVER: Yes, we're going to take these more seriously then give them a more --

MR. KATZ: It's just potential. It doesn't mean it is. It has to be explored.

MR. FARVER: We use whatever title you want.

MR. KATZ: Right. So when you were asking about title. You were saying should we be calling these findings and I'm --

MR. FARVER: No, I'm saying we could elevate them to a level of a finding.

MR. KATZ: Well I'm saying, you

can call them a potential procedure issue, potential TBD issue.

MR. FARVER: We could call them an observation. I mean the --

(Simultaneous speaking.)

MEMBER RICHARDSON: You're saying that findings have actions that need to be taken --

MR. FARVER: Correct.

MEMBER RICHARDSON: And historically the way that we've handled observations is just to wave them goodbye.

MR. FARVER: Correct. If you want to call them a potential TBD issue you're going to have to have some consequences and some tracking of that.

MR. KATZ: Yes, but I think it's implicit. It's potential TBD issues, so then there's a group that deals with that TBD. The same thing with Procedures we have a group that deals with Procedures.

MR. FARVER: You would have to

assign it a, some kind of number, some kind of identifier, so, okay which is basically tracking it like you would a finding. But you're not calling it a finding.

MR. KATZ: Right and that will fit very nicely with the system that Stu was describing that we have and Wanda that we have, the Board's review system.

MS. BEHLING: Would it make sense to call, this is Kathy, to call these -- findings, or no, maybe we'll stick with observations.

MEMBER MUNN: We were very clear at the outset what a finding was. A finding was a defect of some sort that affected our job which is to do dose recalculations and to compensate people large sums of money if they had reached a certain level. That's what a finding was.

And anything that did not reach that level of specificity was not a finding. If we were observing that a table had an

incorrect heading on it, if we were commenting that this job is a better job than was done in the preceding review, those are observations. And they're, some of them should have an action of some sort. Others really don't require an action.

They are certainly not a technical issue that affects the compensation that is the major concern and the major focus of the entire Board. I think it would be a mistake for us to begin to elevate them to anything other than an item which probably should be corrected and needs to be tracked until it's fixed because it's not affecting the compensation issues which are our primary concern.

DR. MAURO: Wanda, this is John. I'd like to just, I agree with what you just said but there's -- it turns out that when we do our scoring in that Table 2, in our DR reviews, whenever we do have a finding and let's say and usually it has to do with a

quality issue. I mean, that's why it makes it into the table.

And we usually give it a low, medium or high. And there is a certain degree of judgment made. And usually something becomes high if, for one of two reasons. One, it could actually profoundly affect the dose outcome and perhaps the compensation decision. That's always gets a high.

But also it gets a high if we feel that this is something that is fundamental and that could impact many cases. So it may turn out that we have, you know, there's ambiguity in a guideline where judgment has been made or judgment is being made by the DR person.

And he's been given that flexibility because no Site Profile is that prescriptive, it will never be that prescriptive. There's always going to be a certain degree of judgment. There's no escaping that.

But the judgment, in our opinion,

is so fundamental that it could affect many cases. And maybe it doesn't have a big affect on the compensation decision for this case. But it could have an affect on those kinds of judgments; we give them a high score. So I mean, at least I do.

So I would say that, I don't know if anyone agrees with that. But the judgment that we make, SC&A makes on why we think something is high, and of course we have a chance to talk to you folks about it during the one on ones. So we do have a pre-screening process where we go low, medium or high based on the one-on-one conversations we have with you.

MEMBER MUNN: And I don't think you're getting any push back on that position, John. I don't think so at all. I'm just saying that, in my personal opinion, the established criterion that we had for identifying the difference between a finding and an observation was a valid one. That was

my only point. I don't see raising observations to the level of findings.

CHAIRMAN GRIFFON: Well if the two examples I heard, you know, from Doug, I will agree with that. I mean, because those, you know, changes on and I think in those instances, I may be wrong, but I think the tables are wrong in the TBD, but in fact the workbook had, was doing the calculation correctly. You know, it didn't really affect the reconstruction at all. I agree, that's an observation.

Nonetheless, it should be captured by NIOSH and fixed, you know, for the next revision of the profile. On the other hand, if you have observations that are sort of these broader issues, as John was saying earlier, and I don't have an example in my mind. But if there was something that was more of a scientific question but they sort of knew it was being handled on the, I guess --

MR. STIVER: What if you came

across something that was, had broad implications but wasn't necessarily rigidly defined as a finding, per se because it was kind of outside the scope of what the TBD had prescribed?

So something that would be in the Site Profile environment would be considered a finding, it just so happened that the dose reconstructor was the first one to notice it during the review. Right now it would be --

(Simultaneous speaking.)

MR. STIVER: There's a few different categories of observations that say what they are.

DR. MAURO: I've got the biggest one for you. The biggest one is the judgment on whether we use 50th percentile full distribution, when to use the 95th percentile. I run into that and that's a judgment call.

CHAIRMAN GRIFFON: Is that listed as an observation though in your previous --

DR. MAURO: That, the person, the

way it goes right now, that would be a finding that is in Section 1.3 on the Site Profile because what happens is the Site Profile leaves, and the procedures. And not only in the Site Profile, but it's also in the procedure, I forget which, 60, I forget which OTIB it is.

But what happens there is the, rightly so, stay with me for a minute, rightly so that discretion is left up to the dose reconstructor, that is should I give this person the full distribution or should I give them the 95th percentile? And that I keep running into that and the place that I very often find myself on one side, and let's say NIOSH on the other side, is a judgment call.

And that judgment has to be made by the DR. And therein lies what I would consider to be something that right now is, goes toward, you know, you would argue, well is that something you put a score into people or is that an observation? In my opinion,

that's so important we can't just leave that, we're not going to worry about that right now.

I mean that goes to the heart of the dose reconstruction and how those judgments are being made. So to call it an observation when it has such a profound implication, maybe not for this case that you're doing right now because it wouldn't change anything. Very often it doesn't change anything because the guy may be down at a 25 percent PoC.

But the very idea that there is this ambiguity and the judgment that's being made is do we go with the 50 percentile or do we go with the 95 percentile. That just keeps coming back time and again. And the question is, I think when that comes up as an issue on a real case it's imperative that it be fed back to the Site Profile folks or to Wanda with the Procedures Subcommittee that we got to work this out.

CHAIRMAN GRIFFON: John --

DR. MAURO: Because it's essential to every one of the DRs.

CHAIRMAN GRIFFON: I think we're in agreement, John. The one thing I'll note also in the first five sets that we did in that final report, at the end of it we had, John spoke to the case ranking. But I also added in the column for, I forget what we called it, but the broader ranking or the, and I guess this was the question that John just raised that this here's a judgment that likely has no impact on this case.

But it was a pretty big issue for the whole site. How are they going to deal with the 50th versus 95th. So we might have a low site -- low case ranking, you know, higher overall ranking because it had, you know, it didn't impact this case but it had potential to impact others. And that was the idea. So I think those, yes, I agree with you, John. That should be a finding, that shouldn't be an observation.

MR. FARVER: Right and the other one that should be --

CHAIRMAN GRIFFON: Maybe the disposition is to go to the Site Profile, it's being --

MR. STIVER: Certainly it should be a finding. It needs to be a disposition and tracked in the appropriate --

CHAIRMAN GRIFFON: Right.

MR. FARVER: Also if you're looking at the percentile and you disagree with what NIOSH did because of something you read in the CATI or job description and you feel it was one way or the other different. You know, it was a secretary -- maybe 95 percent and maybe failed should be 50 percent. So that would be a finding.

A case where it would not be a finding was if during our review of a Site Profile, you know, exposure matrix we brought up the point that, you know, we didn't like their percentiles or something, you know, 50

to 95 and we thought it was ambiguous or whatever, you know the grouping. Since we have been identified in another report that would probably either go in under 1.3 or as an observation, if it had already been identified. So I could see where it could go in either --

CHAIRMAN GRIFFON: I would think that would be in 1.3, wouldn't it? I would hope.

MR. FARVER: Yes, but before 1.3 I believe we were putting it in observations. Just an honest judgment.

CHAIRMAN GRIFFON: And I think we're all saying similar things here. I mean the idea is just not to, you know, narrow the review so much that you're just looking at sort of a checklist, you're keeping an, and I'm not saying that you haven't been doing that. I'm just saying again that we should reflect that in what we write as a protocol.

MR. STIVER: I think we definitely

need to be cognizant of those things that could, you know, kind of be more site wide and identify them.

DR. MAURO: How would you think about, what would we do to Table 2, then? You see right now Table 2, you know, is not designed to capture those types of issues if they really go back to concern about clarity in a dose reconstruction site 00 I'm sorry, a Site Profile or a procedure that may or may not be active, that is, you know.

There may not be an active Work Group, but we do have an issue. It may be an issue that we've already identified and is in a finding in one of our Site Profile reviews or it might be a new issue. I just came across one that just surfaced while I was doing this. My goodness there's something wrong here.

And it wasn't captured in the Site Profile review so it's sort of like another category that do you want to try to capture

that in the Table 2 score card, somehow? Is that the question that's on the table?

MR. STIVER: Yes. I think that ultimately that's where it would have to be done.

MR. FARVER: What I would suggest would be just adding a single category. You know, we go up to letter H and that's our totals. I would bump that down to I and make letter H whatever you want to call it, potential TBD issues. Group them all into one category.

MR. STIVER: Yes or you know, either way. It can be easily incorporated into the structure that we have.

CHAIRMAN GRIFFON: And the TBD and that TBD procedure category would also cover all these things like, I'm just thinking out loud, but it would cover all the workbooks and all the, because they're driven by the procedures, right, by the --

MR. FARVER: It would cover

overarching issues, how about that, the two you mentioned. It would not cover --

CHAIRMAN GRIFFON: Well I mean, I guess what I'm getting at is the workbooks are, should be consistent with the TBD or procedure that they fall under, right. So --

DR. MAURO: I would agree that the workbooks, for all intents and purposes, are an extension of the Site Profile and the procedures. And if we have, if we see that they didn't, the workbook didn't follow that, you know, that's basically a quality assurance issue. If it does follow it, but we don't like it, it's basically saying well we don't like the Site Profile.

CHAIRMAN GRIFFON: That's what I'm getting at, right, okay.

MR. STIVER: That procedure if it's not site specific.

MR. FARVER: So if it follows the Site Profile, but you don't like it, it would go into that --

MR. STIVER: Potential.

MR. KATZ: Potential TBD issue, right.

MR. FARVER: Okay. I can live with that. And then if it's something like there's an error in the title of a table, that --

MR. STIVER: That's still an observation.

CHAIRMAN GRIFFON: That's an observation, yes.

MR. KATZ: It doesn't have the potential to affect dose --

CHAIRMAN GRIFFON: I think Wanda clarified that. I think that, I agree with Wanda, that stays, that's an observation all the way, yes. Okay. Now dare I ask about blind reviews? Where do we think they fit into the picture?

MR. STIVER: I think we saw this morning they can be pretty helpful in identifying the impacting decisions with the

question of judgment, something that we don't typically see as much in these basic reviews. We sure see it, you know, within SC&A and also doing the comparison with NIOSH. Now does that -- that would have to feed into some other, you know, to become a metric.

CHAIRMAN GRIFFON: I think they have a lot of utility in identifying the critical points --

MR. STIVER: Yes, critical points, yes.

CHAIRMAN GRIFFON: -- in the, yes. And when you're reviewing that you might notice it. But when you do it blind --

MR. STIVER: When you do it blind you put a little bit more thought into it typically.

CHAIRMAN GRIFFON: Yes, right. And then also the, you know, I guess the, you know, the importance of different decisions too I think can be highlighted in that process. Anyway I --

MR. FARVER: It could very difficult to do particularly getting the, or using the updated tools that are available. You know, we're a little bit limited on what we use. I think they've made changes. Are there any changes to the platform that the tools are on or can they all still be PC based?

MR. SIEBERT: No, there's been some platform changes.

MR. FARVER: Yes, so there might be some difficulties getting us access or the ability to use the current tools.

MR. STIVER: Yes, we'd have to have full access to the tool sets first.

MR. FARVER: That's the only problem I see.

MR. SIEBERT: That's a key question.

MR. FARVER: Because I know we're having some issues with the CAD W because that was all moved to a different platform that's

not easily used on our PCs.

MR. STIVER: You guys are all on Windows 7 now, right? We have some who are and some who aren't at this point. We need something for us to work on, on our end.

MR. HINNEFELD: Well let's figure out what has to happen --

MR. FARVER: Yes, I just want to make sure we're comparing apples to apples.

CHAIRMAN GRIFFON: Yes, yes. And we don't want to throw a burr into right away.

MR. SIEBERT: And we are implementing that over time with the tools. And some tools are in the old process and some are coming to the new process as we --

MEMBER MUNN: That's another one of our numerous TLAs that gives me real grief. It's very hard for an engineer to hear CAD and not think computer assisted design. I have to stop and think about that every time. All right.

MR. KATZ: So any other thoughts

about the value of blind reviews and about how much should be done? I mean we've done two --

CHAIRMAN GRIFFON: And also the approach. I mean I think we have two different ways to use and I saw some value in actually both methods.

MR. STIVER: I like the idea of having both -- to see the impact of where we find a technique using these very complex workbooks versus the standard health physics calculation.

CHAIRMAN GRIFFON: Yes, because I think the approach, the standard health physics calculation kind of approach has the potential to identify things that, because if you start putting the blinders on and these are the tools that they're using.

MR. STIVER: And you start thinking of them outside the boundary.

CHAIRMAN GRIFFON: Yes, you can think outside the box.

MEMBER KOTELCHUCK: Also, I mean

it is very helpful to --

DR. MAURO: Have you folks had a chance to talk about Kathy's report on the blinds?

MR. KATZ: Yes.

DR. MAURO: Okay. You did do that. Because when all is said and done that conversation should have revealed what value, you know, what did it do for us.

CHAIRMAN GRIFFON: It did.

DR. MAURO: I read the report, I said, okay, you start to see how it serves the process. It's another way to get at quality and consistency and, you know, where the judgments are being made, where the errors might be made.

So it's a whole other, I mean in a way you could say that the blind review is your final score of whether or not this is working. And quite frankly, I know that NIOSH, you folks are doing blinds right now. Is that correct?

MR. HINNEFELD: Yes.

DR. MAURO: And so in a way you're doing the exact same thing that we do with those too. And it's going to be, you know, there's no doubt that in the end the blind review process, whether done by the Board and its contractor or done by NIOSH, is probably the purest way in which you could judge the quality and consistency of the DRs.

I would strongly recommend that blind process continue, whether it continues with the Board and its contractor and/or with NIOSH and the role the Board might play in reviewing those, to me that is, everything else, I mean that is your final test, so to speak.

It tells you everything. If everything is working well or you, every one of these blinds should come out pretty close to each other and if they don't you'll know why. You can figure out why, as Kathy pointed out in her report.

MR. KATZ: Let me ask a question that came up earlier, but we didn't pursue it yet because we were going to talk about it now. But DCAS is doing these blind reviews using the A formula basically, along those lines of what you've done at SC&A in your A and B formulas.

So does it makes sense for the Board to be doing blind reviews in the A formula or should it just focus on doing them using the B formula? That's the John Mauro formula.

MR. STIVER: I would say there's value in retaining the original component in that, because we're also comparing it to what NIOSH did.

And I think one of the problems NIOSH has had so far and it may not be this way for much longer, is that just being on the learning curve. Whereas, some of the SC&A people have been doing this for years and years and years. And it might give you a

better idea compared to the blind reviews like the one Kathy did or John has done.

DR. MAURO: One of the things I learned, because I was the one who was involved in what I call the basic approach, is you know, I'm not, the workbooks as everyone knows, they make my head spin. And I say to myself, I can find myself lost in a workbook trying to figure out, you know, okay what did they do?

I don't want to look at that. I want to look at that DOE data. I want to look at the bioassay data. I want to look at the film badge data. And I want to determine for myself whether or not I, you know, what the doses are. And what I learned, I learned something very important in the process, is that NIOSH's workbooks and procedures operate at a much higher level of resolution than I'm working at.

In other words they have incorporated steps in the process where there

are adjustments made and considerations given to certain factors that really bring you into the state of the art in dose reconstruction, taking into consideration some real nuanced things that -- so I would say in a funny sort of way, I think the body of literature that has been compiled and documented by NIOSH is astounding.

The procedures, I mean I've learned so much health physics in reading those procedures. And so when there is a difference, very often it's NIOSH did a better job then I could do using my pencil and paper and my calculator and use what I call the common sense approach. But it reveals that.

So I mean the value was, my goodness look. The reason we're different is NIOSH did a much better job on adjusting for neutron energy distribution or whatever it is. But also what it does is, the common sense approach also, you can become blinded by the workbook.

In other words, I could see a person going into a workbook and going through it step by step almost by rote, never really thinking about what they're doing, just automatically running the workbook. So I think you've got to do both.

I have to say I think you've got to do what I call the common sense, basic health physics approach. But also you want to work through and see the workbook approach. It's just so revealing, as Kathy's report pointed out.

CHAIRMAN GRIFFON: I think from, you know, with our, my argument would be for keeping some capacity on the Board level of doing those blind reviews. Yes. I think both understanding now that I'm happy that NIOSH is implementing this.

But also from a public standpoint I think that, you know, that's what the Board is here for is to be an independent sort of oversight review. And I think having a layer

of those blind reviews is good.

I'm struggling with the questions on number, you know, how many should we do. Because that was one of the criticisms we keep hearing is you said you were going to do two and that was eight years ago and now you're finally finishing two.

You know, so how many should we be doing? Especially given that NIOSH has now got a path forward and we have access to looking sort of at their aggregate findings from that process.

And the second part is selection. You know, I think it's difficult because we, if we want it to be truly blind, it has to be an in process case. And then we're often, we're likely to get anything. You know, we're not going to get best estimate cases.

MR. FARVER: Right and I think that's what we saw this morning with the big difference in the internal dose was --

CHAIRMAN GRIFFON: Because they

were overestimating.

MR. FARVER: -- overestimating it.

MR. STIVER: Yes, I think you get the biggest bang for our buck we have to look at those that are, you know, close to a compensation level.

CHAIRMAN GRIFFON: But we won't know if it's truly, so that's my question of the selection. How do you, you know? And if we're going at, Stu, what did you say? The best estimate cases, it's less then five percent overall isn't it? Or it's a low.

MR. HINNEFELD: It's a pretty low percentage --

CHAIRMAN GRIFFON: So our chances of getting that randomly, you know, are --

MR. STIVER: About two and half percent, somewhere between 45 and 50, I believe.

CHAIRMAN GRIFFON: So two and a half percent.

MR. STIVER: Pretty small.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: But statistically we are not going to want to do as large a number as would be necessary for us to get a good statistical evaluation of anything. That's just too large a number, too time constricting, just simply can't do that.

So it would, it seems, be wise for us to choose a relatively low number that we would attempt to maintain as much non-specific criteria in choosing as possible but still have the best estimates in there if we possibly can and rely to a large extent on an overview of the NIOSH internal review process to give us a feel for what their findings are to see whether there's any major disconnect with the findings that we would have in our relatively small number of cases. I wouldn't think that we'd want to do more than, we've done two, ten?

MR. STIVER: We've done two. Would it be possible for us to do, you know,

take a case that, you know, it's already been performed and adjudicated through NIOSH, so we can finalize it, you know, unbeknownst to the SC&A reviewers, that are within that range that look to be good candidates. And we could pick those that have, work that in house and then compare that back to what NIOSH did in the process.

MR. SIEBERT: I just have one clarification for my mind. Does that mean that for the comparison A which is checking the NIOSH version versus you guys following the same procedures, you guys would need to know the date that claim was actually done so you use the same revisions of all documents that were in place at that time? Because otherwise you don't have --

MR. STIVER: Yes, otherwise you would be comparing apples to oranges. Otherwise we're stuck with trying to pick two and a half percent. If you get something at ten or 15 percent, you know, you're starting

to see the impact.

MEMBER KOTELCHUCK: If we're going to have a small number, my feeling is the types of cancers are critical. We've looked at one skin cancer, we're looking no more. But pick some them that we, that tend to come in more frequently types of cancers.

CHAIRMAN GRIFFON: Also ones that tend not to be overestimated like prostate often would be overestimated because, we can other selection criteria. That's what I was thinking about. Are there other things we can select by other then PoC? I think we can maybe think --

(Simultaneous speaking.)

CHAIRMAN GRIFFON: And then, you know, overall I think, Ted and I were talking about this earlier, but generally like 60 a year has been a rough number of how many --

MR. STIVER: That's about average.

CHAIRMAN GRIFFON: -- cases are reviewed. And do we think, I mean I'm just

throwing out, would ten percent, you know, would six be too many blind reviews or should it be?

MR. STIVER: Why don't we ask this to Kathy and John and Doug, what kind of effort went into producing the blind reviews in terms of hours as compared to a, you know, a basic?

(Simultaneous speaking.)

MR. KATZ: Kathy, John, did you hear the question?

DR. MAURO: Yes, I did. The way, when I was looking at these, quite frankly, I do it the same way. I check, when I do my DR reviews I do the same thing except that in this case in the blind I don't know what doses, you know, that they, NIOSH got. I don't know what PoC was attained.

But I have all the data. So it's really about the same amount of time. And I could tell you right now cradle to grave to do a, what I would say my judgment is cradle to

grave for a realistic whether it's a blind review or a DR review, it takes 100 work hours.

So I mean if you want to, you know, to go through the process. Now certainly some of them we do better. But they've been on that order. And John you have all the stats, but I think --

MR. STIVER: I can pull that information. I don't have it on hand right now, but it's --

DR. MAURO: You don't have it. I know when I was keeping track of it we were tracking at around that. Now of course it's quite variable depending on the complexity of the cases. But the cases have been getting quite complex. So what I'm saying is, I think the amount of time it takes to do a blind is probably not that much different than it takes to do the actual DR review.

MR. KATZ: I find that a little surprising considering the DCAS experience --

CHAIRMAN GRIFFON: Also isn't John, everybody's also, I'm thinking, John, I mean most of your case experience is the AWE cases though.

DR. MAURO: That's absolutely true.

CHAIRMAN GRIFFON: So I think the other cases are different.

MR. STIVER: Yes, a DOD site like Savannah River or, you know, those really complex ones that Ron Buchanan does, those --

CHAIRMAN GRIFFON: Yes, those require time too, right.

MR. STIVER: A lot of effort goes into them. But I think that 100 hour figure at least for the Part A sounds probably like ball park -- what I actually spent on the first two.

MR. KATZ: You missed the discussion, John, earlier where DCAS was explaining their blind review experience. And there's a lot of learning curve, et cetera

that goes into doing them yourselves versus reviewing. They're two very different in their experience, very different enterprises. And I'd be surprised if it's the same resources too.

DR. MAURO: Are you, I just, on my own, I'm kind of curious, what is the level of effort it usually takes to do one of your listed cases? Are you free to disclose that or is that something you --

MR. HINNEFELD: Boy ORAU sent us something.

(Simultaneous speaking.)

MR. KATZ: In hours?

DR. MAURO: In work hours, not dollars. No, no. Just --

MR. SIEBERT: I believe between dose reconstruction and peer-review the average is somewhere between 12 to 16 hours.

MR. KATZ: But that's --

DR. MAURO: That's terrific. Okay. I could never do one in that time.

MR. CALHOUN: I've never done one, a blind DR. But I would, I can't imagine it would take us any more than 30 hours. Beth's done one. I mean, what do you think?

MS. ROLFES: Maybe 30 hours.

MR. STIVER: About 30, so about a week's worth of effort.

MR. KATZ: Okay. So double what ORAU takes though is what you're saying? Which makes sense, I mean you don't do this every day and they're doing it every day.

MS. ROLFES: When I did mine I didn't use the tool. So I did it as a TBD.

MR. KATZ: Right. That's sort of similar to what John's saying, so John, you might double what you would consider your resources for doing a review, double that for doing it.

DR. MAURO: A blind?

MR. KATZ: A blind.

DR. MAURO: Okay.

MR. FARVER: And a lot of it

depends on the case and how many data points you're looking at and how many thousand DOE records are included.

MR. STIVER: They can range over a factor of ten. I mean some of these you can bust out in one afternoon. Others can take two weeks of hard effort.

MEMBER KOTELCHUCK: If we're talking about one, two, three, we can't set a percentage. I think we can't set a number even. I think if we're talking about, two are in process, one is done, one is in process. My sense is if we have five, right if we have five different ones of different cancers and then let's see if there are systematic things that we're learning.

And then we can reassess and say fine, we've learned what we can learn, stop. Or say no, we see a pattern in these kinds, let's go ahead with x more.

MR. STIVER: Cyclic incremental type of approach.

MEMBER KOTELCHUCK: Yes, that's right.

CHAIRMAN GRIFFON: I agree and that's why I wasn't trying to make us stick to ten percent. Six sounds like a reasonable, you know, five or six. And then we reassess. I don't think we can really assess with one or two. Let's get a few more at least.

MEMBER KOTELCHUCK: Right there are no patterns going to come out.

MR. FARVER: But on our part the biggest hold up is just going to be getting that interface together and the tools to the workbooks.

CHAIRMAN GRIFFON: The only other thing I would ask is that because we can probably wrap up this discussion, the only other thing I would ask is that if you have ideas on how to, I think the type of cancers obviously we'll need selection criteria. Are there other criteria that would help us?

MR. STIVER: Type of cancer,

complexity of the case, various things like that.

CHAIRMAN GRIFFON: Well you know, like I said, several of these things you're not going to have if the case is in process, right. So if it's a true blind review, what are you going to know?

Well one thing is site. We could make sure we don't get the same site all the time or --

MR. HINNEFELD: The case of the, like the contractor, the SC&A review will be done.

MR. KATZ: Will be adjudicated.

MR. STIVER: Yes, it will already be adjudicated so we'll be able to look at --

MR. HINNEFELD: So we'll know and then if you, you know, we can ask that.

(Simultaneous speaking.)

MR. HINNEFELD: You know, we have access. We can either trust them not to look at it or we could mask it. You know, I guess

DCAS could say okay, well SC&A now can't see these two --

MR. KATZ: You can block them.

MR. HINNEFELD: Yes, we can block them too. It depends on what you guys want.

CHAIRMAN GRIFFON: But also, I'm just thinking about, we I mean, as a selection criteria we can't say we want something between 45 and 50 PoC because then SC&A sort of says okay, well I've got 42, you know. We'd better look at this closely.

MR. KATZ: I think you've got to do the selection out of SC&A's awareness.

(Simultaneous speaking.)

CHAIRMAN GRIFFON: Some of it may be the mechanics of how we do this. We might have to have a closed door session of the Board to select the blind cases. Anyway we can figure that outside of this.

MR. STIVER: Just do that and send us the information for that one.

CHAIRMAN GRIFFON: Alright. So I

think that is helpful just in terms of what we're doing on the regular reviews and the idea of the blind reviews.

MR. FARVER: What kind of timeframe, for now, were you looking at or thinking about for these blinds? Like next year, total year or?

CHAIRMAN GRIFFON: Yes, I mean I would think for the next year we would want five or six, you know.

MEMBER KOTELCHUCK: So two are almost, two are --

MR. FARVER: Two are done.

MEMBER KOTELCHUCK: One and a half done, so three next year?

MR. FARVER: Okay.

CHAIRMAN GRIFFON: Yes, so we should probably, I mean I think at the next Board meeting I'm going to present some of what we've discussed here. If the Board agrees, I think the next thing we should do is task at least a few more, you know, to get the

ball rolling.

MR. FARVER: You want to do two in the first six months and then two the second six months, for four?

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Or if it's small like that I think we could handle.

CHAIRMAN GRIFFON: Or three and three, whatever.

MEMBER KOTELCHUCK: Two and two during the regular year, one in the summer and then have the Board discuss is that too much?

MR. FARVER: Well I'm not sure --

MEMBER KOTELCHUCK: I'm looking, when the Board meets in the fall to be able to talk about them. That's a good, sort of academic calendar.

MR. FARVER: I think a lot of this we're not going to really know for sure until we start digging into them.

MEMBER KOTELCHUCK: Yes, okay.

(Simultaneous speaking.)

CHAIRMAN GRIFFON: That gives us enough to go on. That's, I think that's good. And can we, I'm not sure how much we're going to get into the matrices. But let me ask, I want to take five only because I need a comfort break.

But can we, what is the preference and since Scott and Doug are probably closest to this, should we try to look at matrix eight and nine? Are we close to wrapping those up? I can't remember. Or should we do ten through 13?

MR. SIEBERT: I think we'd probably get through Rocky and LANL.

(Simultaneous speaking.)

MR. SIEBERT: They're pretty close because --

MR. FARVER: We'd probably get through at least Rocky.

MR. SIEBERT: Quite a bit of them because we have a --

CHAIRMAN GRIFFON: Let's take five

and then we'll focus on Rocky after the break. And we've got to be cognizant of some people have to, Dave, you have to leave a little early that's --

MEMBER KOTELCHUCK: Yes, I could leave before the end, but probably maybe a quarter of five.

CHAIRMAN GRIFFON: We'll be done by, I think we'll wrap up by five anyway.

(Whereupon, the foregoing matter went off the record at 4:14 p.m. and went back on the record at 4:24 p.m.)

MR. KATZ: We're back. Subcommittee on Dose Reconstruction and Review.

CHAIRMAN GRIFFON: Okay. We're going to just do, we're going to jump to the last item on the agenda which is the case reviews for the Rocky Flats cases in the 10th through 13th matrices. And I will, there is a matrix that was sent out to, does everybody have one of those?

Alright. You're one ahead of me. I just got it, so I'll leave it up to either, I guess Scott or Doug to start off on them.

MR. FARVER: Okay. It's the basic matrix format. We have the finding, the NIOSH response and SC&A response. And then an SC&A suggested action. Our finding 252.1 assigned missed dose, missed photon dose not consistent with the protocol or the DR Report.

We have a lengthy NIOSH description, I mean it's very thorough. And it comes down to really two basic issues. The DR Report says that they used best estimate methods. And really we've used overestimates for some portions, okay. So that's one part of this.

And then the second part is, the DR Report states that 238 missed doses were used, so basically 238 cycles were used to calculate the missed dose. When you look at the calculations only 196 were used. Now so if it's mainly an issue of what was said in

the DR Report was not what was actually done. That's what it all boils down to.

And we've seen this before. You got the gist of it, Scott?

MR. SIEBERT: Yes, the, it's really, the first one is the wording issue of overestimate versus best estimate methods, which when I look back at the actual report we do state the processes claim the dose was assigned estimating using efficiency measures, which is overestimates.

And then in the next paragraph it does say this dose reconstruction was performed using best estimate analysis for some components. So I believe we were relatively clear on the fact that portions were overestimated.

MR. FARVER: Some were, some weren't.

MR. SIEBERT: The overall claim was overestimated, but portions were best estimate, so.

MR. FARVER: Okay. And in some reports we'll see where they'll say that it was efficiency methods for, you know, certain parts and they'll list the parts. And I mean for photon, for other external doses.

And then for internal dose they'll say we used efficiency methods or something. It just, it was clear in this one. And then the other issue is just the number of zeros.

MR. SIEBERT: And the number of zeros I would, that's just, that's a typo error between the numbers between the two because, yes, you're right. Your numbers and ours as to the actual count of what was used were relatively consistent, so.

MR. FARVER: Yes, it's not a complaint about the method or anything. It's just what was written and not what was done.

MR. SIEBERT: Right.

MR. FARVER: Okay. So we suggest just closing that one.

CHAIRMAN GRIFFON: Can I ask, I

mean this, I should point out for the record this is our first attempt at this process where you guys had an interim discussion. Were there any Board Members on the --

MR. FARVER: This is the second attempt. And we didn't have any discussion.

CHAIRMAN GRIFFON: It's the second attempt.

MR. FARVER: I mean we didn't, I mean the second --

MR. SIEBERT: Nothing you said was right.

(Simultaneous speaking.)

MR. SIEBERT: There was a call in between, we had discussed that before. We have never had that process.

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: This has all been we submit our responses, they submit responses back. So it's all been on paper.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: And really what it

would come down to us wanting to need a call is if something isn't clear. But usually the explanation made it clear or --

CHAIRMAN GRIFFON: Well the only reason I asked is because when we initially had the idea of having a call, we were going to make it known to the Subcommittee in case someone wanted to dial in. No one had that opportunity.

MR. FARVER: We haven't had --

MR. SIEBERT: We haven't had to do that, right.

CHAIRMAN GRIFFON: I was just going to ask if we had, yes. Right.

MR. FARVER: So far what's worked in potential findings was we get responses in time, we can look at them thoroughly. A lot of times we understand what was done so we'll recommend closing it. And on a couple of instances like you'll see here, we recommend that the Subcommittee --

CHAIRMAN GRIFFON: I just wanted

to clarify, I wanted to note whether we had a call. And so in this case you don't, there's no recommendation to, no need to change, modify, I mean the concern about the language in the report being misleading.

MR. FARVER: We've seen it several different ways. It's like sometimes they will say that it's a --

CHAIRMAN GRIFFON: Right.

MR. SIEBERT: Well this one didn't specifically say external recorded dose, external missed dose and external ambient dose. It was specified which pieces were best estimate and which were overestimated.

MR. FARVER: And we were wrong on that part. But then the number of zeros just did not match up with what they calculated.

CHAIRMAN GRIFFON: And so the last column is our action as a Subcommittee. If, I'm just asking the other Subcommittee Members. I mean I think this is okay. Any comments? Any reasons not to close it?

MEMBER MUNN: I don't see any.

CHAIRMAN GRIFFON: All right. Fine, we'll close.

MR. FARVER: Okay. Moving right along is --

MR. SIEBERT: That closed a whole case.

MR. FARVER: That closed a whole case, yes, now we're 53.1.

CHAIRMAN GRIFFON: We're already more efficient.

MR. FARVER: Incomplete accounting of the recorded dose? Okay. This is the one where I mentioned that part of the dose for 1958 was assigned in '58 and part of it was assigned in '59. The shallow dose of '58 was just for part of '58 was assigned in '58. The deeper dose was assigned in '59.

They assigned all the dose. They broke it out into two separate years. And you could see part of the issue was the dosimeter that ran from December through the beginning

of January from '58 to '59. Our biggest concern was well if you want to put it in '59, put it in '59 or put it in '58.

But we just didn't understand why it was split. It makes it difficult to review a dose reconstruction like this when it's not clear if the things are split like that.

MEMBER MUNN: So there wasn't anything wrong with it. It just wasn't obvious.

MR. FARVER: The numbers were correct, just spread out a little bit.

MEMBER MUNN: Okay. It could happen to anybody.

MR. FARVER: And really that's the first time I've seen that happen. I don't know if they do that a lot. There was just different ones we haven't seen before.

MR. SIEBERT: That's really unusual though, yes.

CHAIRMAN GRIFFON: Can I ask for, I know we closed 252. But for both the last

252 and since that closed out the case, like Scott said, and 253, they're both in the SEC time frame. Are they non SEC cancers I assume or are these --

MR. CALHOUN: Part of them would have to be, but that doesn't mean, you know, they may have had a second.

CHAIRMAN GRIFFON: These years in question, yes.

MR. SIEBERT: And it may have been done prior to the SEC. This was done in 2006, the first one was done in 2006.

(Simultaneous speaking.)

MR. SIEBERT: Yes, the SEC was later then that.

MR. KATZ: 2008.

MR. SIEBERT: Yes. So that's why there's no --

MR. CALHOUN: The second one is SEC cancer only.

MR. STIVER: There's only two out of the eight that were not SECs.

CHAIRMAN GRIFFON: That's right. These are the, yes, these are those ones.

MR. SIEBERT: And once again, the second one was done in 2007 as well. So the same thing, it's prior to the SEC.

MEMBER MUNN: Recommendation is to close it.

MR. FARVER: Recommend to close it. Don't know what else to do to it.

MEMBER MUNN: That's great. Why not? Discrepancy is explained.

MR. FARVER: So we, are we finished with 253.1?

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Okay. All right. 253.2, inadequate information for derivation of the organ dose. This stems from, we couldn't match their calculations. So and this was a Monte Carlo calculation, so a lot of times we do have difficulties matching their numbers. Usually if it's within like ten percent then we'll say okay, it was

probably just due to Monte Carlo fluctuations.

Okay. This case, we couldn't match it that close. So when we got this response back Ron went and reworked it again using values from OTIB-12, which does have values in it that you can approximate Monte Carlo calculations. And the values were closer. So it was done correctly. We just had difficulty interpreting it. Was that the gist of it?

Part of the reason we had trouble deriving the organ dose was that a file was not included. The IREP output sheet that was included in the files we received did not match the final IREP workbook sheet. So we didn't know how you got from one to the other. The numbers were different.

So you have a workbook which the final page has your IREP output. And then you have your final IREP input sheet. And they should match. So there's two and --

CHAIRMAN GRIFFON: When was this

form dated?

MR. SIEBERT: 2007, early 2007.

CHAIRMAN GRIFFON: Because I, I mean I understand and it seems, the outcome seems fine. In the middle of the response, the first paragraph, they say the practice was not to include the detailed calculations at the time, the practice was not to include the detailed calculations with the claim files. Wasn't this after we talked about the show all work, include all the work kind of concepts or no?

MR. SIEBERT: 2007's awfully early for that.

CHAIRMAN GRIFFON: I can't remember.

MR. SIEBERT: Compared to this Subcommittee.

CHAIRMAN GRIFFON: Yes.

(Simultaneous speaking.)

MR. SIEBERT: Well and I personally think it probably should have been

included as well.

MR. FARVER: Anyway, we suggest closing that one because we don't know what else to do with it.

CHAIRMAN GRIFFON: Is everybody in agreement?

MEMBER MUNN: Yes.

MR. FARVER: Now if we want to look at an observation, we can look at observation one on the next page of 253. We were able to match NIOSH's numbers for certain years. But there were two years when our adjusted gamma dose was less than what was used by NIOSH.

Now this goes back to, NIOSH was very good about this. They did give responses to observations. It goes back to their response for 253.2. And I'm guessing that had to do with the file that wasn't included. The reason that we couldn't match those couple of years because it was done a little bit differently in the worksheet that we didn't

have. But that's an example of an observation.

CHAIRMAN GRIFFON: I mean why was that separate from 253.2? You reported that separately, why?

MR. FARVER: Just an observation. It really didn't impact, excuse me, impact anything. It was one of these cases where the numbers didn't exactly match. We didn't know why, but it really wasn't going to have an impact on anything.

MEMBER MUNN: It was explained in 253.2 why there should be, why it would not be unexpected to have slight differences.

CHAIRMAN GRIFFON: Yes, I was just trying to understand why that was listed separately than the finding we just went through.

MR. FARVER: The same thing for observation two.

CHAIRMAN GRIFFON: No action. Are we in agreement as a Board first?

MEMBER RICHARDSON: I don't understand. So there's a bunch of these like 253.4 and .3, all these are tied back to 253.2, the kind of the response that's given there.

MEMBER MUNN: Yes.

MEMBER RICHARDSON: But how does that response kind of bear on like observation number four related to the neutron dose? Maybe I'm not -- is it sort of that this sheet was quirky and they used values based on a phone conversation?

MEMBER MUNN: Well probably because --

MR. STIVER: It looks like there's -- it was a Monte Carlo calculation.

MEMBER MUNN: And SC&A had half, found half that assigned by NIOSH in cases where the findings are claimant favorable then there's not going to be any major --

MR. STIVER: That's a best estimate Monte Carlo.

MR. SIEBERT: And remember those findings were prior to them using the OTIB-12 DCFs which were closer DCFs than what you're going to see in Monte Carlo. And then once they did that those are things that matched up better, is my understanding from what they did.

MR. HINNEFELD: How many workbook sheets are we talking about in our response to 253.2? There's the RFP workbook version three, IREP output, which really isn't an IREP output. It's an input to some Monte Carlo calculation.

MR. SIEBERT: It's the output from the workbook in IREP form. It's the last page of the workbook.

MR. HINNEFELD: So and then down in the next paragraph, there's an input data worksheet. Is that part of the RFP tool, the RFP workbook?

MR. SIEBERT: Yes, input data is the second tab in the tool.

MR. HINNEFELD: So that's one of the tabs?

MR. SIEBERT: It's one of the tabs in the tool.

MR. HINNEFELD: Okay. And there's a comment there that says when the NDRP gamma dose is greater then the DOE file reported dose you make some sort of correction to something.

MR. SIEBERT: Right.

MR. HINNEFELD: Which would be photon dose or?

MR. SIEBERT: It's, yes, it's the whole NDRP collection stuff. I don't have that off the top of my head as to what the specific corrections are. But it's handling the NDRP data.

MR. HINNEFELD: Okay so it's, so it has to do with the interpretation of the NDRP data. And it's sort of a conditional when the photon doses or gamma doses -- and then the year worksheets are other tabs of the

tool, of the RFP worksheet where it talks about the, on the year worksheets --

MR. SIEBERT: Yes, those are all still tabs of the --

MR. HINNEFELD: Those are tabs on the RFP workbook. Too many moving parts for my brain.

CHAIRMAN GRIFFON: I know it's a little late in the day to figure out some of this --

MR. HINNEFELD: So something about when the RFP gamma dose is used, it's used in some fashion for like based on the missed dose zero selection. This is all a fairly, it seems to me to be an, it's a fairly complicated interpretation that uses the NDRP dose.

MR. SIEBERT: That's what we're going on.

MR. HINNEFELD: And it's built into the worksheet and so not, if someone like me looked at the worksheet I would be

completely flabbergasted about what I was looking at. I mean I would not know really what I -- because I don't do this. But it's the interpretation of the, how to utilize the NDRP data which I recall is there are a bunch of things, there's bits and pieces, a bunch of different pieces to the NDRP.

MR. SIEBERT: Right it's not a full data set for that individual. It's pieces, parts that we have to interlock into what we have.

MR. HINNEFELD: So you have to assemble it and based on some if’s and then’s and that's all done in the workbook.

MR. SIEBERT: That's what that is.

MR. FARVER: And what we found is -- the workbook we've got all the IREP output or input data. And then you have the final IREP file that you plug in and do your PoC calculations. Those two things did not match and we, for some, for some it did.

And so we're questioning, well

where are the work calculations, and when we did our calculations we always came up with less. So the numbers in the final IREP were higher, but we weren't exactly sure why. But they were less, that's claimant favorable. That we did not make in a finding.

MR. HINNEFELD: Okay. So when it was, when your numbers were higher then it showed in the finding.

MR. FARVER: If it would have showed up higher we probably would have made it a finding.

MR. HINNEFELD: Okay. And when it showed lower then it's not. They showed up lower on --

CHAIRMAN GRIFFON: That's still a finding. But that's not the question I guess, you know. It's a quality finding you're saying.

MR. FARVER: Yes, because the file was not included at the group of files.

MR. HINNEFELD: Okay.

MR. STIVER: I'm not sure we even understood what they did.

MR. SIEBERT: Right that was at the time, as I said when we moved forward one tool was used that has the generic overestimates of the DCF1, something like that to put the data into the correct format for the complex, for the best estimate tool to do the Monte Carlo calculations on the pieces that needed that Monte Carlo calculation.

That's why there's some of it that will stay the same such as medical technology, I believe missed dose, those things stayed the same because Monte Carlo doesn't affect them. But the Monte Carlo calculations that were different were the ones that were run through the tool for the measured external, and yes that file should have been in there.

(Simultaneous speaking.)

CHAIRMAN GRIFFON: This is another tough one only because, I mean, I think observation number one I still think should be

a finding number one. But you know this, the explanation this is a 2007 case, not a 2001 case. So, you know, the idea of well this was a while ago or a long time ago. I mean, I don't know.

MR. FARVER: And the reason --

CHAIRMAN GRIFFON: We have to start to watch out for that explanation.

MR. FARVER: -- was number one they were already identified in a finding that we didn't know how they came up with their doses. We identified that something was different between the two IREP sheets. So we already made that a finding.

So now we're getting down here and we do some calculations and we figure well there's a couple here that we don't really know why they came up the way they did. But they're less than, I mean they're less than the NIOSH values so that's claimant favorable, it's already been identified.

And really to tell you the truth

these could go either way. I can make them findings or I can make them observations.

CHAIRMAN GRIFFON: I mean are those all part of the --

MR. FARVER: It's all part of, you don't know how you got from this IREP table to this IREP table. So we did our calculations and they don't match yours, but we don't know what calculations you really used.

MR. SIEBERT: So then really the specifics for portions of what's discussed in 253.2, specific years and information as opposed to the generic issue of you couldn't understand where the numbers came from, why there's a difference between the IREP sheet from the end of the tool and the IREP sheet that was actually run for PoC.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: But then to get to this 253 observation two. I don't think we're going to, you know, maybe wind it up with this discussion. But observation two,

you talk about this like David said the phone call. And, you know, the other interesting part for me in that explanation is that this new dose conversion factor, it wasn't included in the modified TBD. Is that what I'm understanding this to say?

MR. SIEBERT: Correct.

MR. FARVER: So that probably should have been a finding.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: That one, now that I'm reading it. But you know, once again it didn't have an impact on the case.

CHAIRMAN GRIFFON: But it could impact on a wider number of cases if --

MR. FARVER: It could have. I'm looking at that now thinking, you know --

CHAIRMAN GRIFFON: You know, was this person right with the phone call or was, I'm not following this. You know, is -- should the -- why wasn't the TBD modified?

MR. SIEBERT: I can't speak to --

CHAIRMAN GRIFFON: I'm sort of asking.

MR. STIVER: That one probably should have been a finding.

MR. FARVER: Yes, and a lot of time when we're --

CHAIRMAN GRIFFON: That certainly could affect other cases and it wasn't done --

MEMBER RICHARDSON: I guess it's a bigger question of are values often changed based on telephone conversations?

CHAIRMAN GRIFFON: Right.

MEMBER RICHARDSON: I mean have we seen this as a precedent before?

CHAIRMAN GRIFFON: I haven't.

MR. STIVER: This is back in the early years.

CHAIRMAN GRIFFON: No, this is not early years though. I don't --

(Simultaneous speaking.)

MEMBER RICHARDSON: So here's a bigger question though. Are values changed

based on phone calls that happened three years ago and haven't been documented anywhere?

CHAIRMAN GRIFFON: Right.

MR. SIEBERT: Well that comment was not a comment that was put in by the dose reconstructor in 2007. That's a comment that was in the workbook explaining why the DCF, the ICRP-60 DCF value was different than what we would normally refer back to.

CHAIRMAN GRIFFON: And this value was not implemented in subsequent revisions.

MEMBER RICHARDSON: But it was in that revision?

CHAIRMAN GRIFFON: Yes.

MR. STIVER: It was in that revision that the --

MEMBER RICHARDSON: I mean it was in that revision of the workbook, but was it in the --

MR. SIEBERT: I can't tell you specifically on that one.

CHAIRMAN GRIFFON: I'm reading

what I'm seeing here. I don't know.

MR. STIVER: It was not implemented but I don't know why it was incorporated to begin with.

MEMBER RICHARDSON: I mean the spreadsheet is supposed to represent as implementing procedures that are -- the spreadsheet is supposed to be a calculation following on procedures, right?

MR. SIEBERT: Generally true or documenting updated things until we can get the procedures updated to what the new information is if we have to do that. That's the kind of thing that we put the dose reconstructor guidelines in place. Something like that would be called out these days in something like that so it's documented somewhere other then just within the tool.

CHAIRMAN GRIFFON: Because you might wait on updates to --

MR. SIEBERT: To the TBD itself.

CHAIRMAN GRIFFON: -- because

you've got several -- comments and --

MR. SIEBERT: But we may want to use the best information for interim, which, you know, we run that stuff through DCAS and we make those decisions.

CHAIRMAN GRIFFON: Well I'm interested in looking at case 253 myself. I don't know that we can, you know, I think, yes, I think if nothing else observation two I think should be elevated to a finding. And I don't know that I'm prepared to discuss this further without looking at more of the details of that case, back at your report I think.

MR. FARVER: My report didn't say a whole lot about that observation.

CHAIRMAN GRIFFON: Maybe just, maybe it's a matter of, you know, pulling the case file. I think I'm interested enough in this one to understand what was happening in the workbook. Other's opinion. We're hitting that time of day.

MR. FARVER: Well I shouldn't say

that. There is a Table 5 in our report that kind of lists all the different dose conversion factors and the different TBD revisions and it has changed over the years. And then the one that was used in this DR Report is a completely different one. In other words, the TBD says .345. And this one, the DR Report used .327.

CHAIRMAN GRIFFON: That was the DCF we were just talking about?

MR. FARVER: Yes. So I guess you'll have to look at the evolution of why it changed from 654 to 345 and how it wound up to 327, which is half of 645.

CHAIRMAN GRIFFON: I don't know. I was looking at the next case to see if it was just like one finding and maybe we could tackle that. But I think we might have to leave it at that.

MR. FARVER: Yes, this one's just a…, we don't know why you used that dose conversion factor when there's other ones out

there. And maybe that should have been a finding.

CHAIRMAN GRIFFON: Okay. I mean is there any, who has, I mean I can go a little while longer. I don't have a time frame here. If we want to attack --

(Simultaneous speaking.)

CHAIRMAN GRIFFON: I would say this for now. I'm not prepared to close on those observations. But maybe we can move on to 274.1.

MR. FARVER: I'm not sure you want to do that.

CHAIRMAN GRIFFON: Is it nasty?

MEMBER MUNN: Well it's the workbook.

MR. FARVER: It's messy.

MEMBER MUNN: Yes.

MR. STIVER: RFP workbook.

MR. FARVER: I can give you a preview.

CHAIRMAN GRIFFON: Yes, give us a

preview and then maybe we'll decide whether we want to call it a day. Make it nasty.

MEMBER MUNN: It goes on, it goes on and on.

MR. FARVER: Do you remember from that report I wrote there was one of these that I listed as unknown because I didn't know what the cause of it was? Guess which one this is.

MEMBER MUNN: This was it.

CHAIRMAN GRIFFON: Now I'm intrigued.

MR. KATZ: Maybe we should schedule the next meeting, that way you, in January, you have all this -- still ready for…, so we don't have to wait so long.

MR. FARVER: Yes, you may want to look at this one for the next meeting because --

MR. STIVER: That's a good idea. Prepare it in advance.

MR. SIEBERT: It's NDRP

manipulation.

MR. FARVER: It's NDRP manipulation.

CHAIRMAN GRIFFON: Alright. You've said enough. Ted's got a good idea. Let's schedule the next meeting.

MR. FARVER: Quickly the employee had reported dose for a certain amount of years. And it came up to like 5.5 rem over the period of four years if you look in the dosimetry files.

MEMBER MUNN: Which is not a big deal for four years.

MR. FARVER: Okay 5.5 rem. And now it's, you go to the DR Report and there's zero recorded dose for those five years.

MEMBER MUNN: Go figure.

MR. FARVER: Go figure.

CHAIRMAN GRIFFON: That's a good place to leave us. Go figure.

(Simultaneous speaking.)

CHAIRMAN GRIFFON: Alright.

Let's look at our calendars and these meetings always end up this way don't they?

MR. STIVER: They end up pretty punchy at the end of the day.

MR. KATZ: So let's put this as the first item of our agenda for next time. We'll start with these case reviews.

MR. KATZ: They're closely related emotionally.

CHAIRMAN GRIFFON: Alright. So let's look into January.

MR. KATZ: How about the third week in, the week of January 14th? How does that look?

CHAIRMAN GRIFFON: The week of the 14th?

MR. KATZ: How does that look for?

MEMBER MUNN: I will not be available in January.

MS. LIN: Do you already have a procedure review the 5th of February?

MEMBER MUNN: Yes, I do.

MR. STIVER: Tag onto that.

(Simultaneous speaking.)

CHAIRMAN GRIFFON: You're not available in January at all, Wanda?

MEMBER MUNN: I don't see how I could be. I could probably do a phone on the third week in January.

MR. CALHOUN: The 6th and the 16th is bad for me in January.

MR. HINNEFELD: I can't do the 18th.

MR. FARVER: What about the fourth of February?

(Simultaneous speaking.)

MR. HINNEFELD: What are we talking about?

CHAIRMAN GRIFFON: How about the 14th? Wanda, can you dial in that day or?

MEMBER MUNN: I could dial in on the 14th, yes.

MR. STIVER: January 14th.

CHAIRMAN GRIFFON: Is that

possible? Or wait a second or better yet the 15th, I'm sorry.

MR. FARVER: The 15th is better for me then the 14th.

CHAIRMAN GRIFFON: 15th, yes.

MEMBER MUNN: I'll try. I'm not going to be very available that day, but I can be on and off.

MR. KATZ: Well we need to worry about a quorum too. Poston didn't show and so we have to be careful about that.

MEMBER CLAWSON: We'll shoot for that one.

CHAIRMAN GRIFFON: Is another day better in that week, Wanda?

MEMBER MUNN: My spouse's surgery is on the 5th.

MR. KATZ: So that's actually not any good that week then.

MEMBER MUNN: I mean it's on the 8th and so I'm going to be kind of --

MR. KATZ: Well then let's push it

up. If I don't have a quorum we can't meet. And we don't want to show up here and find out we can't meet.

CHAIRMAN GRIFFON: Well then realistically what was the 5th was the Procedures?

MEMBER MUNN: No, the 5th of February is Procedures.

CHAIRMAN GRIFFON: I mean, how about the 4th then, yes?

MEMBER MUNN: It's a possibility.

MR. KATZ: The 4th is open.

MR. KATZ: Is the 4th okay, folks?

(Simultaneous speaking.)

MR. KATZ: Let's do the 4th.

MR. STIVER: The 4th it is.

MR. HINNEFELD: We'll start at 8:30 again?

MR. KATZ: Yes, let's start at 8:30. Okay.

CHAIRMAN GRIFFON: Alright.

MR. KATZ: Okay. So February 4th,

8:30 and here, but call in if you can't come.

CHAIRMAN GRIFFON: Alright. And with that I think meeting adjourned.

MR. KATZ: And thank you everyone for all your hard work. And thank you everyone on the line. And have a good day.

(Whereupon, the meeting in the above-entitled matter was concluded at 5:01 p.m.)