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 REVIEWS

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MONDAY
DECEMBER 19, 2011

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The Subcommittee convened in the Brussels Room of the Cincinnati Airport Marriott, 2395 Progress Drive, Hebron, Kentucky, at 9:00 a.m., Mark Griffon, Chairman, presiding.

PRESENT:

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

ALSO PRESENT:

TED KATZ, Designated Federal Official
KATHY BEHLING, SC&A*
DOUG FARVER, SC&A
STU HINNEFELD, DCAS
JENNY LIN, HHS
JOHN MAURO, SC&A*
MUTTY SHARFI, ORAU Team*
SCOTT SIEBERT, ORAU Team*
JOHN STIVER, SC&A*
BRANT ULSH, DCAS

*Participating via telephone

C-O-N-T-E-N-T-S

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

9:05 a.m.

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

Just getting started here and we will begin with roll call beginning with Board Members in the room.

(Whereupon, the roll call was taken.)

MR. KATZ: Okay, a small group but I think that takes care of it. We can get started. There is an agenda, it's on the Web page. It's everything everybody's familiar with. We have sets, I think, 7 through 9 to complete, right? And 10-year review follow-up on DR issues.

CHAIRMAN GRIFFON: Okay. Yes, I think in preparation for this meeting I was reviewing the July transcript so we haven't met in awhile but I think a couple of main

things. I mean, I know this is a tough week to have meetings but I at least wanted to touch base and see where we stand and at least get a path forward for some of this QA/QC, some of the QA/QC issues. I'm looking back and I'm going to need help from everyone in the room but I'm looking back at the transcripts and there is, you know, some items. The last meeting we discussed some possible options for how to, really they were how NIOSH or ORAU could modify their QA/QC system to do what we're terming reworks of cases, reruns of cases and whether it made -- different models, different options made sense.

The other, I guess some of the more mechanical things, I know we had, SC&A had generated several of our findings from the early sets of cases on QA/QC and I think there was a follow-up that NIOSH was going to do on those. In the last meeting, Stu, you indicated that you kind of had wrapped that up

but not released it to the Subcommittee yet. It was in final reviews or whatever. Do you remember what I'm referring to?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: It's the -- yes, yes.

MR. HINNEFELD: Yes, I remember.

CHAIRMAN GRIFFON: So that's one data point. I'm not sure if that will help shed some light on a path forward or not, but that's one thing. I'll just bring up a couple of things and then we can discuss it.

The other thing we were trying to grapple with was, you know, just this path forward and the problem we seem to be having constantly as this DR Subcommittee is that we're looking at cases that are often quite old, so the question comes up that we say well, we found this sort of, maybe not a trend but we found some pattern of some problems and then we talk to NIOSH and ORAU and it's quite obvious that that has not -- it's different

now, it's done different now. And then we ask well, you know, I think we talked around this issue for awhile at the last meeting too was well, what's the benchmark. You know, are you tracking this and have your changes actually reduced the rates of these sort of occurrences. And I'm not sure internally whether we ever heard whether ORAU had some good benchmarks or whether, you know, you were just making some common sense changes that made sense. You saw some errors but there wasn't necessarily any documentation of where you started and where you're at now and that kind of thing, so.

MR. HINNEFELD: Yes, I think it would be -- I don't think we would be able to over history track a -- follow a track of these errors were being made and identified in a quality review, this review or some other review, and therefore it's fed back and we made these specific changes. It's going to be hard to resurrect a record like that. My

recollection from the analysis that SC&A have done of QC and QA errors and it was, you know, that we had gone through that. We'd done some preliminary, yes, we agree these are findings and I agree. My memory is very much like yours that our discussion here was those dose reconstructions were done so long ago that many of these things aren't done this way anymore and essentially the question is moot. And so we said at that time that let's, in order to get a better feel for this let's look at the most recently reviewed ones that we have. And since a specific finding in the 10-year program review or a specific recommendation in the 10-year program review was that if in fact there are mistakes coming out in dose reconstructions that are found in review like by this Subcommittee why is it that all this quality, what we say we're doing quality isn't finding those errors. And in order to get the best take on that we wanted to look at some of the most recently completed

dose reconstructions that had been reviewed in order to have a more current view than what was comprised in the SC&A review. So we have done that.

We have taken, at the time we made that decision the most recently delivered, the latest review set we had was the 12th set. We took the five individual dose reconstructions from that set that had the latest completion dates and we looked at the SC&A findings for those five cases and then made the evaluation of looking for QA/QC errors. So we had our contractor ORAU do that task, provide us a report. We then kind of reviewed that report and have a preliminary judgment of what we feel are QA/QC errors. There were still some there. And we fed that back to, and we're starting, just now starting the analysis of those errors and to figure out what is it about our QA program that wasn't there that should have been that would have caught these errors. And so that analysis is underway now

but we don't have that.

We do have I believe a summary -- we haven't really reviewed this for the purpose of sharing it and so it may be a little rough and it may be the opinion of the people who did it rather than the office opinion, but we do have that intermediate analysis that was done of here are the errors, these are -- this first analysis, what we feel are QA/QC errors. So we might be able to resurrect that and submit it to the Board Members today. But that's the last thing we have because the final piece, what about the QA/QC program didn't see these things. That part's not done yet. So we have done those things.

CHAIRMAN GRIFFON: And that at least gives us some newer data.

MR. HINNEFELD: Yes, and in fact even then -- the problem is we're always following because this Board reviews cases that are finally adjudicated. So that puts

you months downstream anyway from the time -- at the time they're finally adjudicated they're usually months downstream from the time we did the dose reconstruction. And so then you select them, review them, publish them, you know, you're probably always a year downstream. So that's always going to be a little tough.

Now if you recall at our last meeting one of the discussions about generating real-time data about what kind of quality, and we had a fairly extended discussion about duplicate analyses and is there a way to do a duplicate. We talked about several possible ways of having a bunch of dose reconstructors do the same one, and we felt like we couldn't do that not only for a resource reason but also because we just don't have that many dose reconstructors who are expert in a particular site. But we did agree that that was something we needed to do, some sort of duplicate as blind as possible. And

so we have started this.

CHAIRMAN GRIFFON: When you say -- I just want to clarify, when you're saying "we" is that your NIOSH staff? Is that NIOSH and ORAU, or --

MR. HINNEFELD: Well, I think it'll be clear when I'm further on. The decisions were made by NIOSH.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: The program was built by NIOSH. It's on our side of the, you know, all the claims.

CHAIRMAN GRIFFON: Yes, I'm trying to clarify.

MR. HINNEFELD: All the claims move through the system in a -- by a computerized fashion. There's a computer application that allows -- the claim is submitted on, it's reviewed on, it's returned on, you know, all that occurs in this. None of that, from ORAU's view, none of that has changed, it looks exactly the same to them as

it always did. The review system, the duplicate review occurs on our side. Each week this program randomly selects two claims and puts them in the inbox for what we call duplicate review. This is as they come in, okay, this is new claims coming in. And then those are assigned to a health physicist on our side to do a dose reconstruction before we see the -- before the ORAU dose reconstruction gets to our side. As far as ORAU, no, there's nothing, when this case goes to ORAU it goes just like normal. They don't know that it's been --

CHAIRMAN GRIFFON: And two is sort of, you're getting about --

MR. HINNEFELD: It's like two percent a month. We figure 2 a week is pretty close to two percent. It's actually a little higher, it's a little higher than two percent because we don't really get 100 a week. So that system is built, and we have several of our dose reconstructions done. I checked

right before we went, right about the time of the Board Meeting which would have been a week and a half ago, and we had just received four of what I'll call the production dose reconstruction from ORAU. So we now have four instances where we have our dose reconstruction and the production and we can start analyzing.

Now the analysis isn't done. We get into this part and we're running into a holiday so we haven't done that. Like I said we have four of them. But we do want to start. So the next step will be to analyze the production dose reconstruction against ours, and if there's some done differently in some fashion then we need to understand why that is. Theoretically these should come out approximately the same. I don't know that we'd ever expect them to come out exact numerically the same. We think they should come out approximately the same.

CHAIRMAN GRIFFON: Even with, I

mean we had this discussion at the last meeting too. Even with things like overestimating.

MR. HINNEFELD: Well, that's always -- that's what's going to be different.

CHAIRMAN GRIFFON: Right. It seems like that could be --

MR. HINNEFELD: There's a lot of flexibility in how overestimate you go.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And what you choose, and how you choose to overestimate. As long as everything else is right and you choose one or two, you know, you can have some flexibility in the overestimate. You know, what may appear most efficient or most easiest from our dose reconstructor may not be perceived, in terms of overestimating, may not be perceived to be easiest from the ORAU dose reconstructor. And so you may have different overestimating approaches and differences for that reason. I mean, that to me is an easy

evaluation to explain.

What's not easy to explain is when people, we think people are doing the same thing and they get a different answer. Well, that says something about how clear your instructions are for dose reconstructors on how to do that thing. So that's what we intend to learn from this.

And so if we can't easily explain the differences because of, say, choices of different efficiency method then that would speak to something that sounds to me as if it needs to be fixed, that we need clearer instruction or better training or something. You know, one of the QA things that can fix a situation like that. Now, we can report back to that and we just couldn't have -- we only had four cases. That was a week ago, and I just noticed that we had four cases a week ago so we don't have anything today, but we could do it for the next meeting.

CHAIRMAN GRIFFON: I'm also

wondering if it falls into one of those things that, you know, you're going to have a certain amount of mistakes, right? When you do a lot of cases.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: So how do you know if it's something that needs to be fixed versus something that just happened. You know, acceptable level of error I guess, you know.

MR. HINNEFELD: Again, we haven't worked out, you know. We're kind of going to learn this as we do it because it's hard for us to envision specifying some sort of, you know, all the criteria ahead of time. We're counting on learning about this and what works as we do it.

CHAIRMAN GRIFFON: But that might even get into more of the ORAU's internal system, right? It would be, it might behoove us to look at that as well to see like what's their baseline and they can, you know, if they

can say well we get, you know, for these data entry type errors, you know, right now, or a year ago we were getting this many and we put so many things in place that now we're reducing those. This goes back to the discussion we had last time, you know, what's the benchmark. Are the systems that we think we're fixing actually improving the output.

MR. HINNEFELD: Okay, we did get a fairly lengthy document about what's being done now on quality assurance. And I don't recall right now, but we can -- I mean, and this came from the contractor. Part of it came from the contractor, you know, they gave us a fairly lengthy document about what they're doing and then we added some things that we do and that's been compiled, but I don't recall right now what it says. I don't even know that I even read it in detail yet. It just got compiled in the last few weeks and published for a meeting we had last week with our management, so.

CHAIRMAN GRIFFON: Yes, because I think, I mean it seems like there's only so much the smaller NIOSH staff can do. You're going to have to do a sample of some sort.

MR. HINNEFELD: Right. Yes.

CHAIRMAN GRIFFON: But ORAU should have some system in place to be tracking all of it, you know.

MR. HINNEFELD: Well, they do quite a lot and I just am not familiar with how much they do. And the other question we're going to run into is inspecting and fixing sufficient, for instance. If you just inspect this item and fix this item, maybe a lot of what we're doing is that. And if you inspect this item and fix this item then you don't stop what caused that. You're not stopping the problem that caused that item to show up the way it did. So that's I think going to be the significant question going forward is our QA or QC too heavily dependent on finding and fixing, quote, the defective

item, as opposed to identifying the cause of the defect.

So we have a lot. We can talk about a lot going forward in this Subcommittee on quality I think. I'm convinced of that.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: So there's, I think it's a pretty rich ground. And of course all this effort is then effort we're not spending doing something else. You know, that's the hardest thing because it all, you know, in order to get to this which I agree is important there is other work that is also important that it competes with.

CHAIRMAN GRIFFON: Well, the other thing I've been struggling with is how do we, I mean we want to stay relevant with our feedback.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: In other words, not commenting on the first hundred cases. It may not be as useful now since, you know.

MR. HINNEFELD: So, here's I think going forward what we need to do is make a point of -- I don't know that we can do it -- I know we can't do it today. Make some serious schedule milestones on these products we've been talking about. We can probably negotiate those with our contractor, you know, what does it mean overall to the project if we do this by this date and so on. And then as we get those, providing them to the Subcommittee Members rather than holding everything and waiting for a Subcommittee meeting. And that way the Members of the Subcommittee can be brought, you know, aware of what's going on and we can probably have a more useful conversation then when we do get together about the items that have been shared in the interim. So I would prefer to proceed more like that and provide more interim product and in fact if there are items that rise to attention we'd welcome feedback from individual Subcommittee Members as well.

CHAIRMAN GRIFFON: And is there anyone, I mean I know -- and we may have even seen this documentation. I'm forgetting, but as far as ORAU's program. That was provided to the --

MR. HINNEFELD: Well, that was for our management.

CHAIRMAN GRIFFON: We had the visit at the office.

MR. HINNEFELD: Let's see. I think I can find it relatively easily. Have not reviewed it very much but -- okay, yes. What we provided was not completed. There are some sections at the end that had not been done yet. But I can send this. Are you at csb.gov?

CHAIRMAN GRIFFON: Yes. If you would send that before I forget.

MR. HINNEFELD: Okay. Brad, you've got an ICP address? Is that the one you're using?

MEMBER CLAWSON: Yes.

MR. HINNEFELD: Okay, David, you have apparently a CDC address?

MEMBER RICHARDSON: If you can send it to the UNC address that would be easier.

MR. HINNEFELD: Okay. What's your UNC address?

MEMBER RICHARDSON: It's david.richardson@unc.edu.

MR. HINNEFELD: How about you, Wanda? Which one do you want?

MEMBER MUNN: I'm on the CDC page right now.

MR. KATZ: John Poston usually uses his University of Texas one.

MR. HINNEFELD: He's J-poston is it?

MR. KATZ: At tamu, T-A-M-U.

MR. HINNEFELD: He's just J hyphen --

MR. KATZ: Yes. And Mike only has his Gmail account. He has not renewed his

security training to use online.

CHAIRMAN GRIFFON: I think I owe security training, too. That's all right, I owe one at CSB also.

MR. KATZ: It doesn't take long. Just bang it out in 15 minutes.

MR. HINNEFELD: This is something ORAU delivered to us and we put some more stuff on it. Grady put it together. Yes, I put Scott and -- put Mutty on there. Those were the two guys -- there was somebody else on the phone?

DR. ULSH: Mutty.

MR. HINNEFELD: Okay and there -- John Stiver was on the phone.

DR. MAURO: This is John Mauro. I just joined you.

MR. HINNEFELD: John Mauro's on the phone. I used their CDC addresses. Kathy Behling was one.

MR. KATZ: Yes, she has CDC, too.

MR. HINNEFELD: Okay, does it

follow the normal convention, Kbehling? Because I've got her SC&A email comes up. Kathy, does your CDC address follow the normal convention, Kbehling@?

MS. BEHLING: Yes, it does, too. Thanks.

MR. HINNEFELD: I've got everybody. I don't know if anybody wants to -- I haven't even looked at this very much myself.

CHAIRMAN GRIFFON: Yes, I mean I think realistically -- thanks for sending that out, but I think realistically maybe we --

MR. HINNEFELD: It's several pages long.

CHAIRMAN GRIFFON: -- on this agenda to sort of discuss and then the Committee Members can like read through it and maybe have some more precise questions. Because I think, I mean one of my concerns is what ORAU is doing internally and whether we're going to look at some small sample at a

later point and like you said, this be addressing one particular issue and not getting at the, you know.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: I think it might be more powerful to understand you know from their standpoint if they at least, even if they haven't had a benchmark from the past if they can at least initiate that now, you know, and then as we go forward we can see whether, you know, these modifications that are being made are making a difference or making improvements, especially -- and then I think it should probably be, I mean, we've brought this up in our discussions too but you know, the question of acceptable errors I think is different for the 45 to 50 percentile, the cases that are close to compensable versus the very low. You know, you might have different levels of review, different -- so I sort of want to see what they have in place and then, you know, I guess

as importantly what they're finding. You know, how has it been working.

MR. HINNEFELD: Now I missed the meeting that was at the ORAU office.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: I wasn't at that meeting, and I don't know what was covered there.

CHAIRMAN GRIFFON: Yes, they did walk us through their sort of process for handling cases. I'd have to look back at my notes on some of that but I don't know, David, if you remember?

MR. HINNEFELD: I don't know if they talked about data entry and data entry QC, if they did things like that. I don't know if they would have done some things like that or if they talked about feedback back into the operating system from inspection and identification of defects and things like that. I don't, since I didn't follow that and didn't pursue it when I got back I'm a little

--

DR. ULSH: We did have a discussion. We actually went to a workstation and had a guy pull up, you know, the data entry screen, showed us some of the procedures for that. I don't know about the feedback that you're talking about.

MR. HINNEFELD: Well, most QA systems, the idea about a QA system is when you find a defect you figure out what was causing the defect and fix the cause of the defect.

DR. ULSH: Right.

MR. HINNEFELD: And so I don't know, you know, I'm really at a loss as to what they're doing.

MEMBER RICHARDSON: You know, I remain -- I have a better idea. We asked them for documents, I was hoping to get a full procedure on what that process was and they said, the document was all about human resources management. I mean as far as I

could tell that was, there was not a description of a process that was ongoing in terms of an assessment and identification of problems and documentation of improvement over time and quality of the product generated.

MR. HINNEFELD: Okay.

MEMBER RICHARDSON: So I think we got a better understanding of the process of how they're operating. It seemed to me that there was an acknowledgment that there was not a in-house assessment of say a failure rate with generation of errors at different steps in that process. What they were doing was showing us sort of innovations and sort of tools, kind of data entry tools and management tools which a priori I believe plausibly would lead to an improvement in data entry, but there's no empirical demonstration of that because they've not generated, they don't have prior to implementing that tool here is the error rate for that keypunch on these items. We've implemented a tool and we got a 10

percent improvement. I would have thought that was fantastic.

MR. HINNEFELD: Right.

MEMBER RICHARDSON: And so they agreed. And so I left sort of thinking like I still would like a 30,000 foot perspective on the process, not drilling down into as you're saying, this particular defect you know in this particular case. That's less interesting to me than how is the system operating and how is it evolving over time to get better and better every year that they maintain this contract?

MR. HINNEFELD: Right.

MEMBER RICHARDSON: So that was kind of, that was my kind of snapshot impression --

DR. ULSH: So is it accurate to say that when you were there, you know, when we were at ORAU it appears that there doesn't exist the kind of document that you're talking about right now, and it would be nice to see

that.

MEMBER RICHARDSON: Yes.

DR. ULSH: Is that something we want to direct ORAU to do then?

MR. HINNEFELD: That is on our list of things to talk to ORAU about. When we -- when I direct ORAU to do anything that means that they're not going to do something else, okay? And so I think this is probably important enough that we want to do this. I just want to make sure what they don't do.

CHAIRMAN GRIFFON: And then what is this.

MR. HINNEFELD: What falls off the list.

MEMBER RICHARDSON: I felt like us as a Subcommittee, it would be useful for -- I mean, I felt sort of strongly that that's something that needs to be in place. I mean, I, but I'm one person on the Board. I would like to see that there was some, any sort of guidance on what we should be providing to you

in terms of having left that site visit. Do you want a memo? Do you want, is this conversation sufficient?

MR. HINNEFELD: Well, the conversation will be on the record now so to me that's okay. It was, I forget when it was. I don't remember what the conflict was.

MR. FARVER: May 5th or 6th or something like that.

CHAIRMAN GRIFFON: Yes, May.

MR. HINNEFELD: Oh, okay. Well, I know what my conflict was then. Okay. Okay. This conversation if that's, you know, if that's the important part of your feedback from the visit this will be sufficient. If you think, if there are other things like from your notes of the visit or something like that.

CHAIRMAN GRIFFON: I mean I think that was the main takeaway.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: There was a lot

of things that were --

MR. KATZ: There's a transcript.

CHAIRMAN GRIFFON: Basically computer innovations that took place that would likely have reduced --

MR. HINNEFELD: Is there a transcript --

MR. KATZ: Oh, we didn't transcribe.

MR. HINNEFELD: I don't think we transcribed it because it was going to be kind of mobile.

CHAIRMAN GRIFFON: Yes, we didn't transcribe that.

MEMBER MUNN: Well, and just looking quickly at the document you've just sent I see a lot of references to the procedures that were used but as David points out not any comment about how the use of this procedure rather than the preceding one may have changed the end result.

MR. HINNEFELD: Okay. Alright.

CHAIRMAN GRIFFON: I think that was probably the biggest takeaway.

MR. HINNEFELD: Well, we'll get with ORAU about what can be done. You know, it seems like there is something that should be done.

CHAIRMAN GRIFFON: I mean, do you know if they're collecting that kind of information now?

MR. HINNEFELD: Do I know?

CHAIRMAN GRIFFON: Yes, yes.

MEMBER RICHARDSON: I think we asked explicitly several times about that.

CHAIRMAN GRIFFON: Yes, we did.

MEMBER RICHARDSON: It didn't seem like that sort of assessment was happening. And I mean, the reason it seems to me it's important is because a lot of, I would say a non-negligible portion of the findings that we have are these findings which are -- should be easily addressed by -- maybe not easily addressed, but are the types of kind of

quality assurance/quality control issues which could be addressed through process changes and that would minimize the number of findings that we have to deal with and -- that are more complicated. And there is some sort of multiple step evaluation going on and these minor things are going through, or continuing to go through.

MR. HINNEFELD: Right.

MR. KATZ: Does the ORAU contract have provisions for a quality management system? It has requirements?

MR. HINNEFELD: Yes.

MR. KATZ: So they are supposed to have a quality manual and all those things that you have under ANSI?

MR. HINNEFELD: Well, I forget what the standard is, but there is a requirement for a quality management system.

MEMBER RICHARDSON: And, Ted, as I said, when I reviewed it, it seemed to me there was a lot of boilerplate in there. It

was mostly about the appointment of somebody who's called a quality manager and it's like sort of the naming of, I'd say human resources people to positions. It wasn't a description of a process.

MR. HINNEFELD: Yes, it's authorities and things like that.

MR. KATZ: Because normally you have categorization of error types and like you're saying, you track those.

CHAIRMAN GRIFFON: Well, that's why I'm asking. Maybe we just haven't seen --

MR. KATZ: It's not --

CHAIRMAN GRIFFON: -- information, but based on our meeting. So that would be the first step maybe, before you, you know, to know what they're doing now. Maybe they're doing something that we're not aware of. But it didn't seem like that in the meeting.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: And I think that's the -- I mean, I guess that would be a

big question moving forward, you know, before we go any further on our side. I think you providing us, I think NIOSH's review of a percentage -- is that sort of where you've come out from the 10-year -- I missed the presentation on the 10-year review, but I mean, one thing that you're putting in place since the 10-year review is this idea that you're going to do two per week pulling them. Are there other --

MR. HINNEFELD: Yes. Well, that came out of actually -- the 10-year program review recommendation is we should continue to work with this Subcommittee on DR quality. That was essentially verbatim what it says. At the last, I believe it was the July meeting, I think it was the last meeting of this Committee we had kind of a discussion about possible ways to get real-time information on it. And so the one we came up with was on the final output of dose reconstruction.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: That's what -- I guess we came up with that, NIOSH, not we the Subcommittee.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: But that was one of the items that was being discussed here in the Subcommittee. And so out of that discussion at the Subcommittee we built and coupled with the recommendations of the 10 year program review we built this system for this duplicate review. So that's what, you know, that's sort of, that's an end point macro level, but it doesn't provide steps in the process kind of feedback like David was talking about.

MR. KATZ: If it ends up being helpful to you, NPPTL -- the national protective technology part of NIOSH, they have, you can speak to Roland, they have several people there who are very highly trained and accredited in quality management systems generically. And if you find that in

your discussions that you need some help sort of in terms of sort of theory and practice for quality management systems there are some great people. The one I know is David Book there, and he really knows inside and out quality management systems. He may end up being helpful just on a sort of a consultative basis if you get into discussions and you're trying to find a path forward for changes in that program as it's operating now.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: So back to your sampling. When did you initiate this, Stu? How many weeks has it been?

MR. HINNEFELD: We've sampled for about seven or eight weeks.

CHAIRMAN GRIFFON: Seven or eight weeks. So it's --

MR. HINNEFELD: Well no, not quite that many. When I went to the Board there were, I believe there were 12 that had been selected. So now it would be seven or eight

weeks.

Now, there is one we did, the first two we selected we hit one of the possible glitches of the system. We selected cases that came in that were in Classes that we were in the process of recommending to the Board. And it was presumptive cancer. And so we said we should never get a production dose reconstruction for this claim. So we just rejected it and pulled another one.

MEMBER RICHARDSON: So you're pulling them and then they're going to ORAU and at some point somebody pulls the plug on that case and ORAU stops it?

MR. HINNEFELD: No, no. ORAU's dose reconstruction is the production dose reconstruction. They provide the dose reconstruction report just like they do on every other one. What we do, we don't write the entire dose reconstruction report. We do the arithmetic in the dose reconstruction, and then the comparison is between the arithmetic

we did and the arithmetic they did at the end. But the dose reconstruction that ORAU does is the one then that goes forward to the claimant, assuming there's no --

MEMBER RICHARDSON: This one that was a problem, this one that you pulled that you said it's going to be within a Class, it was not going to go through ORAU or it was?

MR. HINNEFELD: Well, I mean at this point it follows its normal path. So it would have gone to ORAU. But cases like that we tend to pend if we expect a Class to be added pretty soon. For instance, if we made the recommendation to add the Class or if the Board for instance has even voted to recommend adding the Class because it's, you've got to be pretty certain you're going to add it. But you know, we don't work on those claims. We pend those claims and wait for them to get paid through SEC. So in this case that, while that claim came in it's going to fit into a Class. That's my phone. We'll try that

later. Better than a ring.

MEMBER RICHARDSON: But this is sort of an audit of the work that ORAU is doing for you.

MR. HINNEFELD: Yes.

MEMBER RICHARDSON: So you would get the work that was done for you for ORAU for that case.

MR. HINNEFELD: No, that's the point, that we won't.

DR. ULSH: This is a case that's been referred to us by DOL. We've got the records from DOE.

MR. HINNEFELD: Well actually, we started doing -- yes, we have to get the records from DOE in order to be able to do the case.

DR. ULSH: Right. So then we selected that to do what we're calling a blind DR. It's also going to ORAU. Ordinarily it would go to ORAU, it would work its way through the machinery over there and then come

over to us and at that time we would do the comparison. But in this case we reached into the cookie jar and pulled one out. We said oh, wait a minute, this is one that's part of a Class that is most likely going to be recommended. Therefore, it'll never go through ORAU's machinery, and we wanted --

MEMBER RICHARDSON: That's what I was asking. The one that's going to get pulled out, you pulled it and then the plug was pulled and it wasn't going to go to ORAU.

MR. HINNEFELD: Right. They would never deliver a dose reconstruction. They would see that the claim came in, but they would never do a dose reconstruction. It would be an SEC pull.

MEMBER RICHARDSON: Okay.

CHAIRMAN GRIFFON: So the 2 per 100 or whatever that you're pulling you're doing full DR -- you're doing a blind DR essentially.

MR. HINNEFELD: We're doing DR,

we're not just writing the dose reconstruction report. There's a lot of verbiage in a dose reconstruction report.

CHAIRMAN GRIFFON: Okay.

MEMBER RICHARDSON: That's great, I think it's --

MR. HINNEFELD: Well see, when we started to do the analyses if we start to -- pull our hair out when we try to compare these things then we'll think, holy cow, what kind of monster have we built here. I already think that every day.

(Laughter.)

DR. ULSH: I'm not surprised that you liked it because it was your idea.

(Laughter.)

DR. ULSH: No, I mean you suggested that we do blind DRs, and we thought it was a great idea.

MR. HINNEFELD: It was the best we could do to implement the ideas we talked about. We worked really hard about how are we

going to keep this blind, and there's no way to have it blind on our side. Everybody on our side knows when they're doing this they're doing this for comparison to a production dose reconstruction. We can keep it blind on the production side.

MR. KATZ: That's all that matters.

MEMBER RICHARDSON: That's who you want to be blinded anyway.

CHAIRMAN GRIFFON: And then I'm wondering about the feedback of that information to the Subcommittee.

MR. HINNEFELD: Well, part of what I was suggesting is that as we do these comparisons we have, like I said we have four where we could have done comparisons like a week or so ago. I don't know if we got any more in the meantime. But as we run through a group of these comparisons maybe we get four or five or whatever. I'm not planning to do like 50 of them before we send them to you.

Let's do a handful and then we'll have this intermediate product and we'll send it out to you. Theoretically if you do two a week, you know, ultimately you could have, you know, you would have a batch of eight pulled in a month roughly. And so you could do them sort of like that as a grouping. Now, they won't necessarily come in production-wise in sequence so as long as nothing goes too long you might wait for the first eight or something, the first month's pulls or something. Or we could start, you know, we started pulling I think in November, you know, once we get all the ones, the production ones for the ones that were pulled in November maybe we just put those together in some sort of summary report.

MR. KATZ: But what you'll share with the Subcommittee would be a report of those including a causal analysis for any differences?

MR. HINNEFELD: That would be my

expectation. That would be my expectation. We haven't done anything yet.

CHAIRMAN GRIFFON: -- some preliminary analysis.

MR. KATZ: That sounds good.

MEMBER RICHARDSON: I mean, one idea for us would be moving forward. I mean, we have this issue that we've been focusing on DRs for older cases, and as we think about the type of work that SC&A's doing one way would be to kind of incorporate their work moving forward into more of an attention to this same stream of contemporary cases that's been generated. And to help or to contribute another perspective on the analysis of these side-by-side comparisons looking for patterns or major trends in them. And I mean, that would be work that was really up to date on what was happening and maybe would help us, you know, give another perspective on as Ted was calling kind of causal explanations.

We've talked some about, you know,

do we just continue doing these draws of historical DRs or do we kind of switch them up and maybe it would be useful also for NIOSH as you're going to have these side-by-side comparisons. There's a lot of analysis that could be done from the final decision on whether it's compensable or not to any of the comparisons of data points along the decision-making process.

CHAIRMAN GRIFFON: Yes. And I mean, the other piece you mentioned was you pulled, what, five from the 12th set? I mean, that's a whole another initiative, right? That's separate.

DR. ULSH: Well yes, that was part of the 10-year review that we committed to do. We wanted to look at contemporary ones so we actually picked the five with the latest date from the 12th set and reviewed whether or not we agreed with the finding and whether or not we also considered a QA finding. I don't think that that initiative is part of an

ongoing thing that we're going to do at least at this point.

MR. HINNEFELD: Well, I think we didn't commit to doing any more than that. Now, you could argue that the 10-year review doesn't expect a one-time look at that, but you should continue to do that. You know, it says if things continue to get through our what we consider QC process and are delivered with QC errors that that's something that could be continued. We kind of said -- before we commit to continuing it though, I'd like to know what we learned from the analysis and can we fix the things, is there something to fix about the process so that these things that we identify in this analysis wouldn't have, you know, don't occur anymore, rather than just say commit to continuing to do that. We can commit to doing every, you know, I don't know that I can do every good idea, we can't do every good idea that comes along. We just don't have the resources to do every good idea

that comes along.

DR. ULSH: And the point in the process where we are with that particular initiative is like Stu said, ORAU delivered their analysis, I took a look at it and added my own, so now we have the judgment at least so far of whether or not we agree with the finding and whether or not we agree that it's a QA. The next step in the process then for those subset of issues where we say yes, you know what? This is a QA issue. The next step is why did that happen, the root cause analysis. We haven't done that.

CHAIRMAN GRIFFON: When you say you took the 12th set, the five latest or most recent cases, were they the five most recent that had QA/QC findings by SC&A or just the five most recent?

DR. ULSH: I think they were just the five.

MR. HINNEFELD: They were the five most recent because there had not -- see, this

is from the 12th set. There has not been any analysis --

CHAIRMAN GRIFFON: Oh, there hasn't? Okay.

MR. HINNEFELD: -- of the findings. When SC&A writes a finding, I mean they sometimes will say it in there.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: They sometimes will say it, but I don't know -- all we did was let's look at the five most recent just for ease of selection.

CHAIRMAN GRIFFON: Because I mean part of the discussion. I mean, SC&A's on the 15th set, I think, now. Have you finished the 15th set?

MR. KATZ: No.

CHAIRMAN GRIFFON: They're working on the 15th set.

MR. HINNEFELD: And they've delivered the 13th in the interim since we pulled out of the 12th.

CHAIRMAN GRIFFON: And we're, as a Subcommittee here we're on the seventh, eighth and ninth. We're hopefully close to wrapping up the seventh I think, but anyway, the question was how can we get sort of ahead of the curve a little bit, you know. And one notion that we were talking about, just talking with Doug earlier, one notion was, you know, is there any way to sort of look at the SC&A ranked medium and high impact findings and sort of do a triage process ahead. But then I think you could also, in doing that you could lose sight of the littler ones which could often fall into those QA/QC kind of things, you know, like missed a year of dose, didn't impact the case overall, you know. So I think we want to kind of balance that.

I mean, but that was one idea was to -- because we, as we talked about in the last meeting we have the QA/QC and the consistency/reproducibility question but we also have the overall charge of this

Subcommittee which is the dose reconstruction validity. So if there's bigger magnitude findings maybe we can high-prioritize those and then let SC&A summarize, give us summary tables of the QA/QC. If they're very similar to things we've seen before I think we want to tackle it on the broad level rather than just picking each one, you know, going down each matrix item, you know, and debating over one year's, you know, one year's missed record or whatever. I think it might be useful for us to see a summary from SC&A that says, you know, over the 10th, 11th, 12th, 13th, 14th matrices you know we found this many QA/QC findings, they fell into this, most of them were low, you know, whatever. And then we have six or eight cases overall where we found bigger findings that might fall into the scientific validity question which we think the Subcommittee should prioritize ahead, you know, so we can be working on QA/QC as an overall thing and then focus more on some of

the technical issues and be more current with those I think is the hope. So I don't know if that makes sense.

DR. ULSH: Well, it does. My first thought on that, Mark, is just maybe a caution that at least taking those five as an example to the extent that you can generalize from that it's a mixture of cases, findings where we did agree with the finding and we did agree with the categorization of the QA, and then at the other end of the spectrum there's some where we didn't agree with the finding.

CHAIRMAN GRIFFON: Right, right, right.

DR. ULSH: So you can take the findings that SC&A has issued but at that point you won't have our responses to it, right? I mean, at some point you've got to get NIOSH's input whether we agree with the finding or we can explain it.

CHAIRMAN GRIFFON: Right.

DR. ULSH: So you've got to decide

kind of where in the process to make that cut to say here's the issue.

CHAIRMAN GRIFFON: Where to do the triaging, yes, yes. That's a good point. I mean, part of the backlog I think is the Subcommittee itself but some of it's also on NIOSH's side because you're overwhelmed on SEC work and other, you know, obviously. So ideally it would be good to have all the NIOSH responses and then kind of, you know, pick out that way after we have all the responses, I agree. Just a thought.

DR. ULSH: You've also done the look back though for the first 100 cases where after all the dust has settled and we've come to an agreement about a disposition of a particular finding then you've gone back and said here are the ones that are QA issues. And I know that the concern there is that those are too old to be instructive now, but it could be a model perhaps that at some point once we all agree on a disposition of a

finding then we take another look back and say these are the ones where everyone kind of agrees were QA issues.

CHAIRMAN GRIFFON: Yes. Yes. But the concern is getting up to this more current cases that were done.

DR. ULSH: And something -- you've got to take something away I guess.

CHAIRMAN GRIFFON: Right.

MR. KATZ: Just to add to this conversation, a little bit of a tangent but it relates to what David was saying. We're on the 15th set now at SC&A and you mentioned the distance between where the Subcommittee is on the sets and SC&A is. And David's suggestion that SC&A be looking at these blind cases alongside the Subcommittee. So I wonder if -- I mean at some point it doesn't make sense to keep stretching out the difference in this progress and maybe we should at some point, whether it's the 15th set or the 16th set we should stop progressing with those sets and

maybe do what David's suggesting, have SC&A focused on as you get these confined cases looking at those and preparing on those for when you have your meetings so that you can at least be doing that contemporaneous work. SC&A's not spending its time churning out new sets that are so far off really in terms of where the Subcommittee can get to.

Because I think Brant's right, I mean until we have some back and forth response, the Board Members have to do their part with the dose reconstruction and so on you really, you just have SC&A's initial perspective. You don't have their final perspective even on those later sets, what the issues are with those sets until it's gone through its normal process. I wonder, I think you should think about that at least. Changing this process going forward in terms of adding on these sets.

CHAIRMAN GRIFFON: No, I agree, it doesn't make too much sense to get much

further ahead, I agree.

MR. FARVER: I suggest not cutting back completely but scaling back. Let's say we start scaling back on the 16th set or 17th set. Instead of 40 cases you knock it down to 10 or something. And then I take the resources that I would use to do the other cases and put them doing the blind reviews. So while we're still moving forward on our DRs to take up anything big, and you might have to be more selective in your case selection. We're still looking at some to pick up issues but then we're also --

MR. KATZ: But the reality is, Doug, is that there's no action being taken on these late sets. I mean there's still -- there's no mechanism for action. They sit on the shelf until they go through the process. I'm not seeing a lot of benefit to that. I mean, I don't think it's an equivalent transfer of SC&A resources to the blind because we're not asking you to do de novo

blind dose reconstructions. I mean, DCAS is doing that. You don't want to duplicate that. Really what we want you to just use your technical eyes to sort of review that work, but it's not the same as actually you doing the dose reconstructions.

MR. FARVER: So we would just review their analysis of the --

MR. KATZ: And come to the table with the Subcommittee ready to discuss what you see there.

MR. FARVER: I misunderstood.

MR. KATZ: I think that's what David was suggesting.

MEMBER RICHARDSON: We need to look at them both side by side, figure out.

MR. KATZ: Right. So we have a fully productive Subcommittee discussion of those cases.

CHAIRMAN GRIFFON: I still wonder if we can triage at an earlier point. I don't think we have to come to complete resolution

in our process on the Subcommittee in order to triage. I think if we got SC&A's findings and NIOSH did an initial review we can look at the matrix and then almost like our selection process we can go down and say, you know, finding 6, finding 10, finding 20 make sense to prioritize and we can vote as a Subcommittee and move those up in priorities. And then say the other ones seem to likely fall in the -- based on NIOSH's review and SC&A's even if there might be a slight dispute whether it's, you know, an accurate finding or not it seems to fall in the realm of QA/QC we can -- and everybody agrees it's a lower impact. Then we can kind of put that in that broader pot with the QA/QC question. Because I don't want to miss these other ones that, you know, and I think we're letting them sit on the shelf like you said. So I mean maybe that's a path forward to have SC&A, I mean they have their initial findings out to matrix 14. If we can get NIOSH's responses, I think

you've done, have you done matrix 10?

DR. ULSH: We haven't given you 10 yet. We've given you some from 9.

CHAIRMAN GRIFFON: Right.

DR. ULSH: And that's about as far as we got.

MEMBER RICHARDSON: By triaging your -- think about it once more. SC&A's got a series of findings and they fall into different types of findings, and you're saying some of them we may want to --

CHAIRMAN GRIFFON: Some of them are, you know, I guess they're ranking them on case impact I think. So some of them may be from a program standpoint these QA things, they serve that up and they could be a problem. But from the case standpoint there may be some issues that end up being --

MR. FARVER: Lower consequence.

CHAIRMAN GRIFFON: Or I'm saying higher consequence. Those are the ones.

MR. KATZ: So you're basically

saying just ignore the set boundaries for some of these high-priority matters, right? Isn't that what you're saying? Go up through 12, 13, 17.

CHAIRMAN GRIFFON: We could be working on upwards from, yes, from 9 through 13 or whatever and we'll --

MR. KATZ: And do them out of order --

CHAIRMAN GRIFFON: Out of order.

MR. KATZ: -- but on a theme basically and address them that way.

CHAIRMAN GRIFFON: Right.

MR. KATZ: And I think that'll work, we just have to be very organized so that we don't lose the rest for one, and also so that DCAS is supplied with the cases we want them to address first in an orderly fashion so they know what their returns, because they're not going to be able to double their volume of ones they're responding on.

DR. ULSH: And to be clear, I mean

at least after the past couple of meetings of this Committee my instruction to ORAU has been focus specifically on the oldest claims. We need to get those off the deck. It hasn't had anything to do with QA or impact, it's how old is it. That's the only thing I've been screening on.

CHAIRMAN GRIFFON: Right.

DR. ULSH: So this would be a change.

MR. HINNEFELD: We change what we tell them all the time.

(Laughter.)

CHAIRMAN GRIFFON: Well, I mean I think at our next meeting maybe we can come forward and I think we need to try this out but if we have the 10th set, if we have NIOSH's responses for all the 9th and all the 10th I don't know if that's --

MR. HINNEFELD: I don't think we've got all of 10. I don't know if we've got all nine. I don't know, I'd have to go

see what we're talking about.

MR. FARVER: If you look at the matrix there is a column, I think it's column five, it says Site Program Rank. I think usually we leave it blank. We can always use that to prioritize.

CHAIRMAN GRIFFON: Yes. That's the one, the first 100 I was, the Committee was going through ranking those.

MEMBER RICHARDSON: The other option is with the first one is to sort of run these in parallel and continue forward through these sets of DR reviews just chronologically as we've been doing them and yet turn SC&A's attention moving forward more onto this kind of new duplicate estimate that's going on between ORAU and NIOSH. It's a question of are we going to introduce a lot of confusion by changing how we've been doing this.

CHAIRMAN GRIFFON: No, I think you're right, I think we've got to be very organized on how we convey this.

MEMBER CLAWSON: I guess I'm a little bit confused on what exactly we're looking forward there. We're looking at continuing on with pulling the reconstructions but take a section in time, say the ninth set and focus in on those and do a more in-depth look at the DR reconstructions?

CHAIRMAN GRIFFON: No, I think the idea would be -- my contention is that they're, and I think we found this, that they're not all simply QA/QC. They don't fall into the QA/QC category. So I'm saying, but a lot of them do I think as far as our findings. So I'm saying, you know, if we can prioritize some of those ones that might be, you know, more important from a validity standpoint, from a scientific validity standpoint. In other words, if you're doing an internal dose reconstruction and SC&A has a very different, you know, perspective than what NIOSH came up with maybe that one wants to -- it's not a matter of they forgot a data point or didn't

get a year's worth of dose, you know, it's the basic approach to how they model the internal dose that there's a disagreement on. You know, we might want to raise that.

DR. ULSH: I think you've got, and Doug can correct me if I'm wrong, but right now the way SC&A categorizes these findings is impact on this particular case, either it has a big impact or it doesn't. It's not necessarily how many cases it might affect.

CHAIRMAN GRIFFON: Right.

DR. ULSH: I mean, it could be a small change.

CHAIRMAN GRIFFON: Where we're using that other column that he was talking about where we tried to make a judgment of --

DR. ULSH: Yes.

CHAIRMAN GRIFFON: -- whether this was something I could carry through to a lot more cases.

MR. FARVER: And if you go back and look at those, I don't know, was it 100 or

so findings and identify it as QA, that initial set, many of those are under the low category because it impacted the case but it would not -- I mean, it would not impact the case much whether you missed an annual dose, but it could impact the program.

MEMBER MUNN: It's a programmatic issue.

CHAIRMAN GRIFFON: Well, I think we're going to have to -- I mean, I certainly agree with the one perspective is having SC&A pick up on this new, these newly generated cases that NIOSH is going to review with their internal process. And we can run the other system parallel or we can try to pick off high-priority ones. I don't think we have to decide that today. If you have more, you know, as far as you get next time let's look at the ninth set and see if it makes sense if some jump out at us. And, again, you know, we have to be organized with it, but I think it's not that difficult to keep track of that, you

know.

MR. KATZ: Well, we could, to tone down the sort of disruption we could do the two things we've just agreed on, process as it stands now and having SC&A look over, review the results from it. But then we could have SC&A just do some analytical work on the, you know, most current four sets or five sets and try to pick out, just bring to each meeting, you know, perhaps one category of issue they have that's sort of more thematic, in other words, systematic, science matter not a quality control matter necessarily, and bring that to the table just as a point of analysis that wouldn't have been the whole process but you could still have a discussion about the finding that they're proposing based on their analysis of those cases. So it would still sort of be bringing you to the future a bit but to kind of stay on a big issue without really disrupting the whole process. So you wouldn't be sending DCAS to have responses,

you know, on a whole bunch of cases or what have you, but you'd have this one theme, issue that you would be bringing to the next Subcommittee meeting and they'd, you know, have to have a chance to do their homework on that, but it wouldn't be the same thing as upsetting the whole apple cart in terms of reviewing cases.

CHAIRMAN GRIFFON: Identify their theme issue by looking at their most recent --

MR. KATZ: Four sets or whatever and seeing what it might be. And maybe they pick out six or seven illustrative cases.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: And provide that to DCAS along with their concerns about what they think is sort of more a systematic problem.

CHAIRMAN GRIFFON: That's sort of another way to get at the same thing.

MR. KATZ: You wouldn't be upsetting, you know, just a small sample to illustrate their concern but it would be

bringing you up. Plus you'd be getting then something of sort of broader importance and bringing you up to current times as well, both. You'd be getting both of those out of this.

CHAIRMAN GRIFFON: There might be another way to get at the same end point quite frankly because what I was thinking on my high-priority ones, I mean, if you look at the matrices from the past most times the medium- and high-ranked findings are a handful and a lot of them fall into low, you know. So I think look amongst those, if there's themes, then --

MR. KATZ: Yes.

MR. FARVER: For example, I went back and looked at the 10th set, and there was one high and three mediums.

CHAIRMAN GRIFFON: Right.

MR. FARVER: In the 10th set out of 30-some findings.

CHAIRMAN GRIFFON: And we don't

even know, is that four cases or four, you're not sure of that, right?

MR. FARVER: I just did a quick --

CHAIRMAN GRIFFON: It might even be two cases, you know, whatever.

MR. FARVER: But I can go back and look at the say top four sets. Like for the next meeting it would be 14, 13, 12, 11th set, and then pull out we'll say top 10 issues or something like that.

MR. KATZ: Well, I wouldn't cover the whole tray of them. I would really try to come with --

CHAIRMAN GRIFFON: Look at your higher ranked ones and see if they fall into certain themes.

MR. FARVER: I mean, I'm fine doing that but I probably wouldn't do any more than that.

MR. KATZ: I was just thinking one or two really, actually. Here's a theme, we have five or six cases among these sets and

this, we think there's something to this in terms of science, validity.

MEMBER MUNN: My concern would be that in a sampling that small you, it would be very difficult to identify a theme unless we had a major problem of some kind which we have not seen.

MR. FARVER: With searching like that what you're probably going to find is something that's extremely case-specific. You know, it makes a big difference for this case where the employee worked, type of deal, but it's not going to affect -- that's not a programmatic error.

CHAIRMAN GRIFFON: Well, that has been a theme. We noticed that theme on neutron dose reconstructions, employee placement, it's always been an issue. I mean, it's been a discussion around this table. On Y-12, I can remember a number, Savannah River, you know.

MR. FARVER: My feeling is the top

issues that I look at are going to be, that would have the most effect on a case are going to be very case-specific.

MR. KATZ: Right, I follow you.

DR. ULSH: So some of the more generalized that if it's a large number are going to be those lower.

MEMBER CLAWSON: So do we want you to focus on -- this is my question. Are we wanting you then to look at the findings and not case-specific or if they are, you know, it doesn't matter, that part doesn't matter. But programmatically will that affect. We want you to --

MR. FARVER: If we happen to find two big issues that are similar, or two cases that have the same issue you could group them. But --

CHAIRMAN GRIFFON: Well, the other judgment that can be made is that, you know, for example with the Y-12, you know, just to use that example, placement of employees

regarding neutron dose. You could argue that that could have a larger impact than on one case, right?

MR. FARVER: It could. I think in general we know that that's an issue and we know that the one at Savannah River, same type deal. Neutron dose.

CHAIRMAN GRIFFON: So there's one theme right there.

MEMBER MUNN: But that's an insoluble theme.

MR. FARVER: Correct.

MEMBER MUNN: That's an insoluble theme about which we can do nothing. And with respect to the QA and QC aspects of it.

CHAIRMAN GRIFFON: Well, that's not a QA/QC issue I don't think.

MEMBER MUNN: No, it isn't. It's a scientific issue.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: But my point is it's a case of which we can do nothing. You know,

if there's an adequate amount of information to identify where the person worked then the issue doesn't arise.

CHAIRMAN GRIFFON: Right. And if there's an inadequate amount then what? That's the question.

MEMBER MUNN: Then it's insoluble.

CHAIRMAN GRIFFON: Why? Why, if -- I mean we could have that discussion. If the program is supposed to be claimant-favorable if you can't place an employee does NIOSH make a claimant-favorable assumption assuming they were in an area where they could have got exposed to neutrons.

MEMBER MUNN: Well, isn't that a policy that's already established pretty much?

DR. ULSH: Well, that's the procedure. We have discussions about, a lot of discussions about should we have done something differently.

MR. HINNEFELD: The question that comes to the level of evidence should be

required to make the decision. That's all of our discussions have always been what level of evidence and so there could be some advice on that. I'm not arguing, I don't want to argue one side or the other, but I don't know that it's clearly cut and dry, Wanda, the way you're saying. I think that there's room for discussion about the level of evidence that is sufficient to make a judgment that we do now know that where this person worked.

MR. KATZ: John, are you on the phone? Mauro?

DR. MAURO: Yes. I was going to step in a little bit. I have some thoughts on this too, if I may?

CHAIRMAN GRIFFON: Please step in.

DR. MAURO: It seems to me that right now sitting around the table we probably could -- you already started this -- identify what are the categories of findings at least that SC&A has made that fall within the realm of let's say recurring scientific, not quality

assurance. In other words your procedures were out there and we reviewed the case against the Site Profile, against your procedures, and basically we see if you're following your procedures. The real issue, and I think you've started it, is for example placing a person. That would be like one major area. Did they, was the proper judgment made regarding placing a person physically at a location.

The second thing right off the bat that strikes me is, and you mentioned it also, is okay, given that the person was properly placed physically at a given facility did they take into consideration all of the exposure scenarios including neutron dose, thorium, et cetera is the second one. That's like tier two.

And then the third one is given that we placed them correctly and given that yes, we did assign them some neutron dose, the third tier is the coworker model that's

assigned to this person. That is, we assumed, we assigned the 50th percentile or the full distribution or the 95th percentile. So it seems to me in a funny sort of way we actually are at a place right now where at least right off the bat just from the conversation we're having now there are these three levels which are nested that we already can identify as fundamental conceptual technical issues where SC&A and NIOSH have had discussions regarding any of the recurring findings and from the point of view of let's say the 10-year plan one could ask the question what rigor can be brought, if any, to these judgments that would help alleviate, if in fact there are issues here, and what metrics can be used to judge progress in improving it.

So in a way, I mean right off the bat those three seem to be, now there may be others, but I'm trying, while we were talking I was trying hard to think of other categories of technical issues that are sort of

crosscutting that are really the big effects, not the quality assurance issues, but you know. And also not comments on the Site Profile. For example, there are plenty of comments that are under debate on the Site Profiles and on the procedures and that's being dealt with elsewhere, but this is given the Site Profile, given the procedure these are where judgments are made. And I think this is where we find fundamental, you know, this is those three areas. I really can't think of others.

CHAIRMAN GRIFFON: I'm trying to think. The only other one that I was thinking of, John, was on the internal dose side, the individual internal dose, you know, the assumptions made in that. That might be a more case-specific.

DR. MAURO: So given that you place them correctly, okay, given that you've got the scenario down, given that you picked the proper coworker model for the person but

you're saying no. What about the person that you're not using the coworker model but you actually have the data for? What are the types of findings we have when that's done? I've got to say usually those are QA as opposed to fundamental science issues. Once you're actually using the real data for the person.

CHAIRMAN GRIFFON: Yes, yes, yes. Yes, I know we've had some questions on assumptions on intake. You know, the assumptions that were made in the internal dose modeling but they tended to be probably mostly case-specific, would you say that? Yes.

DR. MAURO: Anyway, I offer that up --

CHAIRMAN GRIFFON: The three you mentioned I agree with, yes.

DR. MAURO: Yes, we are well along in a position to actually start identifying, you know, strategies and maybe actually discussing what -- are there metrics that can

be used in the sampling that you're talking about that look for that and say did we do this, you know, has it happened. But of course, again, that's a judgment. You know, when you pick the full distribution versus when you pick the upper 95th percentile, and we always find ourselves in that position, it's a recurring theme.

CHAIRMAN GRIFFON: Right. But those are the, Doug, I don't want to put you on the spot, but do you have anything to add to that? Because I agree with those three as sort of themes we've seen.

MR. FARVER: -- on the findings and see if there's anything that --

CHAIRMAN GRIFFON: I think that might be a good action for the next meeting too for you to look at it more systematically, look at your last, up through matrix 14 and look for these kind of --

MR. KATZ: Case examples.

CHAIRMAN GRIFFON: Right. And

1 themes and cases that fit into those themes.
2 MR. KATZ: Yes, and have a little
3 report for that?
4 CHAIRMAN GRIFFON: Yes, yes, a
5 mini report.
6 MR. FARVER: Non-QA items?
7 CHAIRMAN GRIFFON: Non-QA I would
8 say, yes.
9 MR. FARVER: Okay.
10 CHAIRMAN GRIFFON: All right.
11 MR. KATZ: It's just a, a
12 discussion report, whatever you want to call
13 it.
14 CHAIRMAN GRIFFON: Right. What
15 John defined as scientific, recurring
16 scientific issues.
17 DR. ULSH: So in terms -- I know
18 that this could change once we revisit this
19 but going out of this meeting going forward I
20 want to make sure that the priorities that I
21 give to ORAU align with the Subcommittee's
22 priorities. I'm still planning to tell them

focus on things up through and including maybe the ninth set.

CHAIRMAN GRIFFON: Yes, I think let's stick with the parallel processing like David described. And we don't have the other input from you guys yet so SC&A won't be reviewing, but once you have a group of those cases then --

MR. KATZ: You'll provide them to SC&A as well.

CHAIRMAN GRIFFON: Right.

DR. ULSH: Oh, the blind?

MR. KATZ: Yes.

CHAIRMAN GRIFFON: The blind.

MR. KATZ: Once you have those sets. You'll funnel those to the Subcommittee --

CHAIRMAN GRIFFON: Whatever you feel is a good, you know, I don't know if it's six, eight, whatever, you know.

MR. KATZ: Yes.

CHAIRMAN GRIFFON: I wouldn't wait

till you have 50.

MR. KATZ: Yes. So John and John, you folks would be tasked with just reviewing those blind cases, reviewing the review from DCAS in effect, and coming to the table ready to discuss what's there.

CHAIRMAN GRIFFON: Okay. Why don't we -- I need a coffee break here so why don't we take, or Wanda, do you have something before we break?

MEMBER MUNN: No.

CHAIRMAN GRIFFON: Why don't we take 10 minutes break and then we'll come back and maybe wrap this discussion up and then move more into some of the matrices. I'm not sure how much progress we have on past matrix items so --

DR. ULSH: Well, I think there was -- we delivered quite a large amount back in April, and I think SC&A, I don't know, I don't know what they've got on their report today, but.

CHAIRMAN GRIFFON: So we have some on the table for discussion.

DR. ULSH: I think so, and then we've got just a couple more from the seventh and eighth sets, just a couple.

CHAIRMAN GRIFFON: Okay.

MR. KATZ: Okay, so about 10:35, we'll --

CHAIRMAN GRIFFON: Reconvene.

(Whereupon, the foregoing matter went off the record at 10:24 a.m. and went back on the record at 10:44 a.m.)

MR. KATZ: Okay, so we're back online. Let me just check before we get started, do I have any additional Board Members on the line? Mike or John Poston? Okay.

CHAIRMAN GRIFFON: Okay. I'll make an attempt at summarizing where we're at from the morning discussion and then a few more items on this theme, and then we'll go into the matrices I think. I think the plan,

the path forward right now is to have a sort of parallel process with the matrix, the findings in the matrices and basically from the oldest to the newest as we've been doing and then to have NIOSH in their newly implemented process of selecting two cases and randomly doing the dose reconstruction along with ORAU, have NIOSH provide sort of interim reports on that to SC&A, and SC&A will review those, what NIOSH has done, what ORAU's done and NIOSH's sort of analysis of the issue. SC&A will review that report and come back to this committee to be prepared to discuss it. So those things will be sort of parallel tracks.

The other action that we've asked for is for SC&A to look at, I guess, the 10th or 9th, whatever is outstanding, 9th through the 14th.

MR. FARVER: Well, it'll probably be the 11th and the 14th will be done by then.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: It should be -- it's at least the 11th through the 13th, but probably through the 14th.

CHAIRMAN GRIFFON: All right. Let's say 11th through the 14th set of cases and look for these sort of scientific issues and try to bin them into certain themes, bring them back to the Subcommittee and then we can decide if we want to try to tackle all of them or certain ones. So you identify the themes and then try to also tell us which cases or findings belong in those themes, you know. That way we can get a sense of the breadth of what we're trying to tackle.

And we haven't completely decided on whether to go down that path. We've all discussed the potential pitfalls of tracking that because we'd be doing things a little bit out of order if we decide to go that path. But at least let SC&A take a look at it, bring it back to us and we can talk about it at the next meeting to see if it makes sense to move

in that direction. And that's sort of where we're at.

MEMBER RICHARDSON: I was wondering if at the next meeting -- there were two other things that were raised, and I think they would just be asks for information if NIOSH could share with us. One is the report on the five most recent cases drawn from the 12th set.

CHAIRMAN GRIFFON: Thank you, yes.

MEMBER RICHARDSON: And to give us a summary, whatever is available at the time that could be shared with -- about that review. And the other one is the suggestion that NIOSH would follow up with ORAU about their QA/QC process and if they learned more about that from conversation, if that could be shared with us.

CHAIRMAN GRIFFON: Yes, just a report on that and sort of what they currently are doing.

MEMBER RICHARDSON: What they have

in place.

CHAIRMAN GRIFFON: Yes, what they have in place. And if that includes documents that would be great. I mean, if there's procedures or other things that we haven't seen, you know. Yes, thanks.

So I think that's where we stand. Brad, does that make it muddier than ever or clarify it a little?

MEMBER CLAWSON: We'll work into that.

CHAIRMAN GRIFFON: Alright.

MEMBER CLAWSON: I just want to make sure we're, that I had an understanding. Because part of my issue was, and we've talked earlier, is we've been looking at these earlier cases and many times they say they've corrected this QA problem. I just want to make sure that we take the latest that we have and kind of hold them in time there and do a more in-depth.

CHAIRMAN GRIFFON: Right. And

part of these blind reviews by NIOSH we're hoping will get to that end, yes. Okay. The other thing, before we move on to the matrices I just wanted to bring up from the last Board Meeting we said that, or I think our Chair has assigned follow-up to different committees from the 10-year review on some of the action items that NIOSH has proposed. And, Stu, I think you said four fall in, were sort of assigned to this Subcommittee?

MR. HINNEFELD: Right, four areas.

CHAIRMAN GRIFFON: And I just wondered just for the record if we can get them on there. And we'll pick up our discussion with them at the next meeting but.

MR. HINNEFELD: One is what we've been talking about with the dose reconstruction quality.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And continue to work on that. The second one was consider the elimination of overestimating approaches. The

third is to quantify the amount or the extent of claimant-favorability in the current program approaches, the methods we use now. And the fourth is to continue to be aggressive in terms of timeliness objectives for dose reconstruction. So the last one I said, you know, we feel like we kind of have that in hand having finished up the backlog, getting things out within nine months and applying, we have a mechanism, a working mechanism in the contract to incentivize timely completion of dose reconstruction. We've been doing that for awhile. We think that is, we kind of have a handle on that, but certainly the Committee can be as involved as it wants to be. So those were the four areas.

CHAIRMAN GRIFFON: Okay. And I think, you know, we'll, I guess we'll bring those up on the agenda moving forward as they make sense to bring them up. I mean, I think that last one might at first blush involve NIOSH just sort of presenting what you're

doing, where you stand and you know.

MR. HINNEFELD: We've done, on the thought process about eliminating overestimates we have done some, we do have some cost estimates on that. It's pretty expensive if we eliminated them entirely, really expensive. But we are pursuing though a partial measure that we don't think is going to cost very much, at least not cost us very much and that is to -- we have a series of DOE sites who don't provide medical X-ray information routinely as part of the exposure history request. But if we ask for it later on as a supplemental request then they can provide it. So that puts us in the position of usually at those sites of doing essentially an overestimated medical estimate just based on annual PA exam. And then when you get into the band close to the decision point then we'll ask the site for the actual X-ray information, or if we get a rework for instance we may ask the site.

So just for timeliness I said well, why don't we approach these sites. We're going to actually approach DOE headquarters so we can approach them all essentially together and see if we can't, since they have the records of X-ray exposure how about just providing them routinely when you get a request for exposure history. That way it eliminates that supplemental request later on, and it eliminates the temptation to do an overestimating approach because you've got the actual X-ray records in front of you. And you just stop doing overestimates on X-rays from those sites.

DR. MAURO: Stu, this is John.

MR. HINNEFELD: Yes.

DR. MAURO: During -- I know we don't want to deal with this in detail, but during the meeting when you addressed the subject you also brought up an idea. Because we all recognize the advantages of the bounding approach which is certainly

compatible and consistent with the regulations to try to move through the process quickly. You had mentioned something that the dilemma you run into is that the second cancer comes up and then, you know, you go to a realistic, a more realistic analysis.

You pointed out something that struck me was that you see this mostly with skin cancer. That is, you find yourself, the ones that you come back later and have a second cancer that then you have to go back and redo it is skin cancer. Did I hear that correctly? Because that might, you know, that might be a compromise, that is limit the realistic analyses to the skin cancers as one of the recurring ones. Is that what you -- you said that very quickly during the meeting, and it hit me really hard. I think that's something worthy of discussion perhaps at the next meeting.

MR. HINNEFELD: It certainly would be something we can talk about. It is a fact

that skin cancers are often recurrent. You get additional skin cancers and we get those back. They are certainly well -- it's a big portion of our returns, I don't know if it's a majority. I'm just, and this is sort of anecdotally reported. I haven't run the statistics. But it becomes a matter, John, of balancing the cost against what -- and since we have to spend, if we spend then, how much cost do we want to spend on doing skin cancers all best estimate, and when we spend that money doing those then we don't have that money to do something else. And so is it more important programmatically to eliminate these overestimate. We aren't going to eliminate the reworks, we're just going to eliminate the confusion that arises by putting out an accelerated, you know, overestimate and then later on doing a best estimate. So is that worth whatever work has to fall off the table because we're spending more money doing only best estimates?

DR. MAURO: But the idea that you put forward was this is one way to constrain the number of realistic estimates that you might do, rather than completely abandon.

MR. HINNEFELD: Well, we've looked at several varieties. We've looked at only do best estimates because sometimes we have serial returns, you know, reworks. You know, we'll work it again and then it'll come back again. And so if, you know, we've looked at well, what happens if the first time we get a rework we're doing best estimates. You know, all the overestimate approaches are out --

DR. MAURO: Oh, okay.

MR. HINNEFELD: So we've looked at that. We've looked at doing all skin cancers as best estimates. So there are a number of things that we've looked at in this one report, and I don't know that there's any reason why I can't share that. It's a cost analysis of those various steps. Okay.

CHAIRMAN GRIFFON: And if you have

something, I mean, preceding our meetings if you have something that you want to add to the agenda that you have enough there for us to discuss I think, you know, providing it in writing and letting us mull over it a little bit before the meeting would be good.

MR. KATZ: Okay, so are you going to be sharing that?

MR. HINNEFELD: Yes, unless somebody tells me I can't. I don't know who would tell me. Jenny hasn't said anything to tell me I can't. I don't know who else would.

MR. KATZ: You could just leave the cost information out.

MR. HINNEFELD: Well, that's kind of the key. That's why we had them do it. So what's it cost to do this.

MR. KATZ: Right.

MR. HINNEFELD: That was our question. What would it cost to do this.

MR. KATZ: You may need to speak with your contract officer about that, about

releasing the cost information. Because there is a proprietary aspect to that.

MR. HINNEFELD: Because it -- yes. There's a manpower number in there, too.

MR. KATZ: Yes.

MR. HINNEFELD: If I took out the cost but left the manpower in that would work.

MR. KATZ: And I think it's partially up to your contractor what they are comfortable --

MR. HINNEFELD: Sharing.

MR. KATZ: -- putting on the table.

MR. HINNEFELD: Okay, so I may not, I may not be free to share it.

MR. KATZ: You just have to look into that.

MR. HINNEFELD: Okay.

MS. LIN: Maybe we can look at it in draft form.

MR. KATZ: So with these I just want to be clear what, for the next meeting

you would like to hear something about the current status of timeliness?

CHAIRMAN GRIFFON: Well, I'm just not sure.

MR. KATZ: No, I'm just -- of these various things. Timeliness you'd like to sort of see what the landscape looks like right now, is that correct? As part of a presentation.

CHAIRMAN GRIFFON: Well, let me ask what NIOSH thinks they're most prepared to sort of discuss. I mean, it sounded like timeliness was reasonable to -- you could provide it in a timely manner.

MR. HINNEFELD: Yes, we can run those statistics prior to the meeting. We can always pick some cutoff date, we'll say cases delivered in the last month or the last two months, here's the average age and if we get some aberration. One thing that happens once in awhile is you'll clear out some really old ones, you know, like that's likely what will

happen with Clarksville and Medina just speaking among friends. That's what will happen with that. Now, that's not a ton of them but they're going to be pretty old and so it kind of screws up your average when you do something like that so you've kind of got to footnote things like the average age of cases but we should be able to come up with something that kind of indicates how we're doing on timeliness just as a routine matter. Get it out to the Board or to the Subcommittee before a meeting.

CHAIRMAN GRIFFON: And the other, I mean the consideration of overestimating, if you can provide this report you talked about. I mean if that's possible.

MR. HINNEFELD: I will have to work with the contractor to see what, or in what form. You know, if we take out some fee information we may be able to --

CHAIRMAN GRIFFON: And that last one, we're obviously going to continue our

discussion on the QA issues, but the other one I'm not sure how far along.

MR. HINNEFELD: We're not far along at all.

CHAIRMAN GRIFFON: Quantify.

MR. HINNEFELD: We are conceptualized.

CHAIRMAN GRIFFON: Right, right, right.

MR. HINNEFELD: That's actually, Jim Neton is leading the plan on that.

CHAIRMAN GRIFFON: Okay.

MR. KATZ: Is that claimant-favorability you're talking about?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Quantify the degree of it.

MR. KATZ: Right.

MR. HINNEFELD: Jim has a plan, he has visualized something that he hopes to do but that's from the sciences issues part of the program review. And so, and he's, along

with several other things that are in that group. So I'm not exactly sure when we'll have something on that. I wouldn't expect it at the next meeting.

CHAIRMAN GRIFFON: Alright, yes, so it sounds like we'll have updates at least on two of those other items.

MR. HINNEFELD: Yes, we should have them.

CHAIRMAN GRIFFON: So we'll put on the agenda for next time. Anything more on that? Because I think we can move on to the matrix work and push through as much of this as we can get through. Somebody just dialed out, right? Good timing.

MR. HINNEFELD: That was my brain.

(Laughter.)

CHAIRMAN GRIFFON: The seventh set I have, and I had emailed it I think the day of the meeting last time, July 15th. So I think I have the most recent, at least, you know, that we finished as of July. It won't

include SC&A's or NIOSH's latest inputs but this is where we left off I believe. And I think, well open items. I mean, I think 121.1 the first one was still.

DR. ULSH: This is an Aliquippa Forge case. Scott, do you want to maybe just give a brief summary of what the issue was and then I'll jump in with status?

MR. SIEBERT: That was me that actually clicked out. Actually, Mutty, do you think you might be able to do -- tell us a little bit more straightforward that I probably can since this is Aliquippa? Sorry, we're going to throw the ball around a little here.

MR. SHARFI: I mean, right now the only thing --

DR. ULSH: Well, how about I rescue you guys a little bit. We're at the stage in the seventh set where the remaining issues, there aren't many but they're the really tough nuts to crack so they're very

resource-intensive. I went back and looked at the discussion that we had at the last meeting, looked at the transcripts, just to try to get a feel for the issues. I mean, this is one of those really old ones that goes back to even before I was involved with this Subcommittee.

The bottom line is I think it has to do with residual contamination, external dose, how we calculated it during that time period unless I'm confusing it. And basically I looked at the Aliquippa TBD, the latest revision of it, and it was dated back in 2005. So it hasn't been touched since then. Given the Working Group, or the Subcommittee's concern about this particular issue in Aliquippa I asked ORAU to pick up that TBD again and bring it up to the contemporary way that we do things, not just limited to this particular issue but as long as we're going to be reexamining it anyway to make sure that all the pieces are up to contemporary standards.

So I think that once that happens that will address this issue.

MR. HINNEFELD: Now, this was one where we had, it was like the mini-TBD review on this one, is that right? So there's a set of findings at the back of the report, right? Isn't that right, John?

DR. MAURO: Not Aliquippa.

MR. HINNEFELD: Not Aliquippa? Does that start later?

DR. MAURO: No, Aliquippa was not one of the three.

MR. HINNEFELD: Okay. So that must start the eighth set then.

DR. MAURO: I'm looking at, you're talking 121.1?

MR. HINNEFELD: Yes.

DR. MAURO: And I'm looking at this. It seems to me as I'm looking at it a lot of it was the old OTIB-70 issues and, OTIB-70 and TIB-6000 all of which have been resolved. I'm not in specifics, there may be

aspects to this --

MR. HINNEFELD: John, I think that kind of falls into what Brant was saying is that the Site Profile for Aliquippa Forge was written before any of those things.

DR. MAURO: Yes.

MR. HINNEFELD: And so what our activity now is, let's go back and look at the Site Profile for Aliquippa Forge to make sure it incorporates the technical decisions we've come to in the last six years. Put those in the Site Profile. Once you do that then you evaluate all the claims that were done at Aliquippa Forge to see if anything's going to change. If anything changes then we let, you know, well we know we evaluated it anyway, but if anything changes we can reopen it, open it back up. So that I would think would, I don't know any other findings on this Aliquippa Forge case that didn't fall into that kind of category.

DR. MAURO: I see one.

MR. HINNEFELD: Is that the one about the 95th percent versus 50th percent, John?

DR. MAURO: The 20 film badges, yes.

MR. HINNEFELD: Yes.

DR. MAURO: It goes to that, exactly right.

MR. HINNEFELD: Okay.

DR. MAURO: And that's separate from the OTIB-70, TBD-6000 issue. It really has to do with this particular worker and where he physically was located. This is one of those first items I mentioned earlier, you know, and it does the default approach, the judgment made. This would be an example of where you place the person and as a result of that where you assigned the coworker, the model, whether you use the full distribution or the upper end. So it goes toward that. And therein lies a judgment call that -- so I think that's, I'm looking at this right now on

the screen and that's the only thing that struck me as something that is specific to this case.

MR. HINNEFELD: Yes, John, I think that what will happen in the rewrite of the Site Profile is that will be clearly laid out that either you're going to have this bifurcated case where job category puts these people at 95th percent and these people at 50 percent, or full distribution, or you're going to say to make sure we're claimant-favorable to everybody we're going to choose a level that's favorable to everybody.

DR. MAURO: Yes.

MR. HINNEFELD: So I think the rewrite of the Site Profile will address that one as well although it is, as you said, a different issue than the others that we mentioned.

DR. ULSH: I could speak a little bit more about that but I don't know if that's what you want to do.

CHAIRMAN GRIFFON: I think we're really not going to get anywhere until we see the rewrite, right?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: That makes sense. It's 121.1 through 3, right? That would be all three of them?

MR. KATZ: Do we have a time frame for the rewrite?

MR. HINNEFELD: No, we just sent them the --

MR. KATZ: Oh, just recently?

MR. HINNEFELD: -- the go-do-this. We just sent them the go-do-this. So they've got to fit it into the other stuff they're doing.

MR. KATZ: Thanks.

CHAIRMAN GRIFFON: Okay. Somebody can help me along if they know where the next one is. 122.1, okay.

DR. ULSH: This is a Simonds Saw case. Scott or Mutty, do you want to

summarize this one? Let me make that not in the form of a request. How about Scott?

MR. SIEBERT: Okay. Let's see here. The first one has to do with, just like John was talking about with the previous one, it's 50th versus 95th percentile discussion. That really goes back to coming up with a process for that specific site as to whether we need to update, whether 50th percentile with distribution or some bifurcation like Stu was talking about doing a 95th percentile. That's where we are on that specific finding. That's .1.

DR. ULSH: I think the issue for .3 is the same.

MR. SIEBERT: .3 I think is a billet and rod issue.

DR. MAURO: Yes. Yes. Your generic approach used a 50/50 split between the billets and rods and I believe this person's job category -- this goes specific to this case now, not any overarching issue -- it

turns out he would have been more likely associated with I forget which one it was, the billet or the rod, but the one that was the exposure field that was more limiting. And as a result if you assign him 100 percent of his exposure to the more limiting geometry he would have gotten somewhat higher exposure.

So this again was, well I don't know what you would call this in terms of those categories we discussed. Here's a case where you assigned a generic approach for Simonds Saw regarding the split but for this particular worker, that particular split may not really be claimant-favorable.

DR. ULSH: So is it fair to say that this is an issue with directions provided in the TBD rather than the way it was?

DR. MAURO: Yes, I think that's fair to say because the TBD did not provide any discretion by the dose reconstructor on when and when not to use the 50/50 split.

DR. ULSH: Right.

DR. MAURO: It's universal. And I believe that in our -- so this might be more, well, we only became aware of it when reviewing the case that well maybe it's important to make that distinction and take exception. But I think that goes across the board. I mean, in all of your exposure approaches on these AWEs you come up with, you know, some degree of granularity. Sometimes it's very simple and sometimes it's a little bit more complex. And the only time, let's say it's relatively simple and we review it and gee, this particular case, I've seen it before. It looks like that you followed your approach but I think that the approach needs a little more greater resolution because there are people based on their job categories that one could easily argue you're really not being fully claimant-favorable for this particular person, and I think that's what happened here. So is this a Site Profile issue or an exposure matrix issue, you know, it falls in that gray

area.

CHAIRMAN GRIFFON: And was the first one, if I understood Scott correctly the first one fell into that revision of the Site Profile question. Yes.

MR. SIEBERT: Well, the second one also kind of does because what John was saying, that you know, it's built generically with billets and rods half and half whereas, you know, if you could have the option of picking one or the other it may be more claimant-favorable. It's the same decision thought process I believe.

DR. ULSH: I have not yet given ORAU the direction to pick up the Simonds TBD again. I've checked and the latest revision was earlier this year but I don't think it was for the purpose of reviewing this particular issue.

MR. SHARFI: It was just the new SEC branch. This is Mutty.

DR. ULSH: Right, so that was sort

of like the SEC. I think in order to resolve this particular finding I will on Wednesday when I meet with Scott direct ORAU to pick up the Simonds TBD again and look at this particular issue in particular.

DR. MAURO: By the way, SC&A's in the home stretch of finishing up our review of the Simonds Saw Site Profile. I don't know. John Stiver, are you on the line? I'm not sure. John has sort of been spearheading that. And I know that we're pretty close to having a draft. The only reason I bring it up is that might be helpful if you folks are also in the home stretch of reviewing it and perhaps editing it.

DR. ULSH: Well, it might be, John, or it might be premature for me to tell ORAU to pick it up until we have your findings so that we can take those into account as well.

DR. MAURO: That's why I bring it up because we're real close. We were hoping

to --

MR. STIVER: This is John Stiver. I was on mute there. Yes, Bob Barton is heading that up and he should have a draft ready within the next few weeks, probably around the first of the year.

CHAIRMAN GRIFFON: Is that being picked up under another Subcommittee, part of the --

MR. STIVER: It's a Site Profile review.

CHAIRMAN GRIFFON: It's a separate Site Profile review?

MR. STIVER: Yes, it's a separate Site Profile review.

CHAIRMAN GRIFFON: Is a Work Group assigned to that? I don't think so.

MR. STIVER: I don't know if there actually is.

MR. KATZ: It's not in a Work Group.

CHAIRMAN GRIFFON: Okay. I'm just

curious.

MR. STIVER: It was kind of an oddball situation. The SEC was actually approved before the Site Profile review was complete. For whatever reason a formal Work Group assignment was not made yet.

DR. ULSH: So I don't know how you want to reflect that.

CHAIRMAN GRIFFON: It would definitely make sense to wait for SC&A's review obviously, I'm just trying to think of if there was a Site Profile Work Group we could refer this, you know, to the Site Profile Work Group. That was my initial notion.

MR. HINNEFELD: I think I'm outside Wanda's arm reach here but it's a Technical Document review.

CHAIRMAN GRIFFON: Oh yes, so it is Procedures.

MR. HINNEFELD: It hasn't been assigned and I don't make assignments but

logically.

DR. MAURO: Stu, this is John. The reason all of a sudden the Simonds Saw came to the forefront in our case for the Site Profile was I believe that there was an SEC in the mill. I don't know if that Evaluation Report has been acted on. I have to say I'm not quite sure of the status of the SEC on Simonds. I remember though that SC&A was asked to sort of put the Simonds in the front of the queue because of this SEC or pending SEC.

MR. STIVER: John, I believe the SEC was granted based on the inability to reconstruct thorium doses.

DR. MAURO: Okay, thank you.

MR. STIVER: I don't recall the exact dates off the top of my head.

DR. MAURO: Okay.

MR. STIVER: So we're basically looking at the residual period for the most part.

CHAIRMAN GRIFFON: Well, I mean I think it's worthwhile checking with the team to see about the Site Profile update, but I would also put an asterisk saying that I think it makes sense for you guys to wait for SC&A's review. I'm just not sure where that review goes to at this point, where SC&A's review is going to.

MR. HINNEFELD: Well, they'll deliver it to us.

CHAIRMAN GRIFFON: Yes, right, but I mean on the Board.

MR. HINNEFELD: What Subcommittee?

CHAIRMAN GRIFFON: Yes.

MR. KATZ: Yes, I mean this is one where we could start a new Work Group.

CHAIRMAN GRIFFON: Yes. But it doesn't fit under one of the TBD-6000/6001. It doesn't fit under --

DR. MAURO: No, it's standalone.

CHAIRMAN GRIFFON: Standalone, yes. Right. Okay.

MR. KATZ: So it would be good to speed that along, the SC&A report, as much as it can be since we know.

DR. MAURO: We're in the home stretch.

MR. KATZ: Yes, that's good. Thanks.

MR. HINNEFELD: Yes, apparently the Board made its vote in Santa Fe.

MR. KATZ: Yes.

DR. MAURO: Ted, this is one of those four or so Site Profile reviews that we did slow down last year for budget reasons.

MR. KATZ: Right.

DR. MAURO: But then we brought it back up again quickly when it got, you know, the SEC process began.

MR. KATZ: Right.

CHAIRMAN GRIFFON: Now, moving on to 122.7, this is about thorium internal dose. Is it for the residual period though? I don't know. Because I mean, the SEC was approved

for this very reason, right? So I don't know how much further we would have to go on this.

DR. MAURO: It sure sounds that way, Mark, that this was what triggered it. As John pointed out maybe something that we could take a quick look at it, see if in fact this issue, you know, in effect was resolved when the SEC was granted.

CHAIRMAN GRIFFON: And I guess the question would be for this particular case is this person in the SEC or is it residual period, yes. Because we approved the residual.

DR. MAURO: Yes, that's a good point.

MR. SIEBERT: Let me bring this up real quick. If they're rolling, they would have to be doing the operations --

CHAIRMAN GRIFFON: This looks like -- yes, yes, looks like operational, so.

MR. SIEBERT: It wouldn't be a furnace operator if it was during residual.

MR. STIVER: Yes, I believe the residual was 1957 and beyond.

MR. SIEBERT: '58 and beyond. The SEC is '48 to '57.

MR. STIVER: Up through '57, yes, because there was some question about what was going on in that last year.

MEMBER MUNN: Yes, and the date given here is '52. So it's definitely inside the SEC.

MR. KATZ: So that's one you can probably close then, right?

CHAIRMAN GRIFFON: Yes, I think so. But okay, I'm just asking 122.1.3, it seems like those still need to be addressed as concepts in the -- yes. But in the residual period would they have, I don't even know if the, you know, billets would be an issue in the residual period. All the main materials would be removed, right? Yes. So that wouldn't be a question any further either, would it?

MR. SIEBERT: It would only be during --

CHAIRMAN GRIFFON: During operational, right?

MR. HINNEFELD: Well, during the operational period for people without SEC.

CHAIRMAN GRIFFON: Oh yes, without presumed cancers, okay. So I think we should --

MR. KATZ: Or without 250 days, right?

CHAIRMAN GRIFFON: Right, or without 250 days. So the, I mean a lot of times why we're capturing these, right, is because it's a Simonds Saw issue, not just a particular claim issue.

DR. MAURO: Maybe I can help out a little bit. I'm looking at these 122.3.4 where we're talking global issues for Simonds during the residual period. The only thing I can say right now is that there has been general agreement, this goes back to OTIB-70,

that -- and TBD-6000. There was some discussion where we had some concerns on residual period which are crosscutting for just about all sites, and those issues had been largely resolved when we resolved TBD-6000 and OTIB-70. So what I'm saying is that if it's NIOSH's position in their SEC review that the SEC was granted for thorium during operations but they say they can reconstruct thorium internal doses for the residual period we would agree in principle if in fact the approach that was selected for the residual period followed the protocol as we've all agreed upon in principle and the OTIB-70 and TBD-6000 Work Group. There's a process of reconstructing exposures and there's agreement across the board. Those issues have all been resolved. It's just a matter of is that in fact the way in which the residual period is being handled at Simonds.

MR. STIVER: This is John Stiver. I know that was one of the issues Bob Barton

was looking into in developing this review.

DR. MAURO: Okay. So that would be very helpful.

MR. STIVER: This is the Site Profile that was put together back, you know, around the 2005 time frame. So there may very well be something that's kind of the lag that we were looking at before in this case.

CHAIRMAN GRIFFON: I'll go back to my simpler solution which I made earlier but now I think it's more justifiable which is let's throw this to the Site Profile group, because I think these two issues are still issues but not really in this case. I mean, this is an SEC case. So especially 122.1.3 and .7, the general concept of thorium reconstruction during the residual period would come up, but they're all Site Profile issues and I think --

DR. MAURO: And we'll all be in a better position to discuss it once we have our report out.

CHAIRMAN GRIFFON: Right, right, right.

DR. MAURO: Very good.

CHAIRMAN GRIFFON: So does that make sense, Brant? I mean, you know, I think they're going to be on the table as general issues in the Site Profile discussion. This is an SEC claim at this point, right?

DR. ULSH: We've still got to address it.

CHAIRMAN GRIFFON: We've still got to do it one way or the other, I know, I know. I'm just, I don't want to be having both groups working, you know.

MR. KATZ: We don't have a second group right now but --

CHAIRMAN GRIFFON: We will.

MR. KATZ: We can ask for one.

CHAIRMAN GRIFFON: Right. I'm assuming that we'll set up. Because we don't have enough Work Groups.

MR. KATZ: We don't. Only 26.

CHAIRMAN GRIFFON: Okay.

MEMBER MUNN: We need one for every available site, right?

CHAIRMAN GRIFFON: So I'm going to, as disposition I'm going to put moved to Simonds Saw Site Profile Review Work Group which doesn't exist but I'm assuming Ted will make that.

MR. KATZ: I'll send a message to Jim because he's got to do a number of Work Group assignment matters anyway.

CHAIRMAN GRIFFON: Right. Okay.

MR. KATZ: Add this to his pile.

DR. MAURO: In concept, by the way, this would fit very well with 6000. Even though it's not one of the original attachments to 6000 the issues themselves that are of concern here, you know, metal-working, is very consistent with the kinds of problems we've engaged for the sites that the Site Profile -- I'm sorry, the TBD-6000 Work Group has been working.

CHAIRMAN GRIFFON: Yes, that's why I asked. I thought it was an Appendix approach. Okay, moving on then.

DR. ULSH: I think that might be all.

CHAIRMAN GRIFFON: Is that it? I'm going to send it through, yes.

DR. ULSH: It's worth double-checking but I think that might be it for that matrix.

CHAIRMAN GRIFFON: I'm relying on my yellow highlighting. I don't see any.

MR. FARVER: So for 122.7 which was the review of the HASL data, are we going to close that and keep the other 122.1 and 3 open?

CHAIRMAN GRIFFON: Yes, I think so, because that's operational data, right?

MR. FARVER: Okay.

CHAIRMAN GRIFFON: I don't know if it would play into the residual model but they'll pick it up if it does, right?

DR. ULSH: So you're going to put matrix 122 and -3 not closed but referred to whatever this group.

CHAIRMAN GRIFFON: 122.1 and .3 as referring to the Site Profile group. 122.7 we'll close. Right.

DR. ULSH: Okay. All right, that's it.

CHAIRMAN GRIFFON: So moving on to the eighth matrix is there a lot of new stuff in there?

MR. FARVER: No. Last meeting we stopped at, well we finished with the 153 case.

DR. ULSH: Actually that's the one I think we just delivered a new --

MR. FARVER: That's correct.

CHAIRMAN GRIFFON: So anything before 153 there's no real updates. It's not worth walking through all these?

MR. FARVER: No, I don't think so.

CHAIRMAN GRIFFON: Okay. So I'll

leave my yellow highlighting as is for the others? Because there are a number of ones that are still.

MR. FARVER: Yes. 153.6 and 153.7 they provided a response.

CHAIRMAN GRIFFON: Those are the first two, Brant? Is that?

DR. ULSH: Yes, I think so.

CHAIRMAN GRIFFON: All right, so 153.6.

MR. FARVER: 153.6 is --

CHAIRMAN GRIFFON: Whoever wants to introduce the case.

MR. FARVER: I can go ahead. This is a Savannah River case and the finding says the DR report does not account for all recorded or modeled neutron dose. And this is one of these cases where it has to do with where the employee worked and how they're placed because in the time period of '78 to '82, get my years right, it looks like the DR assumed the worker worked in, and I'm still

getting the location, okay.

CHAIRMAN GRIFFON: I just want to make sure I'm looking at the latest version too because I have as the last action in this in the yellow I have from 4/18. I don't see anything in July. And it was, "SC&A will review NIOSH response." Was there an action after that in July?

DR. ULSH: I think so.

CHAIRMAN GRIFFON: Do you have the matrix open? Is there?

MR. FARVER: Yes, July we had a -- well, I'm not sure if we got -- we did get to it.

DR. ULSH: There is a July. NIOSH further reviewed this case looking at the guidance available at the time which is pre-OTIB 7.

CHAIRMAN GRIFFON: Oh, so I'm not looking at the -- the copy I have open isn't the most current copy of the matrix.

DR. ULSH: That's yellow highlight

for 153.6 that I have in the matrix I have open.

MR. FARVER: Yes.

MR. SHARFI: It moved to another page, at least on my version.

CHAIRMAN GRIFFON: Yes.

MEMBER RICHARDSON: So what's your version titled?

DR. ULSH: 8-30 Case Matrix Working Draft July 15th, 2011 is the one I have. It's 114, sorry, 107 pages.

CHAIRMAN GRIFFON: And I see mine is labeled April, yes.

MEMBER MUNN: April.

CHAIRMAN GRIFFON: Oh here, I have the other one.

MEMBER MUNN: I don't.

CHAIRMAN GRIFFON: Do you want me to email those? Do you have, can you? Well, if you have the whole list, Stu, do you have the eighth one that you could forward to people?

MR. HINNEFELD: Yes, it was in an email that Ted sent in late July and it was with the seventh.

CHAIRMAN GRIFFON: Does it have the eighth?

MR. HINNEFELD: Yes, it has them both.

CHAIRMAN GRIFFON: It should have been on July 15th, right? Or July 16th.

DR. MAURO: The title has July 15th in it.

CHAIRMAN GRIFFON: Yes, and I found my right one now, yes.

MR. HINNEFELD: Okay.

MEMBER RICHARDSON: What was the date?

CHAIRMAN GRIFFON: Was it sent on the 16th?

MR. HINNEFELD: It was sent on the --

MEMBER RICHARDSON: Twenty-first?

MR. HINNEFELD: Hang on a minute.

MEMBER RICHARDSON: Yes, the 21st here. It was the July 15th document.

MR. HINNEFELD: Yes, it was sent on July 21st and it is, the filenames have July 15th in the filenames. Now, who needs it?

MEMBER RICHARDSON: I have it now, thank you.

CHAIRMAN GRIFFON: Yes, I have it. Wanda, do you need it or have you got it?

MEMBER MUNN: I'm looking.

CHAIRMAN GRIFFON: Okay, that makes more sense. There's the July 15th action. Okay. 153.6. So you should have a 7/15 action.

DR. ULSH: If yours is 107 pages long like mine is it's on page 14.

CHAIRMAN GRIFFON: Top of page 14, yes.

MEMBER MUNN: This is the eighth set, right?

CHAIRMAN GRIFFON: Eighth set,

yes. What threw me off is they were both saved on July 15th on my computer, so. Everybody got them? Brad, have you got the?

MEMBER CLAWSON: Trying to.

CHAIRMAN GRIFFON: Okay. Can you just resend them to?

MEMBER MUNN: There it is.

CHAIRMAN GRIFFON: Oh, you've got it?

MEMBER MUNN: This is for the seventh and eighth I think. I think that's it.

CHAIRMAN GRIFFON: July 21st email, is that what you're looking at?

MEMBER MUNN: No.

MR. HINNEFELD: Okay, I've resent it to Wanda and Brad, Jenny.

MEMBER CLAWSON: Stu, did you send it to my CDC account?

MR. HINNEFELD: I sent it to your ICP account.

MEMBER CLAWSON: ICP?

MR. HINNEFELD: Yes.

MEMBER CLAWSON: Oh, that's my government.

MR. HINNEFELD: Do you want it on your CDC account?

MEMBER CLAWSON: If you would, please, yes. I didn't get the one this morning either, that's what I was kind of looking for.

MEMBER MUNN: Might as well send it to me too.

CHAIRMAN GRIFFON: I think he did.

MEMBER MUNN: And there it is. There it is, the 21st. Finally. I guess it doesn't get translated in the mail to where I want it. It's a puzzlement.

CHAIRMAN GRIFFON: We're on 153.6.

MR. FARVER: Are we ready?

CHAIRMAN GRIFFON: Yes, I think we're ready. Yes. Go ahead and pick it up. So we had an action on 7/15 at NIOSH, a further review of this case looking at

guidance available at the time.

MR. FARVER: Okay. The time period in question is 1978 to 1982. The employee was assumed to have worked at 221 FB Line, Savannah River. What NIOSH did is assigned him a neutron dose in '78 and '81 which were the years when the neutron dose was recorded. So no unmonitored and no missed neutron dose was calculated for the remaining years. And in our original finding we site TIB-7 Section 3.1 which talks about non-routine workers from 1971 through 1989 and it lists specific criteria about work location, job description and photon exposure. And we believe that the employee met those conditions and should have been assigned a neutron dose from the other years, other than '78 and '81.

And NIOSH response, to tell you the truth I really didn't understand the response completely. It starts off by saying yes, it could be, you could look at it that way, you know, that we should assign dose for

those years and it talks about it, and then I believe at the end after the case has been reworked for Super S. It kind of lost me here and I'm guessing that you're saying if you rework it and add in the missing dose then the PoC drops and I got confused there.

DR. ULSH: Well, I think the important point from our latest response is when SC&A issued the finding they cited OTIB-7 and I think we've been down the path now where we figured out that OTIB-7 was not in place at the time that this dose reconstruction was originally done. However, a lot of the predecessor guidelines that became OTIB-7 we were still operating under. The bottom line from the latest response is this basically comes down to a matter of professional judgment and I think at the end of the day we by and large agree that we probably should have assigned neutron dose for all of the years in question. We also in our response talked about in addition to the original dose

reconstruction this particular DR had been reworked for Super S and that's not the one that SC&A reviewed because this came after that. So we talked about both the original and the Super S. But at the end of the day I think the take-home message is yes, I think we agree -- it comes down to professional judgment. We think it's probably reasonable to assign a neutron dose.

MR. FARVER: And this is one of those issues where, where did the employee work, where we could assign them or if we can't assign them what information we have on where they worked. And it comes down, it's important for Y-12 and Savannah River mainly under neutron dose, missing and unmonitored neutron dose.

CHAIRMAN GRIFFON: Can I ask, Brant, did it result in any changes in your guidance? I mean, it seems like it still is left up to the -- a little bit of judgment, right?

DR. ULSH: Yes. I mean, I don't think that we changed the Savannah River Site Profile in response to this. I mean, you can never prescribe guidance for every professional judgment case that comes up. I think the impact of this particular one was pretty minimal but, I don't know. Mutty, do you have anything further to add, any other pertinent details?

MR. SHARFI: I do not.

MR. SIEBERT: This is Scott. No, you pretty much hit it on the head. There are some years in the middle such as 1980 that really don't fit the definition even under TIB-7 assuming that the person was exposed to neutron. But as Brant said, we talked about it and walked through all the different years and it would be a reasonable professional judgment that even though it doesn't meet the spirit of the letter of TIB-7 for specifically 1980 it would be reasonable to assign neutrons during that time frame.

So like Brant said, what we did is we reviewed the original assessment and the Super S rework assuming that neutron exposure occurred during all those years, determined whether there was a difference in compensability or not and the PoC really didn't change much. Compensability certainly did not change.

DR. ULSH: So Scott, I don't -- let's just say for the sake of discussion at this particular point in time that everyone agrees up to this point. That may not be the case but let's just say that. Then Mark's question is given the resolution of this where it appears that we have a situation where the guidance, the Savannah River TBD and whatever applicable procedures come into play do we need to make them more prescriptive to cover this situation? Is it going to be something that's common enough that we want to edit that or is this one of those things that you just kind of have to say, you know, it's a one-off

or two-off.

MR. SIEBERT: I would tend to say this is an unusual one because there are, you know, there's time frames during those years where it's clear that we should be assigning neutrons such as when there are neutron badges or when there's an incident report saying he was in FB line. Then the fuzzier things are years where it doesn't meet the requirements of TIB-7 such as there's no plutonium bioassay, the shallow-to-deep ratio does not come all the way up to 1. So I think it's more of a one-off situation than something that you can generically prescribe.

CHAIRMAN GRIFFON: Yes, I guess that would be my question is if it didn't meet those requirements do those requirements need to be modified slightly or whatever. I don't know. But it sounds like you said probably not in this instance.

MR. FARVER: No. I can look at it. I can see it completely different because

under Section 3 which talks about non-routine workers for '71 through '89 it doesn't mention anything about plutonium bioassay, it doesn't mention anything about neutron-to-photon ratios. It is strictly based on work location, job description and did he have previous positive photon exposure.

CHAIRMAN GRIFFON: So you think under that they should have --

MR. FARVER: I think under that it's quite clear.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Now, if it was --

CHAIRMAN GRIFFON: Because this person was a laborer, right? Is that correct?

MR. FARVER: I believe so.

CHAIRMAN GRIFFON: But a non-routine.

MR. FARVER: It was non-routine monitoring. Because if we only had two years I call that non-routine, so…

DR. ULSH: Okay, so I guess we're

in agreement that for this particular dose reconstruction -- because we've basically agreed with your position.

MR. FARVER: Yes. The other question I have, this is another case where the dose goes up and the PoC goes down.

DR. ULSH: Scott, is that something that can be explained easily? Is that?

MR. SIEBERT: I think that's based on the fact that, you know, you're not adding -- I mean realistically the neutron doses we're talking about during that time frame, you're not adding much. And we're at the, you know, we are right at the 45-ish percent point and things are going to go slightly up or slightly down. In this case it went slightly down.

CHAIRMAN GRIFFON: Yes. I mean, I'm looking at the table that was in our response and I don't want to get too specific but the dose for the one organ went, it was

less than, it was about one-third of a percent in PoC. In the other organ it was about one-third of a percent, so it didn't change much. It's in that area where, you know, this is a statistical process.

DR. ULSH: So I think for this particular DR we're in agreement. The remaining question on the table is do we need to change any guidance documents, either SRS TBD or procedures. Doug, you mentioned that we didn't say anything about plutonium bioassay is a signal for a neutron dose. Yes, I mean in general someone working with plutonium or has a potential exposure we would consider --

MR. FARVER: For that one section of the TIB it does not specify. Now, in the other sections where it's talking about I think routine workers and other things, yes, it does mention that's one of the criteria and also about the neutron-to-photon, or the shallow-to-deep ratio. But not in the section

talking about non-routine workers from '71 through present.

DR. ULSH: So I guess what I'm trying to get a handle on is it SC&A's position that we do need to change those guidance documents or not?

MR. FARVER: No, I think that the guidance document is fine, I just don't think that section was followed.

DR. MAURO: So Doug, you're saying this is a QA issue as opposed to a personal judgment issue where some additional guidance might be needed?

MR. FARVER: Yes, I believe the section as it's written was not followed correctly.

CHAIRMAN GRIFFON: Or else our guidance wasn't clear enough. You know, that's the other question, right? Because it sounds like Scott's reading that differently.

MR. FARVER: Well, I think he was looking at a different section.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: I mean Section 4 talks about clarification of the neutron-to-photon ratio and then if you move up to Section 2 that talks about work potential prior to '71 and it talks about the work area and you should have --

DR. ULSH: Is it important that we come to resolution on this last little piece at this meeting?

CHAIRMAN GRIFFON: No, no. Because I also think that Savannah River has had this -- we've got several cases on this, right?

MR. FARVER: Yes, yes.

CHAIRMAN GRIFFON: So I think it'll come back and if we think in this case it was just a matter of not following what was there then that's fine. But I think other ones might come up with the broader question of, you know, do you need to revise. I mean, I think that's going to come up again, right?

MR. FARVER: Oh, I'm pretty sure

it'll come up again.

CHAIRMAN GRIFFON: Is my sense, yes. So for now I think we close this one out. This didn't have a big effect on this particular case.

MR. FARVER: You might want to go back and look at the Section 2 and Section 3 because, you know Section 2 does talk about your shallow-to-deep ratios and plutonium bioassays but then Section 3 doesn't. And I don't know if they want to go back and revise that or just look at that.

CHAIRMAN GRIFFON: Alright.

DR. ULSH: So between the last meeting of this Subcommittee and this one we've now talked about the things that we've delivered that are new. There might still be some things that are, that we delivered back in April but we haven't talked about, I don't know.

MR. FARVER: Correct. So if we start with 154 then --

CHAIRMAN GRIFFON: So there's nothing new on 153.7, is that what you're saying?

MR. FARVER: 153.7 and 153.6 were what we just --

CHAIRMAN GRIFFON: Oh, they're the same. Okay, you're right, got it, got it.

MR. FARVER: And we go to 153.8 and I believe that is our issue on fission products. And I believe we resolved that at the last meeting: failure to account for internal dose from all fission products. Sound familiar?

CHAIRMAN GRIFFON: Sounds familiar several times, yes.

DR. ULSH: Yes, it looks like that was resolved.

MR. FARVER: I believe that was resolved.

CHAIRMAN GRIFFON: Yes, that's closed out, right? Look at that. So then we're up to 154.1 like you were saying.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Okay. So who's up?

MR. FARVER: 154.1 and 154.2 are NIOSH will review.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: So we don't have any information on that.

DR. ULSH: Yes, I don't think we have anything to report on that at the moment.

CHAIRMAN GRIFFON: Alright.

MR. KATZ: So will that be next meeting?

DR. ULSH: I'm putting it at the top of the list. These are now the oldest findings, so.

MR. SIEBERT: Well, correct me if I'm wrong but they are, the comment is NIOSH will review and determine the nature of the error and how to prevent this in the future. Doesn't that fall under the QA/QC process review?

MEMBER MUNN: It should.

DR. MAURO: Sounds that way. It sounds like we're in agreement here, that you agree that this error that was made was in fact an error.

CHAIRMAN GRIFFON: Right, right. Yes, so this falls -- yes, you're right. It falls into that QA/QC grouping if we're continuing to track the QA/QC cases, right?

DR. ULSH: From our standpoint, from the NIOSH/OCAS/DCAS standpoint we still need to answer. It's just a different context.

CHAIRMAN GRIFFON: Yes. Right. Now, do we -- I don't see much highlighting beyond this but I don't know that we got further than this.

MR. FARVER: Oh we did at the last meeting but we -- NIOSH did provide some responses even through set 9 I believe from April.

DR. ULSH: I think that's the

case.

MR. FARVER: So we can keep moving on.

CHAIRMAN GRIFFON: Okay.

MEMBER RICHARDSON: So are those closed, 154.1 and 154.2?

CHAIRMAN GRIFFON: Well, they're under the QA/QC umbrella, that's the problem. Yes. How do we want to handle those, that's the question. I mean, we've got this outstanding group that SC&A forwarded to NIOSH for consideration, right? And that was from the older sets of QA/QC.

MR. FARVER: I think you may want to leave those two open until they look into them. And then they could come back and say we looked into them and close them.

CHAIRMAN GRIFFON: Yes, I think they have to stay open.

MEMBER MUNN: Are we going to try and track -- is this body going to try to track these things that we're putting in the

QA/QC box in some way other than our broader matrices?

CHAIRMAN GRIFFON: Well, we haven't in the past, but. I mean, track them separately.

DR. MAURO: This is John. From the point of view of this particular issue we have agreement that this is something that needs to be fixed, you know, agrees that there's a QA problem, whatever, QA, they didn't exactly follow the procedures. So from the point of view of what we've historically done in the matrices was, okay, this would have been closed. You said yes, we agree, and NIOSH will take action. I don't know what action NIOSH would take to see if it has an effect on the outcome or not but, you know, we agree with the resolution on how to resolve this issue. I guess we're creating something new now in terms of okay, we're collecting, you know, quality assurance issues and now it becomes a matter of, okay, what protocols are

being put in place to catch these types of quality assurance deviations and take some action I guess to get to the root cause, whatever, which is really something different than what we're doing right now in going through this matrix.

CHAIRMAN GRIFFON: I think you're right, John. Yes.

MEMBER MUNN: It's entirely different but then up until today we did not have a directive with respect to the 10-year report. We now have a directive with respect to the 10-year report and it appears to me that that places an additional burden on us to do something in terms of categorization.

CHAIRMAN GRIFFON: I think what makes most sense to me is to close it out here and then when we finalize these matrices we should fill in those blank columns which would identify this as a QA/QC finding and then we do like we did with the first five sets, we sort of do an aggregate report of what we have

for QA findings, stuff like that. And then, you know, the ultimate resolution is your response to the QA/QC aggregate issues that have been identified, not each one in particular.

MEMBER MUNN: They clearly go in the category.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Maybe some words that say transfer to the overarching QA issue or something like that?

CHAIRMAN GRIFFON: No, I think that'll be understood. I mean, any QA/QC ones we have we're going to transfer.

MEMBER MUNN: Or just mark them, essentially.

CHAIRMAN GRIFFON: Yes, mark them, label them QA/QC. We'll have to go through the matrices from --

MEMBER MUNN: We can track that easily under Category.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: So in the context of this matrix then you're going to change it to say that these two issues are closed?

CHAIRMAN GRIFFON: Closed.

DR. ULSH: No action from us required.

CHAIRMAN GRIFFON: No, not in this context of the matrix, right.

DR. ULSH: Not right now.

MEMBER MUNN: It said closed, under category it says QA/QC.

MR. KATZ: Yes, so it seems to me DCAS when they're looking at the QA/QC system, they're going to want to compare all these examples against that system to see that they're all being addressed similarly for the Subcommittee down the road.

CHAIRMAN GRIFFON: Right.

MR. KATZ: They'll want to see those matters.

CHAIRMAN GRIFFON: Exactly.

MR. FARVER: And just so you know,

this has to do with incorrectly calculating the low photon over the -- yes.

CHAIRMAN GRIFFON: Right.

MEMBER CLAWSON: Those have been corrected for this dose reconstruction? Or are we worried about that, Mark?

CHAIRMAN GRIFFON: Well, we concluded that it wouldn't likely affect this case I think, right? At least that's what our summary says.

MEMBER MUNN: That's correct.

CHAIRMAN GRIFFON: I think we looked at it at least enough to know that it wasn't likely to --

MR. FARVER: It could be a workbook issue or something like that where it could affect many cases.

CHAIRMAN GRIFFON: Right.

MR. FARVER: It just has to do with the incorrect equation.

CHAIRMAN GRIFFON: Right. But for this case we're closing it, yes. It wasn't

going to make a big difference.

MEMBER MUNN: And in the Category box we're saying QA/QC, right?

CHAIRMAN GRIFFON: Yes. And I want to look back at my first -- I'll try to, as homework I'll try to go back if it's 6, 7, 8 and try to categorize these things like I did last time. We can bring them back to this Committee.

MEMBER MUNN: In your copious free time.

CHAIRMAN GRIFFON: In my free time. Actually I'm going to be here tonight so maybe Wanda can help me tonight.

MEMBER MUNN: Thanks a lot.

CHAIRMAN GRIFFON: Alright, where do we stand on time? We're getting -- anyway. Alright, let's just move down and try to --

DR. ULSH: The next yellow highlighting I see is 160.1 unless I missed any. Which is page 33 of 107.

MR. FARVER: And Tab 160 in

general is a rework case that we are to provide a review of the reworked case and the original case.

CHAIRMAN GRIFFON: Can I ask, just -- I hate to go back but looking at 155.2 which we did close out, I'll give you that, but I'm interested in our answer here. SC&A understands what NIOSH did and believes it's a subjective call. This is a work location thing again. I think it's Savannah, is it Savannah River?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: This is professional judgment.

CHAIRMAN GRIFFON: So in this case you accepted their arguments on the subjective call I guess, right?

MR. FARVER: This is one, it could go either way.

CHAIRMAN GRIFFON: Yes, okay.

MR. FARVER: We don't necessarily

agree with it but we understand what they did and why it was done that way.

CHAIRMAN GRIFFON: Right. Well, that gets me back to if you don't agree with it.

MR. FARVER: I wouldn't do it that way but I understand how they came up with their numbers.

MEMBER CLAWSON: Aren't we going to be getting a clarification on professional judgment? Isn't that in the 10-year review?

CHAIRMAN GRIFFON: Something did come up about professional judgment.

MEMBER CLAWSON: I thought Stu or Jim was going to go kind of clarify that. I'm waiting to see how that comes out but --

MEMBER RICHARDSON: But this is number one of the three nested issues --

CHAIRMAN GRIFFON: Right.

MEMBER CLAWSON: Are they placed correctly.

MEMBER RICHARDSON: Placing people

and what sort of metrics could be developed so that we could assess whether these judgments --

CHAIRMAN GRIFFON: Were claimant-favorable.

MEMBER RICHARDSON: -- robust and that those judgments could be improved over time. I think this would fall in that category, that major category. I mean, we could look at this as one of these examples again. Because you're imagining a different way of doing this than somebody else imagined how to do it.

CHAIRMAN GRIFFON: Right.

MEMBER RICHARDSON: Presumably there is some gold standard out there about where the person actually was. I mean, if you're trying to think about what the metric's going to be you would want to start by finding someplace where you actually agreed that somebody was there. And then you would go back and use the records, find a living

worker, maybe take their word as where they were and then run their location.

CHAIRMAN GRIFFON: Right, right.

MEMBER RICHARDSON: I mean, I was just trying to think through how you'd start to validate how we're placing people and what locations. It's going to have to be something like that.

MR. KATZ: And where the facts run out is where you go to claimant-favorability as a policy.

CHAIRMAN GRIFFON: Right.

MR. FARVER: See and I think that's where I have the issue with this. I don't think what they did was entirely claimant-favorable.

MEMBER MUNN: But there's always that tension between claimant-favorability and reasonable assumptions.

DR. ULSH: Well, there's a -- I mean, this appears to be one of those cases where we've hashed around, hashed around. At

the end of the day NIOSH and SC&A just can't come to an agreement.

MR. FARVER: And I think what it comes down to in this case is the PoC is so low that we finally said well, you're not going to --

DR. ULSH: So I guess you guys need to maybe say, okay, we've got two differing opinions, what do we want to do with this. That's where we are, right?

MR. KATZ: I agree.

CHAIRMAN GRIFFON: Well, we let it go at one point in this particular instance, but I mean I don't think -- I think we've got enough of these that, you know, it's going to come up several times more, so.

MEMBER MUNN: But especially in cases where you have two not necessarily opposing, but differing approaches that can be taken and in both cases there is a non-compensable claim in front of you. Then this is one of those times when it would appear I

think reasonably that arguments about which of the two is claimant-favorable is moot.

MEMBER RICHARDSON: Yes, I mean I agree with that.

CHAIRMAN GRIFFON: For this particular case, yes.

MEMBER RICHARDSON: In particular, but the kind of general issue --

CHAIRMAN GRIFFON: Right.

MEMBER RICHARDSON: -- this is a recurring issue where it affects reproducibility of results. If we can clarify a procedure that would be useful.

CHAIRMAN GRIFFON: It would improve reproducibility, yes. But I think we can let it go on this case. It just caught my eye.

MR. FARVER: And this, it's pretty detailed. This is back to where you're looking at the actual DOE records for the certain dosimeter cycles and it's marked, you know, Area 3F or such and such so you would

put them in F area and that would be I believe a neutron dose. Anyway, it goes all back to it's looking at their dosimeter records and where they were assigned the dosimeter. And I've got to tell you, even where they were assigned the dosimeter is not going to be very accurate depending on what their job function was.

MEMBER MUNN: No.

DR. ULSH: Is this -- I wasn't at the last Work Group Meeting -- sorry, the last Board Meeting. I know you guys acted on the Savannah River petition. Did that action not supersede this but kind of make it moot? You guys have already weighed in on it.

CHAIRMAN GRIFFON: Yes, it was on worker location related to thorium, but yes.

DR. ULSH: I don't know if the years.

CHAIRMAN GRIFFON: The years I don't know about, yes, yes. Right.

MEMBER RICHARDSON: I don't know

if it makes this moot. That had to do with definition of a Class but it was over the same issues of how well could you place people.

DR. ULSH: Right. The Class definition that we proposed was based on placing people but you guys waited.

CHAIRMAN GRIFFON: Well, this is 1985 though. We went through '72 so it wouldn't completely, you know, resolve that, but anyway.

DR. ULSH: All right.

CHAIRMAN GRIFFON: Yes. I mean, I feel like we closed that one so I don't want to reopen issues at this point. We do have the overall theme, it's going to come up again so we won't lose it. We know particularly for Savannah River and Y-12 and a couple of others it's come up many times, so let's just move on I think at this point.

Alright, where was the next?

MEMBER RICHARDSON: It's your fault. You jumped back to it.

(Laughter.)

CHAIRMAN GRIFFON: I totally take the blame. All right, I'll make up for it. How about we break for lunch now?

MEMBER MUNN: Very good. Excellent plan.

CHAIRMAN GRIFFON: Why was I looking at non-yellow items, you know?

MR. KATZ: It's noon, so I guess 1 o'clock.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: Thanks everyone on the line. We'll be back at 1.

CHAIRMAN GRIFFON: John Mauro, you should stay on the line, please.

DR. MAURO: No lunch for me.

CHAIRMAN GRIFFON: No lunch for you. No soup for you.

(Laughter.)

MR. KATZ: Thanks everyone.

(Whereupon, the foregoing matter went off the record at 12:00 p.m. and went

back on the record at 1:12 p.m.)

MR. KATZ: Good afternoon, this is the Dose Reconstruction Subcommittee. We're back. Sorry we're a little bit late. I think we're ready to go.

CHAIRMAN GRIFFON: It said 12 parties.

MR. KATZ: Let me just check about do we have any Board Members on the line? Mike Gibson or John Poston? No. Okay.

CHAIRMAN GRIFFON: Alright, we're back on the matrix work. And just for people's schedules I think we'll probably try to break around 4. I mean, I think usually by then we're fading out anyway so if we can go through till 4 we're doing pretty good I think.

MR. HINNEFELD: I have to sit out for a phone call at 3:30. I was going to do that anyway and Brant can cover. I mean, he can take care of stuff.

CHAIRMAN GRIFFON: Alright, I know

there's some flights that, you know, I just want to -- I think by 4 we'll be toasted anyway. So back on the matrix, 160.1 -- well, that's actually closed. Oh no, it's not. 160.1 is our next one I guess.

MR. FARVER: Is that a fission product? Oh, this is a case that's been reworked and we are going to provide you a report on this case, 160, comparing the original and then the reworked case to see what changed. And also it's going to be down on Tab 175, I believe.

CHAIRMAN GRIFFON: So you haven't done this yet, right?

MR. FARVER: Have not. This is two reports that we owe you, or one report on two cases.

CHAIRMAN GRIFFON: Does this cover all the findings on 160?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: It carries through, right?

MR. FARVER: It'll just be to show what the differences were between the cases.

CHAIRMAN GRIFFON: Alright.

MR. KATZ: Will we have that at the next meeting?

MR. FARVER: It depends how much other things you want. Possibly.

CHAIRMAN GRIFFON: It's an action.

MR. FARVER: Yes, it is.

CHAIRMAN GRIFFON: Okay. Alright, 161.2, I think, is the next one.

MEMBER RICHARDSON: So then this, I'm sorry, 160.1 gets flagged in that category again?

CHAIRMAN GRIFFON: No, 161 is just a carryover. SC&A is still reviewing it.

MEMBER MUNN: But 161.1 is one of those QA.

CHAIRMAN GRIFFON: Oh, I see. I didn't even look at the particulars because I think they're going to look at the whole case again, right?

MR. FARVER: Yes.

MEMBER MUNN: Maybe this would be a good opportunity to stick QA in that category box.

MR. FARVER: You could.

CHAIRMAN GRIFFON: 161.2 you mean?

MEMBER MUNN: 161.1 is shown closed.

CHAIRMAN GRIFFON: Oh, got it, yes. I see what you're saying.

MEMBER MUNN: As long as we've run across it.

CHAIRMAN GRIFFON: Right. It is identified as a QA.

MEMBER RICHARDSON: And that was the same with 160.1 also.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: And point 3.

CHAIRMAN GRIFFON: Okay, yes. I still want to go through the whole matrices and see what we can categorize. And some it's going to be easier than others it looks like.

MEMBER MUNN: Let's do the easy ones if they already say so.

CHAIRMAN GRIFFON: 161.2 then?

DR. ULSH: Well, the latest I see is that's a NIOSH follow-up and we have not done that yet.

CHAIRMAN GRIFFON: Alright, how about 161.3? It says QA concern.

MEMBER MUNN: NIOSH action.

DR. ULSH: No, we haven't done that yet.

CHAIRMAN GRIFFON: Okay. And moving on down.

DR. ULSH: What's the next one?

CHAIRMAN GRIFFON: I'm just scanning some of the non-yellow ones. What is the next one?

MR. FARVER: 165.3.

CHAIRMAN GRIFFON: 165.3, yes. And --

MR. FARVER: NIOSH was going to check the workbook, see why it was dividing by

1.6.

CHAIRMAN GRIFFON: Yes. Examine the tool that determined why the factor of 1.6 is used.

DR. ULSH: Wait, that was 7/23 and under that there's another entry 4/18/11.

MR. FARVER: Right.

CHAIRMAN GRIFFON: Yes, at the very bottom of that last entry it says NIOSH will examine the total to determine why the factor 1.6 is used.

DR. ULSH: That's not in yellow.

MEMBER MUNN: No, it isn't. It doesn't count, not in yellow.

(Laughter.)

CHAIRMAN GRIFFON: Sorry. Good point. Alright, we'll skip that one. No. I didn't carry through my yellow, sorry about that.

DR. ULSH: Looks like that's another outstanding.

CHAIRMAN GRIFFON: That's still

outstanding, is that what you're saying?

DR. ULSH: Yes.

CHAIRMAN GRIFFON: Alright. I mean, is there an easier way to do this? Do you know any coming up that do have? Oh okay, you've got, okay. 165.4?

MR. FARVER: 165.4, okay. This was an INEL case and the finding concerned the neutron missed skin dose calculations were in error. We've been through a couple of iterations of this and I believe this is a workbook issue. And --

CHAIRMAN GRIFFON: So you're saying you reviewed, the last part says NIOSH and SC&A will review to see if it's case-specific or workbook, right? Or broader potential.

MR. FARVER: My notes here says it's the workbook and the correction factor was only applied to the skin dose and was not used for the bladder dose.

MEMBER MUNN: This is in the best

estimate complex-wide external dose tool. Looks like everybody needs another look-see.

CHAIRMAN GRIFFON: Are you saying this is your update, Doug, that you looked at it?

MR. FARVER: Yes. And, well, one part of it is that, let's see. Yes. If you look up in there the one response, the latest response SC&A points out that I believe the correction factor was not applied to the bladder. That's kind of what it comes down to. It was applied to the skin dose, was not applied to a bladder dose.

CHAIRMAN GRIFFON: I don't see that.

MR. FARVER: Well, in other words they didn't apply the correction factor to both doses.

CHAIRMAN GRIFFON: No, I understand what you're saying. I don't see it in the matrix though.

MR. FARVER: It's up there.

DR. ULSH: Page 53 of 107. I think.

MR. FARVER: 165.4.

MEMBER MUNN: On my copy it starts on page 50 and then goes to page 51.

CHAIRMAN GRIFFON: 165.4 this is.

MR. FARVER: Yes.

MEMBER MUNN: -E-3-1.

CHAIRMAN GRIFFON: I see the entry on 4/11 that I have is NIOSH determined that it should use the correction factors from missed doses and measured dose. See TBD.

MEMBER MUNN: Keep going.

CHAIRMAN GRIFFON: SC&A points out… Okay, I didn't see bladder in there. Okay, sorry. So you think that they didn't, it's not in the tool itself is what you're saying. The correction factor.

MR. FARVER: Correct. I believe it's a workbook error.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Now, we probably

should both take a look at it again.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: I would --

MEMBER MUNN: NIOSH is saying they got it out of the best estimate -- complex-wide external.

CHAIRMAN GRIFFON: I mean, Scott, you don't have anything on this, do you?

MR. SIEBERT: We're, Matt Smith and I are actually going back and forth looking at this and I think we need to, I think we have an idea as to what the actual issue is but I don't want to speak on it, I want to go ahead and hammer it out before the next meeting. We'll have something for the next meeting.

CHAIRMAN GRIFFON: Fair enough. Alright, so I said NIOSH and SC&A will look further at this.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: Alright. Then next, you tell me the next one you have

something on, either one of you, NIOSH or SC&A.

MEMBER MUNN: The very next one.

CHAIRMAN GRIFFON: Next one? Okay.

DR. ULSH: It says NIOSH to provide final PoC determination to Subcommittee along with all 30 IREP run values. Scott, did we do this?

MR. SIEBERT: I can't speak to that because you guys handled the 30 run stuff. Sorry.

DR. ULSH: All right. We'll get it for you for the next meeting.

CHAIRMAN GRIFFON: Did you receive this? Do you know, Doug, yet?

MR. FARVER: No.

CHAIRMAN GRIFFON: Okay, all right. So that's still outstanding. All right, how about 166.6.

MR. FARVER: NIOSH will verify all doses, verify that all additional doses identified in the case planning were addressed

and whether outcome was affected. I don't think they have a response yet on that one. And that would bring us down to 167.3.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: Which comes back to unmonitored neutron doses again. We've been through this several times as you can see in the resolution column. And NIOSH provided a response in April and I reviewed that and I concurred with their response.

MR. SIEBERT: I'm sorry, this is Scott. Doug, I can barely hear you.

MR. FARVER: That's because I'm just playing out and I'm really quiet. I'll speak up.

(Laughter.)

MR. FARVER: Basically you folks gave a response back in April and then I reviewed it and I agree with your response from April.

MR. SIEBERT: I like to hear that. Which number was it?

MR. FARVER: Oh yes.

CHAIRMAN GRIFFON: 167.3.

MR. SIEBERT: Okay, thank you.

MEMBER MUNN: And E-2-3.

CHAIRMAN GRIFFON: Now, can you explain was this a worker location thing?

MR. FARVER: I'm trying to find out which site it was.

CHAIRMAN GRIFFON: Yes. It's not obvious which site.

MEMBER MUNN: Just failed to consider unmonitored neutron dose.

MR. FARVER: I thought it would be a Savannah River.

MR. HINNEFELD: It's Savannah River.

CHAIRMAN GRIFFON: It is Savannah River. I mean, is this another subjective sort of, or was there firm evidence in this case? I think we need to.

MR. FARVER: Okay. You want more, okay.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Well, without going back and finding out exactly what their response was.

DR. ULSH: So it's 167.3?

MR. FARVER: Yes.

DR. ULSH: Scott, do you recall what our response was on 167.3? Do you have it handy, by chance?

MR. SIEBERT: I'm actually digging for that right now. Just a second.

DR. ULSH: Okay.

MR. FARVER: I mean, it's one of these having to do with worker location.

MEMBER MUNN: Partly.

MR. SIEBERT: I have 166 and 168. Can we just average those?

(Laughter.)

MEMBER MUNN: It's partly that but not, not specifically that.

DR. ULSH: It looks like we provided it on April 15th if that helps.

MEMBER MUNN: It's unmonitored neutron dose.

CHAIRMAN GRIFFON: So this TIB-7 goes back to the one we were discussing earlier, right?

MEMBER MUNN: Right.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: Missed dose was greater than the recorded photon dose which would indicate the employee was not routinely exposed. Then it's saying missed neutron dose would be excessively unrealistic. It wasn't signed in accordance with TIB-7.

MR. SIEBERT: For some reason I'm not seeing it either. I'm with Brant and Doug, I know we did and I know Doug was going to look at it and I just can't put my finger on it at the moment.

CHAIRMAN GRIFFON: Yes, I think we need to at least explain your difference in -- because your position's pretty strong here in the, you know. Based on the location along

with the CATI information SC&A believes unmonitored period should be assigned.

MR. HINNEFELD: Okay, I've got the April 2011 response we sent. I can read it.

CHAIRMAN GRIFFON: Sure.

MR. HINNEFELD: Okay. The assignment of neutron dose for early years of employment at SRS often requires some judgment on the part of the dose reconstructor. The decision to include or not include neutron dose is based on many factors including but not limited to the employee's occupation, work location, dosimetry records and guidance in the Technical Basis Document and Technical Information Bulletin.

In general, the guidance of OCAS TIB-7 is followed when making this determination as it was created specifically to help the dose reconstructor determine when to apply neutron dose when no dosimeter results are available. The latest SC&A response indicated that OCAS TIB-7 was issued

two years after the dose reconstruction was completed. However, it was the revision that was issued two years after the dose reconstruction. The original version was issued 9/17/2003, well before the assessment. The sections addressing the action areas were consistent between revisions. As stated in the SC&A response OCAS TIB-7 indicates that a claimant-favorable approach with particular attention to the information in Section 2.2.1 should be applied. None of the conditions specified in Section 2.2.1 are met for this claim in that there is no neutron monitoring in 1971 or later, no documentation of use of the 17 keV calibration curve for shallow dose and no neutron monitoring in any of the dosimetry records that are available. The potential for neutron exposure therefore relies on the employee's work location/job. He was apparently employed at the P-reactor for some or all of his employment and the reactors are known to be facilities where workers can

potentially receive dose from neutron radiation.

Section 2.2.2 of OCAS TIB-7 discusses the potential for neutron dose at specific areas of Savannah River Site including the reactor facilities. It describes the types of occupations for which neutron dose should be assigned. These occupations are maintenance crafts or individuals responsible for radiation monitoring in the workplace such as radiological control technicians. As an engineer, the employee's occupation does not match the types specified in OCAS TIB-7. The work he noted in his CATI related to technical engineering of uranium slugs. Electroplating is mentioned. This does not seem to indicate exposure to neutrons in the reactor area. Therefore, since none of the criteria specified in Sections 2.2.1 and 2.2.2 are met neutron doses are not indicated for the employee even though he worked in a facility

where the potential for neutron dose existed.

CHAIRMAN GRIFFON: I think this is a great example. I'm wondering if we're being too prescriptive in, or NIOSH is being a little too prescriptive in their guidelines. I mean, you have an individual that worked at the facility who apparently would have a recorded photon dose and you're trying to determine who within that facility had the potential?

MR. HINNEFELD: Yes, I'm not an expert in Savannah River but as I understand it the operation, the reactors as they sit there and ran, you know, they're water-reflected. Not necessarily heavy water, but they're water-cooled and water-moderated reactors. There's essentially by the design of the reactors essentially no neutron dose around an operating reactor unless you're in an exposure port or something like that. And that there was a particular bay where it was constructed such that there was some neutron

exposure in that bay and that's where the maintenance crafts worked. And then the people who would survey for maintenance would do that as well. And so I remember TIB-7 is pretty specific about yes, there were reactors, of course there were neutrons in the reactors but there really wasn't neutron exposure potential in the bulk of the workforce. There was just this one area where the maintenance guys worked where it was and that's why maintenance people and people who do radiation surveys made it in here because they would be there measuring radiation levels and maybe working in that area. But other people who may have worked on the reactor would have been in the other part of the work area and not exposed to neutrons. That's the reasoning in TIB-7. I only know it because I read TIB-7. I've got no prior knowledge about the situation at Savannah River. And I believe that's what was presented.

MR. FARVER: That response is very

thorough and follows, you know, TIB-7 exactly. In that instance they follow it exactly so that's why we agree with their response.

DR. MAURO: This is John. Do we have a Site Profile issued here whereby we may not agree and that the exposures are that constrained?

MR. HINNEFELD: Well, it would be a TIB-7 issue.

DR. MAURO: Oh, our TIB-7 issue. That might be what we have here. I can't speak to the status of our review of TIB-7 and whether this issue came up or not. But it does sound like that, you know, if there's reason to believe that it's not that constrained you could see why one person would make one judgment and another a different one. Anyway…

CHAIRMAN GRIFFON: Yes, I was also thinking of that whole issue of placing people. I mean, if an engineer as defined by that job type would have never been in those

locations, you know, Stu's argument seems reasonable, you know. But I'm wondering how much we can rely on the job titles. Maybe in this case we can.

MR. FARVER: According to TIB-7 there's just certain occupations that would be in the area and that's not one of them.

MR. KATZ: They had the interview too. I don't know what the interview results were. Is this an employee or a survivor case?

MR. FARVER: I'd have to go back and find the CATI.

CHAIRMAN GRIFFON: It seemed to say, the CATI, if I heard Stu's reading of that answer correctly was saying he worked in other areas, right? Based on the CATI I thought it said something about --

MR. HINNEFELD: The CATI talks about electroplating of uranium metal slugs which I would think would be 300 Area but I could be wrong.

CHAIRMAN GRIFFON: So it's silent

on this.

MR. HINNEFELD: Yes.

MEMBER MUNN: I would imagine with that much detail in all probability it's a living claimant.

MR. HINNEFELD: Actually, John Mauro, the TIB-7 did in fact review this.

CHAIRMAN GRIFFON: I was going to ask that, yes.

MEMBER MUNN: I was going to try to find that. I thought we'd looked at TIB-7 very thoroughly.

MR. HINNEFELD: It did and made a finding saying that guidance does not specify all occupations that may involve neutron exposure at SRS which seems to be the exact issue --

CHAIRMAN GRIFFON: So it's already on the table, right?

MR. HINNEFELD: Well, the finding is closed.

MEMBER MUNN: I think we closed

it. We referred it back.

CHAIRMAN GRIFFON: The Savannah River group. No, I'm just teasing.

MR. HINNEFELD: Well, here's the thing. The finding of -- the resolution of the finding was to revise TIB-7 to clarify or cancel TIB-7 and provide a new program for the TBD. So in other words, revise TIB-7 to make it clearer or cancel TIB-7 and put that guidance in the Site Profile.

CHAIRMAN GRIFFON: Site Profile, right.

MR. HINNEFELD: And then the closing statement is SC&A's review of Rev 1 of TIB-7 found that NIOSH satisfactorily accommodate SC&A's finding, no further action is required. So Rev 1 --

CHAIRMAN GRIFFON: So you accepted the way they clarified.

MR. HINNEFELD: Now, I don't know what rev I remembered from and I don't know what rev this dose reconstruction was done

with. And I don't know if we prepared this dose reconstruction to Rev 1. So I mean, to be consistent if we were going to say well, Rev 1 has been deemed okay, you know, the thing now would be to say was this DR done with Rev 1 or was it done with Rev 0 in which case you would have to see if it's still okay with Rev 1. Does that make sense? It's making my head hurt.

CHAIRMAN GRIFFON: You don't know, Doug, which one this fell under by any chance?

MR. FARVER: No, but I could go back and check the files and see what one was referenced.

MEMBER CLAWSON: You don't know what the changes to OTIB-0007 were?

MR. HINNEFELD: Well, I see what I can find. I have a wealth of information at my fingertips if I can figure out how to get there.

MS. BEHLING: Excuse me, Kathy Behling. This dose reconstruction was done --

or NIOSH did the dose reconstruction in December of 2005 and the OTIB-0007 was revised in October of 2007. So this was not done under Revision 1. And the description for Revision 1 says, "Clarification of locations, occupations and time periods for which this TBD applies."

DR. MAURO: This is John. I would like to add an overarching issue which I think goes to our opening discussion, and it could be very important. When you get to the point where trying to resolve something at this level of precision and it goes against the claimant I think this really gets to the heart of some of these fundamental concepts and concerns raised in the 10-year review. You know, do we want to operate at a level of assumption regarding job title, job location, et cetera, et cetera that goes to this level of granularity? And I think that is really the core question here because when you get to this point where we are now you're really in

an impossible situation. Certainly both the -- do you look for weight of evidence that is overwhelming, that no, it's really out of the question that this person could have ever had some neutron exposure. If you're looking for that then you sort of have to assign this person some neutron exposure because, you know, it's a fine judgment we're making here. Anyway, I bring this up only because I think this goes to the heart of one of these overarching issues that we've been talking about.

CHAIRMAN GRIFFON: Yes, no, this definitely is the overarching issue, but I also get the sense that in this particular case it was fairly well defined. I mean, I don't dispute that that issue still exists, but in this case it seems like a pretty strong rationale.

MR. FARVER: The rationale they gave which is from Rev 1 of TIB-7, I believe, was what was done. Now, I don't have Rev 0 of

TIB-7 so I don't know what was in TIB in the Rev 0, but according to the current TIB-7, it was done under that guidance.

CHAIRMAN GRIFFON: Right, right.

MR. HINNEFELD: If you want to do that analysis, I can find it and forward to you the Rev 0 if you would like. I don't think we should do it in a meeting.

CHAIRMAN GRIFFON: I think we have to close this one. And I don't, I'd be shocked if this issue doesn't come up again so I think we need to close it for this specific case. Hearing no other objections, I'll close it.

MR. FARVER: In this case, they may not have followed the exact wording of Rev 0 which, to correct it, you would add more job titles and so forth which apparently is what was added to Rev 1.

CHAIRMAN GRIFFON: Yes. Right. That would be the action anyway, so yes, yes.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: So I don't think leaving it open gets us anywhere so I think we close it. Yes.

DR. ULSH: 167.3 is --

CHAIRMAN GRIFFON: Closed. Now that next one is just probably a note from me on where the response is. Check CDC email. So I'll make that clearer. Not yellow. All right, 168.7.

MR. FARVER: 168.4, don't we -- or is that closed?

CHAIRMAN GRIFFON: I have that closed unless I made a mistake.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: Do you have it open?

MR. FARVER: I'm in the wrong spreadsheet. I'm in the wrong matrix.

CHAIRMAN GRIFFON: Alright, 168.7. Looks like a Mound.

DR. ULSH: T-building, must be Mound.

MR. FARVER: We reviewed their April response and we agree with what they did, which, we should have their response there. So we're in agreement with the April response.

MEMBER MUNN: That it can be closed.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Can you just tell us what this was about real quickly?

MR. FARVER: Briefly, this goes back to when they did their dose assessments at Mound previously, and instead of doing a detailed assessment for everyone I think they went in and used a sample result equal to the decision level and calculated a minimum dose from that and assigned it. So I do not believe this employee actually did have a plutonium sample, it was just one that was assigned for dose assessment. Scott, was it something to that effect?

MR. SIEBERT: Yes, that sounds

about right.

MR. FARVER: So, it wasn't that he worked in a plutonium area and had a plutonium bioassay and all this; it just was a method of expediting their dose assessments back when they did them, the '80s? '90s?

MEMBER MUNN: Eighties, I thought, but maybe not.

MR. FARVER: So that can close.

CHAIRMAN GRIFFON: So, I mean, well, this may be drilling down a bit far but why were they assigning plutonium dose then with the previous method? There must have been some rationale.

MR. FARVER: There was some letter stating due to the scope of the project, exposure investigations were not conducted as part of these assessments. I think it was just a way to get through it quickly.

CHAIRMAN GRIFFON: Okay. But you're okay with what the --

MR. FARVER: Yes.

CHAIRMAN GRIFFON: -- their explanation. Anybody follow up on that one?

MEMBER MUNN: Looks like it's covered.

CHAIRMAN GRIFFON: I think I'm okay with it. I mean, I do remember the DR project and they did do some screening, right?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: So I could see that.

MR. FARVER: So this was mid-'90s.

MEMBER MUNN: Was it?

MR. FARVER: I think so.

DR. ULSH: Oh, are you talking about the MJW pre-1989 dose requirements?

CHAIRMAN GRIFFON: Right.

MR. FARVER: Is this the pre or the --

CHAIRMAN GRIFFON: Yes.

MR. FARVER: The dose is from pre-1989.

MR. HINNEFELD: The dose is from

pre-1989. They did it I think in '90.

MR. FARVER: Yes.

DR. ULSH: The late '90s and I think it was issued in 2000.

MR. FARVER: I believe that's what all this was from.

DR. ULSH: Alright, I don't know that I have a more clear answer for you.

CHAIRMAN GRIFFON: We really should know what the report is, yes.

MEMBER MUNN: 170.2?

CHAIRMAN GRIFFON: Where are we, Wanda, 170.2?

MEMBER MUNN: I believe.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: Okay, let's see if I can explain this one. Started off with a finding of failing to consider or assign unmonitored and missed neutron doses for 1947 to '51 and '62 to '88. And this is going to be X-10.

CHAIRMAN GRIFFON: And Y-12 or

just X-10? I see both mentioned.

MR. FARVER: I see both names. Okay. You can go down and read through the NIOSH responses there in yellow, and when you get down to the last one which was in April and NIOSH concludes, the individual should not have been assigned neutron dose. Guidance included in ORAU OTIB-23.

And I went back and looked at OTIB-23 and they did follow that guidance. However, there is, from Section 6 of that OTIB it also says, if the above condition is met concerning the missed dose not being assigned, then dose reconstructors should include appropriate explanatory language in the dose reconstruction report. This should include a discussion in the DR report of the available information regarding work locations and the rationale for the conclusion that neutron doses could not have exceeded incidental levels. In other words, if you're going to claim it's OTIB-23 and there was no potential

then you have to put that explanation in there for that assumption, which was not done, but I mean it's good, it's a good thing to do. So that was my only comment on the response. They did follow OTIB-23 except for the section that says if you're going to not assign the missed dose then you better explain why.

DR. ULSH: So with the further explanation that was not included in the DR that we provided and you are in agreement with our decision not to, but we should have put that explanation in the DR?

MR. FARVER: Yes.

DR. ULSH: Okay.

MEMBER MUNN: Then it can be closed.

MR. FARVER: And actually I think that's probably a good practice for a lot of these cases on this neutron dose was to write down your justification for not doing it.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: Put the statement

in.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: 171.2?

MR. FARVER: Yes.

MEMBER MUNN: More unmonitored missed neutron dose.

MR. FARVER: More unmonitored neutron dose. NIOSH failed to assign unmonitored and missed neutron dose for 1965 to '89.

MEMBER MUNN: An overestimating practice.

MR. KATZ: Is this 171.4?

MR. FARVER: 171.2.

CHAIRMAN GRIFFON: Can I say for that last one, I was still typing on that last one but that NIOSH agrees that the information should have been included, the extra information? I mean I think that's, just so we can close it. The decision was right but they should have had the explanation. Yes, alright.

MR. FARVER: And for 171.2, the employee was the senior engineer draftsman in design technology at ORNL from '56 through 1989. Various work locations throughout ORNL. And neutron dose was assigned, or missed neutron dose was assigned for the period up through 1974 but not for the period after.

MEMBER MUNN: It's an overestimate.

MR. FARVER: And that was basically the finding that they did not assign it for the years of the after-74.

MEMBER MUNN: From '74 to '89.

MR. FARVER: Through '89.

MEMBER MUNN: And they say that it wasn't included because of the work location and no positive data.

DR. ULSH: Well, it looks to me like we did assign it up through '74.

CHAIRMAN GRIFFON: Up through '74, right.

MR. FARVER: Up through '74.

DR. ULSH: I think SC&A's question, if I can paraphrase --

CHAIRMAN GRIFFON: Right. Why before.

MR. FARVER: Why not after.

CHAIRMAN GRIFFON: Right.

DR. ULSH: And our explanation, such as it is, says that this was an overestimate and you shouldn't take, more or less, evidence having -- you shouldn't take the fact that we assigned it prior to '74 as evidence of neutron exposure. That was an overestimating thing that we did. Is that, does that sound like what we're saying here?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: Now, that brings us to, do you agree with that.

MR. FARVER: No. I mean, if it is an overestimate and if there is still some discrepancy about the work locations after that time period, why won't you go the

claimant-favorable route and say well, you know, he should be assigned something through here? I don't think it's exactly clear where the employee worked when. I think there is some question about work locations, but the work locations that are mentioned are --

CHAIRMAN GRIFFON: The same before and after that time period.

MR. FARVER: There are ones that could have neutrons, potential for neutrons. And in our original review, we put a table in there from, it looks like it's the TBD, listing places that should have neutron doses and when they have them. So, our feeling is if the employee's time period fits into that table that's already published then you should go ahead and assign a neutron dose for that period.

MEMBER MUNN: And it looks like the NIOSH position is, if I can paraphrase it, that job description and lack of any neutron monitoring would lead one to believe --

DR. MAURO: This is John. To close the circle on this I guess we would have expected some language saying what changed after 1974 that said well, we'll grant them something pre-'74 but it would be pushing it to its extreme to go post-'74 and I guess there's no language in here explaining what might have changed.

MR. SIEBERT: Well, this is Scott. In the response we gave in April, it stated in the final paragraph in this response the reason the missed neutron dose was not assigned starting in '75 is because all photon doses were zero, no neutron monitoring was performed and the EE's job description would not support neutron exposure or monitoring.

DR. MAURO: And that was different than what was pre-'74.

MR. SIEBERT: Pre-'74, if I remember correctly, I'd have to go back and look, but there, I believe there were positive photons so the dose reconstruction just said

we'll just kind of overestimate and throw it in there, if I remember correctly.

DR. MAURO: Well, that seems to be the key. I mean, what I just heard was there was a rationale for making that switch at that date, and it is written up. Doug, I hate to -- I mean, it sounds like there is some justification. Would you feel that that justification does the trick?

MR. FARVER: Gosh. I remember reading it and I remember thinking that's not very good, but --

DR. MAURO: No, that's important, you know. We have to be comfortable with this.

MR. FARVER: I'll work on number two, so.

CHAIRMAN GRIFFON: Do you want to look at the 4/15 response? I mean --

MR. FARVER: That's what I've got here. It pretty much says what Scott did.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: It wasn't in the job description and --

CHAIRMAN GRIFFON: But were the buildings different or the same?

MR. FARVER: And I can go back to the original report that we wrote and it says the DOE records nor the CATI were very time-specific concerning work locations or job functions.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Now, we can go back and say that this person was a senior engineer draftsman in design technology, yes, technologist. Now, does that fall into one of these people that should be going into these reactor areas?

MEMBER MUNN: No.

DR. ULSH: Well, it seems to me that certainly a draftsman could go into those areas. I mean, it's a generic category. The question is, could a draftsman with no recorded gamma dose plausibly make the case

that he should have been assigned a neutron dose. That seems to be the crux of our argument and I don't know how you guys feel about that.

MEMBER MUNN: If you don't have any photon dose then how can you work on the assumption that you need to be assigned a neutron dose?

MR. FARVER: Okay. I will go back and give a better response on that one.

MEMBER MUNN: Okay.

MR. FARVER: Just because what I have written here seems like I was pretty convinced at the time that I didn't agree with it.

MEMBER MUNN: Okay.

CHAIRMAN GRIFFON: Alright, 171.3.

DR. ULSH: It looks -- I mean, I'm just reading what's in the matrix here, 171.3.

CHAIRMAN GRIFFON: Oh, that's the full case we're asking for, right? So I think there's agreement on this specific finding.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: But then we're asking for the impact on the overall case from all the findings. I think that was the action, Brant.

DR. ULSH: Okay, well unless Scott corrects me, I'm pretty sure that we have not done that, but what I'm wondering is, doesn't 171.2 need to be resolved before that can be done?

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: Yes, I would say everything we've done up till this point --

CHAIRMAN GRIFFON: You've done what you can do.

MR. SIEBERT: -- everything. But unless, if 171.2 gets resolved differently then presently, at best that throws what we did out the window.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Right.

MR. FARVER: That depends on --

CHAIRMAN GRIFFON: Yes.

MEMBER RICHARDSON: I think this again is a QC category. 171.3 is omission of entering data.

CHAIRMAN GRIFFON: Yes. Right, another QA/QC. Yes. All right, 171.4.

DR. ULSH: Sorry, my computer's acting up. I hope you're not waiting on me.

CHAIRMAN GRIFFON: This is a long one. NIOSH provided a response 4/15. SC&A will review. And the answer is?

MR. FARVER: Let me go back to original finding.

MEMBER MUNN: Didn't assign coworker doses correctly for unmonitored years.

MR. FARVER: You know, for some reason, I've missed these 171s. Not all of them, just some of them.

CHAIRMAN GRIFFON: So it's a question of coworker versus environmental being assigned during some years, right?

MR. FARVER: Yes, it gets kind of messy. I guess it comes down to, when do you use coworker data. This is going to be a question of when to use coworker data. And in the response that NIOSH gave for this finding, they quote a sentence out of OTIB-34 that says, in such cases, data from coworkers may be used to approximate individuals' possible exposure. The word may allows the DR to subjectively make a decision to apply or not apply the coworker intakes according to other information. So, this comes down to, well, it depends on the person looking at it.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Do you apply coworker data or do you just go with environmental data?

MEMBER MUNN: Do we have NIOSH's response to that?

MR. FARVER: That was NIOSH's response saying that they could use when they choose to.

MEMBER MUNN: On the 15th.

MR. FARVER: And they chose not to.

MEMBER MUNN: That's their April response.

DR. ULSH: Well, it's not quite that --

(Laughter.)

MR. FARVER: Well, I didn't say you didn't have reason for not doing it, I just said you chose not to.

MEMBER MUNN: Do we have your 4/15 response?

DR. ULSH: Yes, it's in the matrix.

MEMBER MUNN: Oh, is that the 14th? Oh. Way, way down. The very last thing.

DR. ULSH: Oh, it says NIOSH's response.

MEMBER MUNN: It says you provided a response on 4/15 but --

DR. ULSH: You're right.

MEMBER MUNN: And that SC&A would review it, but.

MR. SIEBERT: And this goes back to the later response that we gave in April which Doug is looking at.

MEMBER MUNN: Doug's looking at it but I'm not because it's not on the matrix.

MR. FARVER: Well, I'll go on with what they were stating. They, based on the EE's job description, it is unlikely that the EE had more than a low potential for exposure to airborne radionuclides in the workplace. I don't know. The DR made a decision to apply internal dose based on the EE's exposure potential, not a gross overestimate of the intake for the entire employment period. I don't know.

CHAIRMAN GRIFFON: I guess your point is that it's perhaps not prescriptive enough guidance.

MR. FARVER: Well, if you --

CHAIRMAN GRIFFON: It leaves it open-ended for the NIOSH dose reconstructor.

MR. FARVER: I kind of look at it, if you look at the beginning, it says this is an overestimate of the employee's dose. But clearly, you know, I don't think this is. I don't think this is an overestimate. I don't say it's claimant-favorable. I think there's a lot of questions as to exactly where the employee was when, and I think on those occasions, you need to err on the side of claimant-favorability. So that's my point, I mean, that's my view.

CHAIRMAN GRIFFON: So the response provided on 4/15 didn't give you any further, you didn't feel any better about the --

MR. FARVER: No.

CHAIRMAN GRIFFON: Alright, okay.

DR. MAURO: This is John. Just to help you out a little bit, as I recall the philosophy behind the procedures when making these decisions is, if there's very little

potential that a person received any, whether it's external or internal exposure, you go with environmental. When it appears that there was some potential, some potential, maybe not a lot but some potential that the person had a location or job description that he could have experienced some exposure but not, you know, you go with the full distribution. And when it looks like, yes, he had a job where he was expected to get some exposure and if you're missing some data or he was not monitored, you assign the upper 95th percentile. In this particular case it looks like that there were time periods where you decided to assign environmental, and is that where the issue lies?

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Instead of --

CHAIRMAN GRIFFON: Instead of coworker.

MR. FARVER: -- coworker.

DR. MAURO: Instead of -- I call

coworker the full distribution, but it could also be the upper 95th percentile.

CHAIRMAN GRIFFON: Right.

DR. MAURO: So what I'm hearing is the issue has to do with assigning environmental when we felt perhaps the full distribution should have been assigned, the coworker model.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: That's right, yes.

DR. MAURO: Okay. So here we have a judgment call.

CHAIRMAN GRIFFON: Right.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: Now, I mean I guess, I get back to this question of, on this kind of thing, consistency, like from one DR to the other, how would you expect to have the, you know, without a little, maybe you need more guidance on how someone defines environmental versus coworker for ORNL, you

know. And I know you can't be completely prescriptive.

MEMBER RICHARDSON: So it's interesting because it's -- I think maybe, it's not just for ORNL but maybe there is, there is a way of being prescriptive about the overestimating approach if that's going to continue to be used. When doing an overestimation, you would take, you would use the coworker model when you're in the situation.

CHAIRMAN GRIFFON: That's another side of it, yes.

MEMBER RICHARDSON: To approximate individuals' possible exposures.

CHAIRMAN GRIFFON: Yes, that could be another way to look at it, yes, yes.

MEMBER RICHARDSON: And then a best estimate would require you to make this argument that, based on their occupation and other information, if you were going to refine this, you would use something else.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: I think we have, and I'll certainly be corrected on this, a bit of a difference of opinion on when we talk about an overestimate or realistic. I believe a realistic has to provide a level of assurance that you're not underestimating the person's dose.

MEMBER MUNN: Or overestimate.

DR. MAURO: Realistic? No. I'm thinking the other way. Historically when you used what I would call a bounding estimate that would always be done simply to assign the highest possible, if not impossible, dose to a person so that, and when you do that you deny. And everyone, you know, we've always been comfortable with that. Listen, it's just a quick way to move this thing through. But then you move into this gray area and I'd certainly like to hear a little bit about this. When you're doing, like the person we have before us here, and you assign

environmental to this person because, well, it appears whatever, for your reasons that the most likely scenario here is that he got environmental. I don't, see, I don't consider that claimant-favorable. I would sooner, it's always a semantics or philosophy. I would say well, listen, if there's a possibility that he might have experienced some exposures that were greater than environmental because of uncertainties regarding what he might have been doing and where he might have been, I consider it to be realistic but claimant-favorable to assign him the full distribution. I mean, and I think this is where perhaps the philosophy between how we look at things and how you look at things might differ a little and is worthy of some discussion when we get to this overarching-issue discussion.

DR. ULSH: Have we said what this guy's job title was?

MR. FARVER: This is the draftsman technologist engineer. And the time period is

'56 through '89, a long time. So he probably had many different titles.

MEMBER MUNN: Yes.

DR. ULSH: So it seems like the current status is we put a response on the table and that didn't satisfy Doug's concerns. So the question going forward is, are we at a point where we just have to agree to disagree, or do you want us to do something, or --

CHAIRMAN GRIFFON: Well, I think, you know, I think there's two sides to this. I don't know if we agree to disagree and put it in an overarching, you know, because this will continue to come up, I guess. That's one possibility. But I mean, you know, I wonder, you know, David's point that I think there's two things here. One is the sort of site guidance but the other is -- which would be one type of guidance. The other might be a broader policy guidance which is, as he said, you know, if you're doing overestimating, you know, by default you always use the coworker

model, you don't use the environmental. Some kind of decision like that that NIOSH could put into place. That's a question to throw out there.

MR. HINNEFELD: It might be worth a project discussion about how fine a line do we want to draw on these decisions about exposed and unexposed. I mean, really what level of evidence do we expect in order to conclude unexposed? Because the burden really should be on -- I kind of agree with John Mauro to an extent that the burden should be to prove the unexposed nature in a situation like this where was the person really not exposed. You know, prove that environmental is the right one rather than that there was a potential for exposure and we should be at coworker.

So, I mean it might be a basis for discussion along those lines just in general from starting with our contractor to kind of get a full picture for what kind of level of

evidence do we think is the right level of evidence and why, and then have a discussion when we're prepared to have that discussion. Today we're not really prepared to have that discussion, but we could have that discussion with the Subcommittee at some time when we're prepared to have it. And you know, we have -- rely on Jim Neton for questions of technical sufficiency so we want to get him engaged in that part of that discussion as well, and other folks on our staff as well.

MEMBER MUNN: This is kind of skirting around the issue of quantifying claimant-favorability. This is coming very close to that.

MR. HINNEFELD: It bumps into it, yes. I'd say it bumps into it. This is a piece of it that I can feel -- I can kind of elucidate this one, you know.

MEMBER MUNN: Right.

MR. HINNEFELD: The entire issue of extended claimant-favorability is kind of

large and amorphous but this is a piece of it I can get kind of get my head around.

MEMBER MUNN: Yes.

DR. MAURO: This is John again. I've always been thinking like if you have to make a decision regarding, you know, assuming environmental versus some distribution, I would be looking for affirmative evidence that I should give them the environmental. And if I don't have -- I think you said it also very well, Stu. Lacking affirmative evidence, you automatically -- the realistic analysis, the claimant-favorable but realistic analysis is to give them the full distribution and the coworker dose.

So I get the sense that what's done here is one where, if I have affirmative evidence that he was exposed then I will give him the full distribution. I would sooner say no, the philosophy, and this is certainly a subject for, you know, this higher level discussion. I would say no, no. Only when

you have affirmative evidence that he was not exposed or unlikely to be exposed for a variety of reasons do you go with the environmental. It's almost a difference of, you know, your decision criteria. What do you require? Lacking affirmative evidence then you automatically shift to giving the benefit of the doubt to the worker.

DR. ULSH: Well, okay. I don't necessarily disagree but I guess I would like to bring this into practical terms because it sounds in general like what we're saying here is we have to prove a negative, prove that he wasn't exposed, and that concerns me. But John, maybe you could give me some idea of an example of what you would consider affirmative evidence. Or maybe we want to postpone that discussion.

MR. HINNEFELD: Well, I think we'd want to have it as part of the project discussion. I guess the thing that kind of gets my attention about this is apparently

this person wore a dosimeter during this period of time when they gave him environmental internal. The reason I say that is because we say, well, he wasn't accumulating any dose on his dosimeter during that time. So, you know, I can understand, okay, well he wasn't accumulating any dose on his dosimeter which would indicate maybe he wasn't heavily engaged in radioactive material, but on the other hand he was wearing a dosimeter so apparently he had access to areas where radiological materials were used. So you know, that kind of, you know, where do we come down as a project in a situation like that. Whereas if a person had no evidence of monitoring, you know, no evidence of monitoring record of any kind and had a job title that certainly looked like an administrative job title and was at a site where we know there were administrative areas it would seem to me that there you've got a fairly good burden, you know, you've got a

pretty good set of evidence that indicate well this person probably should get environmental. When we get into the mixed-mode stuff that it gets a little more complicated.

DR. ULSH: So is the path forward then that we need to have a talk with ORAU and then report?

MR. HINNEFELD: Yes, I think it's kind of a little bit of a summit, you know, with Jim and probably Dave Allen.

CHAIRMAN GRIFFON: I think also, I mean, I don't want to speak for David but I think he was making the slightly different point that if you're defining something as an overestimating maybe that's another layer that you can look at. Like if we are saying this is overestimating then by default we should just use coworker and not even consider environmental models in those cases, you know what I mean? You know, then everything else you said I agree with, but this is another level of if we're already saying we're doing

an overestimating case why should we try to be that fine.

MR. HINNEFELD: Yes, why start doing that if you're overestimating. There's really only a legitimate argument for overestimate if what you're doing makes it go faster. I don't know how it would make it go faster to do a part of it a particular way and a part of it another way. I don't know how that makes it go faster.

MEMBER RICHARDSON: Yes, that's what I was wondering because this opens up kind of, you're at some decision-tree point and if you're going to go down the line of justifying why you're want to use environmental as opposed to coworker data I would think it requires the person who's doing the dose reconstruction then, what you're proposing is that they write a justification for kind of why they're limiting the dose in this way.

MEMBER MUNN: It is very

disturbing to hear over and over again that we have badged individuals with long-term monitoring records whose record is not being accepted as adequate. And that as I understand is the basis of what we have here. We have a monitored individual.

MR. HINNEFELD: We have -- finish your --

MEMBER MUNN: No, go ahead.

MR. HINNEFELD: The monitored -- this person has a record of being monitored for external exposure.

MEMBER MUNN: Yes.

MR. HINNEFELD: Okay, and so the question is being asked about what about internal exposure. And so is it a fact, then, that we feel like the person was sufficiently monitored externally, like they hung a badge on this person, gave him access to various parts of the plant. Is there a high level of confidence that they have an internal monitoring record, or that there was zero

potential for any intakes. I mean, a potential for intake that is below the monitoring threshold for, at the time for internal monitoring probably is higher than the environmental exposures at the time.

MEMBER MUNN: Probably so.

DR. ULSH: Well, it's somewhat site-specific. Like I remember at certain time periods at Rocky Flats the dosimetry and the security badge were combined. So that everybody onsite had it and that shouldn't be taken to indicate that they went into rad area.

CHAIRMAN GRIFFON: That's true. And that's the case here at Oak Ridge and that would be something to know in this case.

DR. ULSH: Yes. I mean, it seems like, just stretching the example, at Rocky, Mark, remember when we -- SC&A identified periods when there were no, there were gaps in the monitoring record and then NIOSH went in, NIOSH and ORAU went in and examined that to

see if there was a reasonable explanation for those gaps or if it looked like, hey, this person should have been monitored and we just don't have the records. Remember we did that exercise?

MEMBER MUNN: Yes.

DR. ULSH: I wonder if that could be done here in this particular case. That doesn't solve the overall general issue, it's just this particular case.

CHAIRMAN GRIFFON: Let me just sort of go back to the, you know, if it's an overestimating approach.

DR. ULSH: Well, yes.

MR. SIEBERT: Wait a second. Brant, I want to point out this individual did have internal monitoring for some years. It's not like he didn't have any monitoring whatsoever.

DR. ULSH: Okay.

MR. SIEBERT: He did have internal monitoring from '65 through some time in the

early '70s.

DR. ULSH: All right.

MR. SIEBERT: And if I remember correctly the way it was assessed was coworker was used up until the time he actually had monitoring, used the actual monitoring until that stopped and then it was environmental past that point, based on the thought process that they stopped probably, I'm assuming, since I did the case, they stopped monitoring him internally because there was no reason to.

DR. ULSH: Well, without knowing the particulars of this case and I don't, I would come down on John Mauro's argument that we need to provide an explanation if we're going to -- if the guy was monitored and then all of a sudden he wasn't monitored then we need to show that that was because he became a secretary or something. And I don't know if we did that. Maybe we did.

MR. SIEBERT: All right.

MEMBER RICHARDSON: Somebody else

can talk to me. My view -- who has a different perspective on this. I said during lunch I think to Mark that the participation in the internal monitoring program is partly driven by radiological considerations but is partly driven by sociological considerations. I mean, that's always been my perception, particularly in the Oak Ridge data. You see strong selection into that program. I mean, it's actually an indication of kind of some factors reflecting status and prestige that are related to kind of good health. Those who were selected into an internal monitoring program are different than the general workforce. And you see social dynamics over time of people from different professions, of different races, of different sexes moving into the internal program. I won't say that the dynamics of somebody going in or out of that program in the absence of a job title change means that there was a judgment solely that they no longer had potential for exposure

because there were fluctuations in it that are historical in some bigger sense than just the kind of, the potential for exposure in a given year in a given job.

DR. MAURO: This is John again. Wasn't it also one of the criteria -- I remember there were certain guidelines at least on the Nuclear Regulatory Commission side when you trigger bioassay programs. I assume that, as you go back in time, the philosophy of who is bioassayed and who's not bioassayed is based on what fraction of an ALI or an MPC was the expectation for a particular worker and the kind of job he has. So, it's not that he wasn't, the expectation was he was going to get no exposure, but the expectation was it's unlikely that he would be in excess of some fraction. And I think it might be 10 percent or 25 percent of a DAC or an MPC at that time. In those days it was an MPC. So, I think that's at play here also.

MEMBER RICHARDSON: Yes. I mean,

until someone can explain to me why there are differences in stroke mortality by selection into the bioassay program. I mean, there's something, I mean, something else going on. So you get these, that's not -- it wasn't selection by, I mean the stroke-mortality differential is one of the things. Or actually homicides, accidental causes. I mean things that are reflected to, that are determined by strong social conditions which were not radiation-related ones which, I mean, that become, you know, really obvious when you're looking at the mortality trends here. Anyway, I'm sorry. It's sort of a sideline except that it's -- it's as though we're reading participation in those programs as being kind of solely objective markers of whether that person was in an area with a particular hazard. And I would need to be more strongly convinced that that was, that those decisions were purely objective in that sense.

DR. ULSH: Alright, I hear your concern. I think -- so what we have on the table right now is that we're going to have a conversation with ORAU about that general question of when we assume someone was unexposed versus exposed, and therefore whether to assign environmental versus coworker. And then I think it's fair to think that we'll go back to you on that once we've had that conversation. So that's the general issue.

On this specific case it's pretty clear to me that we're not going to close this today so I've already got an appointment to go over and talk to Scott on Wednesday. We'll take a closer look at this case and talk about the particulars and see whether we can do anything to allay Doug's concerns or, if not, we'll just report the status back to you, Mark. Does that sound reasonable?

CHAIRMAN GRIFFON: Yes, I think so. Yes.

MR. KATZ: When you say report back, do you mean at the next meeting or an email?

DR. ULSH: Yes. I can see Scott and Mutty and I having a conversation about this one in particular on Wednesday and they'll say, here's why we did what we did, and I'll say either I'm convinced or I'm not. And if I'm convinced that I agree with them then I'll just report back to you that look, that's our best and final offer after I talk to Stu and Jim to be sure that we're --

MR. KATZ: You'll send us an email?

DR. ULSH: Yes.

MR. KATZ: Okay, good.

DR. ULSH: Or I'll overturn it and say no, change it.

MR. KATZ: Yes. Whichever way it comes out, it's just -- that'll be nice.

CHAIRMAN GRIFFON: Why don't we take 10 minutes and then we'll have our last

hour and a half or so run to the finish line.

MEMBER MUNN: Very good.

CHAIRMAN GRIFFON: So 10-minute break on the phone and then we'll come back. And we'll go through till about 4 p.m. today.

(Whereupon, the above-entitled matter went off the record at 2:29 p.m. and resumed at 2:44 p.m.)

CHAIRMAN GRIFFON: We'll start up again for our last segment. Another hour and 15 we can get in. All right, we left off on 171.5, I believe and I documented Brant's course of action for 171.4 so I think we're okay with that. So 171.5.

MR. SIEBERT: This is Scott. Can I ask a question?

CHAIRMAN GRIFFON: Too early for a question. Go ahead.

MR. SIEBERT: The question I have is why the hell am I asking questions that I'm entirely -- never mind. Move on to 5.5. Sorry.

CHAIRMAN GRIFFON: Okay, 171.5.

MR. FARVER: Okay. The finding was NIOSH failed to address different solubility types. This has been going back and forth a couple times. And I believe, in their April response, it came down that there was a problem accessing the files that had to do with the solubility. It's not that they didn't do it, it was a, either you couldn't access them or the files weren't included at the time. Is it something like that, Scott?

MR. SIEBERT: Yes. The files were run, I just think you guys couldn't open them was the problem.

MR. FARVER: Okay. Anyway, so that has been taken care of and I looked at those so we can close that finding.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: Yay.

MEMBER RICHARDSON: Was that like the IMBA runs or something like that?

MR. FARVER: It was spreadsheets.

MEMBER MUNN: And so you did or did not review the provided workbook?

MR. FARVER: They were there but not accessible.

MEMBER MUNN: Okay, so --

MR. FARVER: Once they were accessible I looked at them and they were in fact, they checked the different solubility types.

MEMBER MUNN: And so we're okay with that?

MR. FARVER: Yes.

MEMBER MUNN: We're done?

MR. FARVER: Done.

MEMBER MUNN: Done.

MR. FARVER: Not done, just finished with that one.

MEMBER MUNN: Well, closed for one. I'm trying to close one here.

CHAIRMAN GRIFFON: Closed, yes.

MR. FARVER: Okay. I don't know if we want to do this next one. Okay. This

has to do with information in the CATI report. NIOSH failed to completely address the contamination incident reported in the CATI report. This person worked at ORNL and it was a time period when there was, was this the release over at 3019?

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Yes. And this was, the employee worked in building 3022. So was 3019 close to 3022? If so, what happened? And I know NIOSH provided files on this back in April that I reviewed and -- what they say is true, you know, it is bounding. Well, if you do an acute intake in 1959 or the '70 to '72 chronic they're essentially the same. The point is, unless you go back and look for this information about the building and about the incident you're not going to know that. In this case, they just happened to turn out to be very close.

MEMBER MUNN: So it's six of one and half a dozen of another.

MR. FARVER: Yes. My point is that you don't know till you look.

MEMBER MUNN: Well, you've looked and there's no longer any question.

MR. FARVER: No, so we can close this one, Wanda.

MEMBER MUNN: We can close it. Good.

CHAIRMAN GRIFFON: Does that mean the general point you're making is that the CATI reported this. They never really assessed it, they just kind of got lucky.

MR. FARVER: Yes. They probably should have looked into it more since it was mentioned in the CATI report.

CHAIRMAN GRIFFON: I think this gets into another of those tough ones that we've -- because a lot of times we've --

MR. KATZ: I'm sorry to interrupt but someone on the line hasn't muted your phone and you're banging around a lot and it doesn't bother us so much but it might the

other folks who try to listen by phone. So, someone needs to mute their phone. Thanks. Sorry.

CHAIRMAN GRIFFON: I was just wondering if this is a question of, a lot of times we get into this mode of assuming that the chronics are going to cover any acute incident, you know. And I wonder if there's, you know, I mean at what point, I've always sort of wondered this. At what point if an incident's documented in the CATI does NIOSH investigate, you know. I remember, the DR, you added a section that basically states that NIOSH considered all incidents mentioned in the CATI and the approach is bounding but I was never comfortable with whether NIOSH actually investigated any of those incidents or just determined as a general principle that these chronic approaches are usually bounding of acute exposures.

MR. HINNEFELD: Well, I think you've got a mixed bag. There are some cases

where people will remember events that were, you know, fairly significant during their history of being monitored. As a matter of course those are pretty much going to be covered by assuming a chronic intake. This is a little different cat we're talking about here. We're talking about a specific event that was related in CATI. Certainly really out of the ordinary. But it seems like from our initial response that the judgment was that the person was largely unaffected by the event. Wouldn't you say that was the position of the original response? Because they were in a different building.

MR. FARVER: Correct. Because it was a different building, it did not affect them, I think was the premise.

MR. HINNEFELD: I'm not saying it's true. I'm saying the judgment of the original dose reconstructor.

CHAIRMAN GRIFFON: That was the judgment of the original dose reconstructor or

the judgment of our process?

MR. HINNEFELD: According to our initial response it depicts that as the judgment of the original.

MR. FARVER: What prompted us to look at it was well gee, 3022, is that close to 3019 because I know that whole area was affected.

MR. HINNEFELD: There was, yes, there was plutonium outside on the streets, there was, you know. So it got outside the building. So that's the question.

MR. FARVER: And then it just went from there. Well, where is 3022. Well, it's no longer there, it's been torn down. Well, where was it and that's how we started looking into that.

DR. ULSH: And this was an incident that occurred with plutonium. And the person had plutonium bioassay?

MR. HINNEFELD: It was years later, wasn't it?

MR. SIEBERT: Yes, it was years later. Correct. And we actually had assigned coworker during the time frame as well, not just a chronic over that time.

MR. HINNEFELD: During the time he was monitored?

MR. SIEBERT: Prior to the time he was monitored.

MR. HINNEFELD: Including the time of the event?

MR. SIEBERT: Correct.

MR. HINNEFELD: Oh, okay.

CHAIRMAN GRIFFON: I didn't know that.

MR. HINNEFELD: I didn't either.

DR. ULSH: Well, yes. Two questions. Number one, did the methodology that we used adequately estimate or overestimate the exposure he could have gotten from this incident? Sounds like we're saying yes.

MR. FARVER: Yes.

DR. ULSH: But another question would be in the dose reconstruction report did we acknowledge this incident that was reported in the CATI and explain why, what we did?

MR. FARVER: You acknowledged it in the CATI and said we should be covered with your -- or how was that phrased?

DR. ULSH: Yes, is it that standard boilerplate language that we use where?

MR. FARVER: The claimant-favorable assumptions used in this dose reconstruction adequately account for any dose received from this event.

DR. ULSH: Scott, did you want to --

MR. FARVER: It's a more detailed write-up of the CATI report than a lot of them.

MR. SIEBERT: Right, it does say, it mentions the explosion in adjacent building. No information found in the DOE

records. The interview process, there wasn't a time frame where it was mentioned in the CATI although we reviewed it later on and figured out it was in 1959 probably.

DR. ULSH: Mark, I know your programmatic concern that we sometimes don't take CATI seriously. It sounds like in this case we did.

CHAIRMAN GRIFFON: I understand it that way.

MR. FARVER: I think more of the concern in this case was, gee, since it wasn't the big 3019 incident, you know, is there anymore information available. Or, you know, would it affect this building of 3022 to begin with, that was our first question. And it's just one of those things.

CHAIRMAN GRIFFON: I actually thought initially that it was just given the boilerplate treatment.

MR. FARVER: No.

CHAIRMAN GRIFFON: It sounds like

they went further, so that's good. I'm reassured. And given that, I don't have the programmatic concern here and it sounds like the case specifics closed, right?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Okay. We're closing all kinds of fun these days. Haven't given any to Wanda's subcommittee either so let's work on that.

MEMBER MUNN: That's all right. It's late in the day, you don't need to disturb yourself at all.

CHAIRMAN GRIFFON: Okay, moving on.

MEMBER MUNN: 172.1 is a QA concern.

CHAIRMAN GRIFFON: 171. I'm not sure why I used the aqua color. Does anybody know?

MR. FARVER: In one of your blue moods.

MEMBER MUNN: I think that was a

no further action, case-closed flag that we started off with a long time ago.

CHAIRMAN GRIFFON: I think that can be removed.

DR. ULSH: The next one I see with yellow is 173.2.

CHAIRMAN GRIFFON: I know why it wasn't removed, because I try to remove it and I can't.

MEMBER MUNN: That's a good reason.

CHAIRMAN GRIFFON: That's some reason. Anyway, we'll go on to 173.2.

MR. FARVER: Still stuck in 171. Hold on.

CHAIRMAN GRIFFON: Yes, I can't clear it. It might be because they copied it from another matrix and it had the blue. I don't know. It's weird. Okay.

MR. FARVER: 173.1, recorded photon dose uncertainty factor is inconsistent with the Technical Basis Document. A little

background. This comes from Los Alamos and the employee worked there from '73 to 2000 as a mechanical technician.

MEMBER MUNN: Wait.

DR. ULSH: 173.1 is closed.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Oh.

CHAIRMAN GRIFFON: 173.2.

MR. FARVER: Well, it's still from Los Alamos.

(Laughter.)

MEMBER MUNN: So there.

CHAIRMAN GRIFFON: You were just giving us background, right?

MR. FARVER: Okay, I've got another finding. 173.2, take that. Failed to properly account for all the reported neutron doses. Gee, what a surprise.

CHAIRMAN GRIFFON: Sounds familiar.

MR. FARVER: While verifying the input data it was discovered that the

dosimeter neutron dose for 1993 was missing in the calculations.

DR. ULSH: You're talking about neutron dose. Is that 173.3 that you're looking at?

MR. FARVER: Okay.

DR. ULSH: That's photon doses.

CHAIRMAN GRIFFON: That's photon, yes.

MEMBER RICHARDSON: So 173.1 and .2 and .3 are all just QA/QC, right?

CHAIRMAN GRIFFON: They do seem like QA, yes.

MR. FARVER: Okay. I was looking at our draft report that does not have that.

MEMBER MUNN: So the new calculation didn't affect these.

CHAIRMAN GRIFFON: Yes, we had an agreement on this and then they checked it but there was further action here.

MS. BEHLING: This is Kathy. I believe for 173.2, the greater than 250 keV

missed dose was calculated improperly, but I think we were concerned with just a work locator.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: And would it be carried through, right.

MEMBER MUNN: To see if the error could have resulted in --

MR. FARVER: I don't know.

CHAIRMAN GRIFFON: So I'm assuming both --

MR. FARVER: Both parties should check workbook.

CHAIRMAN GRIFFON: Right, okay.

DR. ULSH: Scott, we haven't done our part of this, have we, where we review the workbook to see if it could have resulted in a broader problem?

MR. SIEBERT: I'm looking at it. I don't believe we reviewed the workbook from that time frame.

DR. ULSH: Okay.

MR. FARVER: And the same goes for 173.3.

MEMBER MUNN: Same issue.

CHAIRMAN GRIFFON: Right.

MR. FARVER: 173. Where are we at?

MEMBER MUNN: 173.5.

MR. FARVER: Looks like that's closed.

MEMBER MUNN: That's actually closed even though it's still yellow.

CHAIRMAN GRIFFON: All right, I'll get rid of the yellow.

MR. FARVER: Some yellow from an earlier meeting.

MEMBER MUNN: Yes. Some Old Yeller.

CHAIRMAN GRIFFON: Oh my gosh.

MEMBER MUNN: Sorry.

CHAIRMAN GRIFFON: Have that stricken from the record.

(Laughter.)

CHAIRMAN GRIFFON: 174.1.

MR. FARVER: This is another workbook to review. There's no specific tool for Portsmouth so they used a K-25 tool with modifications. So, what was the original finding? DR overestimates the recorded prostate dose.

CHAIRMAN GRIFFON: Overestimates.

MR. FARVER: Overestimates. So, basically they just took an air calculation workbook and modified it with the Portsmouth parameters.

MEMBER MUNN: So have you guys taken another look at it?

MR. FARVER: No.

MEMBER MUNN: Okay.

CHAIRMAN GRIFFON: Okay. So it remains your action. Alright, is that it? 175.1.

MEMBER MUNN: 175.1.

CHAIRMAN GRIFFON: That might be it for what we have responses for.

MEMBER MUNN: All missed neutron dose. Not accounted for. That's that older building.

MR. FARVER: I don't have that marked.

CHAIRMAN GRIFFON: So did -- do I understand this correct? Did NIOSH have previously unavailable information, they reworked this and now SC&A's reviewing the reworked case?

MEMBER MUNN: That's what it says.

MR. FARVER: That's it, that's what we're doing. This is the other case, 160 and then 175.

CHAIRMAN GRIFFON: Oh right, you mentioned the other. Yes.

MR. FARVER: Yes, so all this under 175 is basically where we're going to compare the reworked case with the original case and then report back on what the changes were.

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: So that's still an SC&A task, is that what I hear correctly?

MR. FARVER: Correct.

MR. SIEBERT: Okay. Thanks, Doug.

MR. KATZ: So will that be ready for the next meeting?

MS. BEHLING: This is Kathy. I'm assigned to that one, yes. I apologize.

MR. KATZ: Thanks, Kathy.

CHAIRMAN GRIFFON: Alright.

MR. FARVER: And then we are into attachments and I believe they only responded back to Bridgeport Brass which would be Attachment 1.

MEMBER MUNN: 175, that's all under that old. Attachment to Bridgeport Brass.

MR. FARVER: Is that what you believe, Brant? That you responded back just to the Bridgeport? That's the only one that I could find.

DR. ULSH: That's the only one I

know of.

MR. FARVER: Okay. And I don't believe I have responses to those, but I will by next meeting.

CHAIRMAN GRIFFON: What is this one for? I was updating the last one.

MR. FARVER: This is one of our mini-profile reviews.

CHAIRMAN GRIFFON: Oh yes.

MR. FARVER: That we did, one of three.

CHAIRMAN GRIFFON: Right.

MR. FARVER: And this one was for Bridgeport Brass.

DR. ULSH: So Attachment 1 is Bridgeport Brass and then there are findings, 1, 2, 3, 4, 5, several findings on Attachment 1 related to Bridgeport.

MR. FARVER: Number 2 is Harshaw.

DR. ULSH: Well, the Finding 1.

MR. FARVER: Attachment 2, sorry.

DR. ULSH: Finding 1 looks like

that's a NIOSH item, right?

MR. FARVER: Well, I have the response from April. It says NIOSH agrees that there is limited data prior to 1960. However, based on 1960 HASL report the later date issued bound the earlier production runs.

DR. ULSH: Oh okay, so maybe the matrix is -- because that's not in the matrix right now, is it?

MEMBER MUNN: No, it isn't.

MEMBER RICHARDSON: But it's in this document called Bridgeport Mini TBD Review.

MR. FARVER: Your response is in the matrix for April 2011. The copy that I have, the July 2011 version.

MEMBER MUNN: I've got the July 2011 version. It's not in there.

MEMBER RICHARDSON: It's not in the July 15th, 2011.

DR. ULSH: Right, that's what I'm looking at and I don't see it.

MEMBER RICHARDSON: But it's in this other document.

CHAIRMAN GRIFFON: No, they're separate documents, right? Because I probably didn't --

DR. ULSH: Separate TBD review.

MR. FARVER: It's in my document.

DR. ULSH: Okay, so we have provided a response and SC&A needs to review it then for Finding 1, Attachment 1?

MR. FARVER: Yes.

DR. ULSH: Okay.

CHAIRMAN GRIFFON: I'll add those things into the matrix just so we have them all in one spot. I think we were working from, you know, we started going to that other separate document.

DR. ULSH: Okay, got you.

DR. MAURO: Mark, this is John. I have to say I did the original reviews of these three attachments. I have to say I don't recall reviewing the responses that may

have come in. When did those responses come in to these concerns?

MR. FARVER: April.

DR. MAURO: In April? Yes, you know, you may have sent them to me but I have to say I may have looked at them, I don't recall, or maybe someone else did.

MR. FARVER: That's okay.

DR. MAURO: So whether or not we have a position regarding each of these responses or not. I'm really not in a position to say.

MR. FARVER: I think what we'll do is we're just going to try to respond to these today for these attachments.

DR. MAURO: Okay.

DR. ULSH: Just so I understand the status, for Attachment 1, all the findings associated with Attachment 1, is it true that NIOSH has provided responses and SC&A has to review them?

MR. FARVER: Let me get back to my

responses that don't exist here.

MR. HINNEFELD: I don't see a response for Finding 3.

MR. FARVER: Not for Finding 3.

DR. ULSH: So that's a NIOSH action.

MR. FARVER: Finding 5, 4, 5A.

MR. SIEBERT: I'm looking at what we sent over April of '11 and I've gotten responses for all four findings.

MEMBER MUNN: There are six findings. Finding 5A.

MR. SIEBERT: I can only say that's what I sent over I think to Brant. They may have changed from that point, I'm not positive.

DR. ULSH: So in other words Scott might have sent it to me and I might not have sent it on to you is what he's saying.

(Laughter.)

MR. SIEBERT: No, I think you forwarded it on, I just, I don't know if you

made some changes along the way, removing one of the responses, something like that.

DR. ULSH: I'm not sure.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: Can you both send me the latest and greatest and I'll merge them into the matrix of sort of a path forward on this?

MEMBER MUNN: I think that's a good idea.

CHAIRMAN GRIFFON: And if you have, I mean, I don't quite understand who -- if it's for me to decide right now, I don't know who had the last response, so.

DR. ULSH: It sounds like we may have responded on some of these but I don't know about all of them.

CHAIRMAN GRIFFON: All right, all right.

MR. FARVER: And that was the only attachment that I believe we got responses to.

DR. ULSH: And there are how many

attachments, two or three?

MR. FARVER: Three.

DR. ULSH: Three attachments. So we still owe you responses on the Attachment 2 findings and the Attachment 3 findings.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: And then if you could forward your responses to Attachment 1. You have those, Doug, you said?

MR. FARVER: Well, at least I have some of them.

CHAIRMAN GRIFFON: Yes. Just forward them to all of us so, and then SC&A, you can work on them and I can populate the matrix with them and be up to date.

MEMBER MUNN: There's Attachment 2 here. I have all these notes that Mark Griffon needs additional time to consider.

CHAIRMAN GRIFFON: That's in your private matrix?

MEMBER MUNN: It says right here.

(Laughter.)

MR. FARVER: Okay.

CHAIRMAN GRIFFON: So that's where we'll leave it, right? I mean, we'll forward the most recent version. We'll repopulate the -- I'll update the matrix with the most current version. You're going to -- NIOSH is going to respond to Attachments 2 and 3.

DR. ULSH: Yes, correct.

CHAIRMAN GRIFFON: And then SC&A will respond to NIOSH's response for Attachment 1.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: The outstanding actions. Okay. Then that's it for this matrix, right?

MR. FARVER: Yes.

DR. ULSH: Before we do whatever it is we're going to do next, it's my intention to direct ORAU for the next meeting to focus their efforts on the remaining items from this matrix. We closed the seventh, right? There's no outstanding items in the

seventh, is that correct?

CHAIRMAN GRIFFON: I think there's one but I think we couldn't do anything with it immediately, right? If I recall.

DR. ULSH: That might be. I might be misremembering.

CHAIRMAN GRIFFON: I mean, the Aliquippa Forge thing. It says rewrite the Aliquippa Forge Site Profile.

DR. ULSH: Okay.

CHAIRMAN GRIFFON: We don't really have a Site Profile Committee for that so I think we've got to keep it here.

DR. ULSH: Okay.

CHAIRMAN GRIFFON: But that's -- so essentially it's closed, right.

DR. ULSH: All right.

MR. KATZ: There's the Simonds Saw item, too.

CHAIRMAN GRIFFON: Yes, but that we referred to the Site Profile Committee that doesn't exist.

MR. KATZ: Oh, that's true.

CHAIRMAN GRIFFON: Yes, yes.

DR. ULSH: So at the next meeting we'll start with the eighth matrix?

CHAIRMAN GRIFFON: Yes.

DR. ULSH: So I'll tell ORAU to focus their efforts on the items in the eighth matrix.

CHAIRMAN GRIFFON: That makes sense, and those attachments -- including those attachments.

DR. ULSH: Right, including those attachments.

CHAIRMAN GRIFFON: I think if we got through that that would be progress.

DR. ULSH: Right.

CHAIRMAN GRIFFON: Alright, so are we closing this for now?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: And moving on to the ninth or does it make sense at this point? Are we just going to be spinning our

wheels? I mean, we don't have to go through till 4 if we can't be productive.

MR. FARVER: No, I've got --

CHAIRMAN GRIFFON: You've got some?

MR. FARVER: If you just want to bounce around and want to close some.

DR. ULSH: Okay. I don't have the ninth, well maybe I do. I've probably got it somewhere.

MS. BEHLING: Before we start the ninth, can I ask a question? Kathy again. I believe at the last Subcommittee Meeting and forgive me because I haven't been as close to this for a while. Didn't we select cases for PER 12 for the, you know, high-fired plutonium?

MR. KATZ: Yes, we did.

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: Has SC&A received those cases yet from NIOSH? Just looking at it or working on them. I haven't seen them.

MR. KATZ: I don't know who's interacting with DCAS on that but that should be done directly between SC&A and DCAS, acquiring the cases. I believe the cases were selected and -- yes, DCAS selected the cases and gave you references for the cases I'm pretty certain.

DR. MAURO: This is John. I think the ball is in our court on that.

MS. BEHLING: Okay, so we're just supposed to go into NOCTS and pull out all of the information that we need?

DR. ULSH: Oh wait, I thought we collected them and --

MR. HINNEFELD: No, that was the 15th set, wasn't it?

MR. KATZ: At the last meeting, you definitely selected the cases for this. So how, the mechanics after that, I have no idea, but the cases were selected.

MR. FARVER: Is there a directory under the DR Subcommittee on the O: drive?

MS. BEHLING: No, I didn't see anything in there and I just wanted to be sure we didn't drop the ball on that.

MR. FARVER: Is there a directory there for PER 12? PER something?

MS. BEHLING: I did not see it.

MR. FARVER: Okay. I saw one somewhere but it could have been anywhere.

DR. ULSH: Well Kathy, I recall collecting, you know, a bunch of folders and giving them to you but I can't swear that that was related to PER 12. I might be thinking of something different.

MS. BEHLING: You did do that. I thought that was for the 15th set.

DR. ULSH: Could be.

MR. FARVER: Yes, I think that was the 15th set. And remember, we selected the ones for PER 12.

DR. ULSH: Right.

MS. BEHLING: And I guess my question was, do we just go into NOCTS and

gather the files or should there be a folder put out there. I just didn't, you know, because I don't believe SC&A has started working on those. Am I right, Doug?

MR. FARVER: No, you haven't.

DR. ULSH: Well, in the past we have collected them for you and put them in a specific location.

MS. BEHLING: Yes.

DR. ULSH: If you want to follow that protocol then that's I guess what we would do.

MR. HINNEFELD: There is a PER 12 folder but it gives the identification of the claims that were selected but it does not include the NOCTS files, it looks like.

DR. ULSH: So it looks like we need to collect the NOCTS files.

MR. KATZ: Is there a big difference between you collecting those and them going into NOCTS? They have the files.

MR. HINNEFELD: Well, the

efficiency is our computer people can do it automatically, put them all in one place.

MR. KATZ: Okay.

MS. BEHLING: It's always helpful for us.

MR. HINNEFELD: If you're coming in through, as SC&A does, you come into the system through CITGO, it's not the quickest responder. So, it would probably take -- I hated to break your bubble there.

(Laughter.)

MR. HINNEFELD: There actually are better systems out there. But it would, I think it would work better. They still come in through CITGO but they wouldn't have to, it's still quicker to just be able to pick up the file. So okay, you've got that one? Okay. Because they're identified in that folder but the NOCTS files aren't there.

CHAIRMAN GRIFFON: Thanks, Kathy, for keeping us on the ball on that one.

MS. BEHLING: Thank you.

CHAIRMAN GRIFFON: Alright. Now, for the ninth set are we working from this latest matrix? Does it finish with 11/8/10? That's the latest version I seem to have. November.

MR. SIEBERT: That's the latest version I see as well, Mark.

CHAIRMAN GRIFFON: Okay, all right. Just wanted to make sure we're all on the same --

MR. HINNEFELD: I sent that to the Subcommittee on, let me think. I think I did on July 15th. July? Yes, 7/15 I sent I believe the one we're talking about. I actually attached the email that Scott sent to me.

CHAIRMAN GRIFFON: But the name of the file was still --

MR. HINNEFELD: The name of the file is ninth set, and ninth is 9t3 instead of 9th, Case Audits Issues Matrix, 11/08/10.

CHAIRMAN GRIFFON: Ten, right.

That's the one I have too. So as of in 15 minutes, this will be slightly revised.

MEMBER MUNN: It would really be helpful to get current updates of all these in one place.

CHAIRMAN GRIFFON: That would be a good idea.

MR. HINNEFELD: You ought to use the procedures application to put your databases in. It could be adapted.

CHAIRMAN GRIFFON: Yes, I know, we've heard. All right, Doug, start us down one matrix.

MR. FARVER: Let's see, the opening number that we -- the first NIOSH response comes from 180.1.

MR. SIEBERT: This is Scott, I'm sorry. I thought we did send a response to 179.2 which is also the same issue of 183.3. It's the PFG.

DR. MAURO: This is John. Yes, I have that on my screen right now, 179.2.

MR. FARVER: Just trying to jump ahead. You caught me. This is Ashland Oil and the finding is medical doses are understated because they did not follow PFG exposure guidelines, yada yada yada. It was talked about this for AWEs and PFG exposures and this should be closed, or we're going to close this because there is -- I swear we closed this the last time.

DR. MAURO: Yes. This is John. Yes, we discussed this before.

MR. FARVER: Yes.

DR. MAURO: And we accepted this answer. The only thing I guess that might remain is OTIB-0006 could use a little language making the distinction between when you use -- why PFG is assumed prior to some date in 1970 for DOE sites, but why it is not automatically assumed for AWE sites. I think the rationale for that decision which is the way in which NIOSH does its AWE medical X-ray calculations is valid. However, in the OTIB-

0006 it's silent regarding that matter.

MR. SIEBERT: Just a quick point here. I'm looking at it. We just revised OTIB-6 between the last two meetings. I'm checking to see if it's now officially in there or not.

DR. MAURO: But we are in agreement in principle regarding this matter.

MR. SIEBERT: Correct.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Perhaps the only reason we left it open was to wait till you made the changes or whatever. I don't know.

MR. FARVER: So we can close 179.2.

CHAIRMAN GRIFFON: Well, we're waiting for Scott to look that up.

MR. FARVER: Oh.

CHAIRMAN GRIFFON: But yes, I essentially closed it.

MEMBER RICHARDSON: So would this

be a regional thing? I mean, just out of curiosity. Like the background document. Would an early AWE site in a large metropolitan area, is it possible that local clinics would have been set up for TB screen whereas in, you know, in smaller areas, they wouldn't be doing fluoroscopy?

DR. MAURO: David, this is John. I remember the conversation we had and it had to do with the contract. That is, though the standard practice at DOE facilities to use PFG often prior to a certain date, when an AWE was brought aboard it actually had a contract with the Atomic Energy Commission or the Manhattan Engineering District and if the contract did not call for annual chest X-rays or PFG in particular, it was assumed that it was an annual chest X-ray. Even though there may not be any affirmative evidence that that was the case in the contract, they do as a matter of standard practice assign a chest X-ray to the AWE workers upon, you know, when work began

every year. But they do not automatically assume a PFG unless there's affirmative evidence that there was a contract to do so or the workers actually have the PFG, I guess, film in their record. And we discussed this and we found that argument compelling.

DR. ULSH: I should mention to you that OTIB-6 is one of the documents that the Procedures Subcommittee has under review.

MR. SIEBERT: And I have reviewed it. It's at the very end of Section 7.2, the most recent version which was I believe this summer. And yes, it does state, because PFG was primarily a mass screening technique most suitable to large populations and therefore unlikely to have occurred on a mass scale at AWE sites, PFG should not be assumed to have occurred at AWE sites unless there is evidence. So, it's in there.

DR. ULSH: So I think the specific answer to your question, David, is no, we didn't take into account.

MEMBER RICHARDSON: Yes. I mean, the argument makes sense to me in general. I was imagining like, you know this place in Brooklyn or whatever, right? That was, you send your worker -- if what they're saying is in these places you might send them to a local clinic in Brooklyn.

MR. HINNEFELD: In that instance the X-ray has to occur at the covered facility in order for us to include the dose because of drafting. It's a --

MEMBER RICHARDSON: Okay.

MR. HINNEFELD: It's a quirk of the drafting of the language, to construct the dose at the facility. And so in the case they went to an offsite clinic that was set up, we wouldn't count it.

MEMBER RICHARDSON: Okay.

CHAIRMAN GRIFFON: That's true. Okay. Well, I think we're closed on this one then, right?

MR. FARVER: Okay. Next NIOSH

response was 180.1. This is a Bridgeport Brass case. And the finding says reviewer questions the accuracy of the employment period identified by NIOSH slash DOL. And John, if you want to pull this one up or if you have any input on this, this is Bridgeport Brass and the question --

DR. MAURO: The Seymour facility.

MR. FARVER: Yes.

DR. MAURO: I do not have anything to add at this time.

MR. FARVER: Okay.

DR. MAURO: I see the response, it has to do with these dates. And this particular worker apparently left one facility and went to another one.

MR. FARVER: Now, you know, the NIOSH response, determination of the dates and facilities of employment are the responsibility of DOL. NIOSH assessed a claim per the information forwarded by DOL. The only question I have with their response is

now, what's the resolution to this or is there one. We run into this occasionally where we come across dates that don't match up with what DOL establishes.

DR. ULSH: I can tell you that in general when we, in a dose reconstruction, when we're doing it and we look into the records, and say for instance there's a dosimetry result that's outside the period of covered employment for that worker, we have, as a practice we notify DOL of that so that they can handle it. I don't know the particulars of this specific case but I mean we do do that.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: So how did this Seymour facility come up? Was it in the CATI interview? The individual identified that they were transferred and DOL's records don't confirm that, is that, am I understanding this correctly?

DR. MAURO: I think the answer to

your question, Mark, is yes. We found some evidence that there was reason to believe that, after leaving Bridgeport Brass, if this is still Bridgeport Brass, I'm not sure.

MR. FARVER: Yes.

DR. MAURO: He went on to another facility, another AWE facility where he could have experienced additional exposure, and that was not taken into consideration. And we stopped there.

DR. ULSH: If that's the case then I don't really like our answer. I mean, if there is in fact evidence of additional employment.

CHAIRMAN GRIFFON: Then that should be turned over to DOL and they should look at it.

DR. ULSH: NIOSH should notify DOL and they should.

CHAIRMAN GRIFFON: Right. So you want to look into it and see what? I mean, right now it says both SC&A and NIOSH are

going to review, right?

DR. ULSH: I see that.

MR. FARVER: Where does it say that?

DR. ULSH: In the NIOSH resolution.

CHAIRMAN GRIFFON: In the yellow.

MR. SIEBERT: What might be helpful for us is to specifically documentation-wise -- SC&A to that determination.

DR. MAURO: Scott, I agree. We owe you, I think that was the genesis of this. We owe you some statement of why we raised the issue.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: Where in the record does this Seymour Specialty Wire come into the picture.

MR. SIEBERT: Yes, that would be very helpful.

CHAIRMAN GRIFFON: Okay. So

really this is on SC&A to review further.

MR. FARVER: SC&A to provide data.

CHAIRMAN GRIFFON: The next step might be for you to go back to DOL but we don't know yet. Okay, all right.

DR. MAURO: My guess is there was probably something in the CATI or somewhere. You know, we would not have come up with Seymour Specialty Wire.

CHAIRMAN GRIFFON: Right.

DR. MAURO: Unless there was some, you know, rationale for it. But we can try to track it down and give that to you.

MR. FARVER: Sometimes the people that do these AWE cases are not very thorough.

DR. MAURO: You better be careful what you say. Remember who you're talking with.

(Laughter.)

CHAIRMAN GRIFFON: Or timely for that matter, you know?

(Laughter.)

DR. MAURO: That's for sure.

CHAIRMAN GRIFFON: Okay, thanks John.

MR. FARVER: So the next one I have a response to is 183.1. This is a Harry Hall Marvin Safe Company case.

DR. ULSH: How many of those can there be?

MR. FARVER: Just one of two approximately. The finding was modeled. External photon dose appears to be bounding but transparency is lacking regarding calculational details in the DR and in OTIB-4. NIOSH responds that NIOSH agrees on the lack of clarity in the OTIB and on how the DCFs were applied to develop the dose in the dose table. It agrees with SC&A that the dose is bounding. The next version of the OTIB did not have organ DCFs already built into the dose tables so this issue has already been addressed. NIOSH does not agree that the organ selection was unclear. The end of the

second paragraph of dose reconstruction overview section states, "The external dose to the kidney was determined by using the dose calculated for the liver." The only concern I have is I didn't find the word "liver" mentioned in the DR report so I didn't find the wording they had quoted as being in that DR report.

CHAIRMAN GRIFFON: That's curious.

MR. FARVER: Which is probably why we sent it to match up.

CHAIRMAN GRIFFON: So what is the next step here? NIOSH has to show you where they found the findings?

MEMBER RICHARDSON: They're explicit here. They're saying the end of the second paragraph of a section. Do we have it?

CHAIRMAN GRIFFON: We can just look it up right now.

DR. ULSH: Scott, why don't you pull it up in parallel if you can.

MR. SIEBERT: Yes, I'm pulling it

up. I'm not seeing it which is kind of annoying me here.

MEMBER RICHARDSON: So is that -- regardless of whether it appears, it's sort of -- this is an issue of kind of documentation and clarity in the report is primarily what it is?

MR. FARVER: Probably more of a QA if it's not in there.

DR. MAURO: Using the liver as a surrogate for the kidney for an external dose certainly is reasonable. I guess, I mean from a technical perspective the fact that you're making that case, you know, we agree. I guess it wasn't necessarily in the DR report.

MR. FARVER: Correct.

DR. ULSH: I don't know if I agree with the QA on that one. I agree that it's a clarity issue. I mean, if we did the right thing but we just didn't give enough explanation that seems to me to be --

MR. FARVER: Yes, I guess it would

be a QA if we put the wrong organ in.

DR. ULSH: Right.

CHAIRMAN GRIFFON: Right. But did you find the statement in the DR? It sounds like it's not in there. That's odd.

MR. SIEBERT: No, and I'm not real happy at this moment.

MR. FARVER: And usually they will put something in there saying they're using the liver as a surrogate for the reconstruction.

MEMBER RICHARDSON: Can we change the yellow, I mean put something underneath it which says that we kind of agree that it was a reasonable estimation but disagree that that text is there?

CHAIRMAN GRIFFON: Close it out.

MR. FARVER: I have no problem closing it.

DR. MAURO: Yes. Because you're correct, in all of the DR reports I ever reviewed whenever you used a surrogate organ

there was very clear explanation that that's what you did.

MEMBER RICHARDSON: Did I hear someone say that was closed?

MEMBER MUNN: We're closing it.

CHAIRMAN GRIFFON: I guess the only QA issue in this case is how did you put that in your response. We'll let Scott think about that one.

(Laughter.)

MR. SIEBERT: Yes, my wheels are turning over here.

CHAIRMAN GRIFFON: We would never make that mistake.

MEMBER MUNN: No. Merry Christmas, Scott.

CHAIRMAN GRIFFON: All right, moving on.

MR. FARVER: Moving on, 183.2. Single-pairing all safe case. Reviewer questions whether OTIB-4 should be used in this case as compensated and there's a lengthy

explanation there by NIOSH. And we agree with that, that was --

DR. MAURO: I think that's closed.

MR. FARVER: That was that short time period. Yes, so we closed that one.

MR. SIEBERT: Okay, it's double closed now.

CHAIRMAN GRIFFON: Yes, it was closed before. No further action. That should put SC&A agrees but no further action.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: Double closed.

MR. FARVER: Double closed.

CHAIRMAN GRIFFON: 183.3 then.

MR. FARVER: PFG exposures.

DR. MAURO: We just did that one. I mean before.

MR. FARVER: This is the same as the AWE one before about PFG exposure?

MR. SIEBERT: Like 179.2, correct.

CHAIRMAN GRIFFON: So that's closed as well?

MR. FARVER: Same as 179 --

MR. SIEBERT: The assumption of no PFGs at AWEs.

DR. MAURO: Yes. We recommend you close. In light of the fact that that new language is now in OTIB-006.

CHAIRMAN GRIFFON: Right. Okay. Look at this, making progress at the end of the day.

MR. FARVER: Well, we'll see what we can do to slow things down a little.

CHAIRMAN GRIFFON: All right, thank you. We'll see if MCNP, if it slows right down.

MR. FARVER: Well, not too much because the action is for us to provide you our SC&A calculations and we didn't do that.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: Doug, I remember on a number of occasions Bob Anigstein providing his MCNP calculations for a variety of issues. Perhaps we did not do it on this one.

MR. FARVER: I don't believe we did on this one, John.

DR. MAURO: We've got to take care of that.

DR. ULSH: 185.2, thanks. I recall Bob Anigstein and MCNP and the exchange of files in relation to OCAS TIB-10 in the Procedures Subcommittee. That might be what you're thinking of.

DR. MAURO: Yes, yes.

DR. ULSH: Never mind.

MR. FARVER: Some of these we'll close but some of these we won't, how's that?

CHAIRMAN GRIFFON: Some of these we just have no NIOSH response though, right?

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: So are we up to date now? Are you ready to go? 185.5 was the next response. And post-operational intakes and intakes from ingestion were not explicitly included. And I'm going to have to defer this

one later to Dr. Mauro because I don't have the answer to this, so.

DR. MAURO: Yes, I didn't look at this.

MR. FARVER: I know, John. It's my fault, I didn't tell you about it.

CHAIRMAN GRIFFON: I'm just going to highlight it. This should have been highlighted from before I guess. So I'll leave it as an action for SC&A.

MR. KATZ: Next meeting?

CHAIRMAN GRIFFON: Next meeting.

MR. FARVER: 186.1, internal doses are likely to have been understated. The claim was compensated based on the dose assigned so there was no need to determine if additional exposure may have occurred. I guess the response is true, you know, they had enough dose. The only comment we have is that the assumed limiting dust exposure of 33 MAC in the TBD may not have captured the upper bound of the airborne dust exposure at the

Linde site from '47 onward, but this has been noted in the SC&A review of the TBD. So this is just a comment.

MEMBER RICHARDSON: So is that closed?

MR. FARVER: It's closed. We can't do anything more with this.

DR. ULSH: And there is a Linde Work Group, so.

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: Was that 186.1?

MR. FARVER: Yes.

MR. SIEBERT: Thank you.

CHAIRMAN GRIFFON: And was that period just voted in the SEC? Yes, the period, I forget what the period was. Anyway.

DR. MAURO: All periods now have SECs I think.

CHAIRMAN GRIFFON: For Linde?

DR. MAURO: Yes. All three periods.

MEMBER MUNN: Pretty much.

CHAIRMAN GRIFFON: So even if it's in the Site Profile. Yes, right. Right. But, so what am I saying to close this out?

MR. FARVER: You can just close it out.

CHAIRMAN GRIFFON: And the broad issue is being considered by the Site Profile?

MR. FARVER: Yes.

MEMBER RICHARDSON: So can I ask you about rows in the table like 188, 189, 190?

MR. FARVER: Yes.

MEMBER RICHARDSON: Where it says no findings and N/A.

MR. FARVER: We do not have any findings for those reviews.

MEMBER RICHARDSON: Oh, okay.

CHAIRMAN GRIFFON: Right, for those cases.

DR. MAURO: They were perfect.

MEMBER RICHARDSON: I've just never seen that before.

(Laughter.)

MR. FARVER: We try not to put that in very often.

MEMBER MUNN: Rejoice. That's your Christmas present.

MR. FARVER: We send back people to scour over those.

CHAIRMAN GRIFFON: Do we have anything on 187.3?

MR. FARVER: I'm trying to find it, yes.

CHAIRMAN GRIFFON: Or was it NIOSH action?

DR. ULSH: Yes, it looks like NIOSH action. I'm not aware of any action on that.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: 187.3.

CHAIRMAN GRIFFON: Looks like a DOL communication.

MR. KATZ: Is that a next meeting?

DR. ULSH: Next meeting.

MR. KATZ: Thanks.

CHAIRMAN GRIFFON: So the next one I have is 192.2.

MEMBER MUNN: Correct.

MR. FARVER: Okay, 192 is -- looks like a Fernald case. And the finding is basis for intakes not included in the records which basically, the IMBA runs are not provided showing the intake calculations is kind of what it is based on.

CHAIRMAN GRIFFON: The IMBA runs weren't provided.

MR. FARVER: They were not included in the files.

CHAIRMAN GRIFFON: Oh, okay, yes.

MR. FARVER: That was part one, and then part two was that there was no uranium intake assigned for 1961 through 1965. And --

CHAIRMAN GRIFFON: That's not really reflected -- yes, that's not really reflected in this.

MEMBER MUNN: Doesn't say that in here.

CHAIRMAN GRIFFON: Which is an important second part.

MEMBER MUNN: It is kind of an important second part.

CHAIRMAN GRIFFON: Yes. Anyway.

MR. FARVER: So, you know, NIOSH gave their response that, you know, they basically forgot to include the IMBA files which is, you know, it happens.

CHAIRMAN GRIFFON: But they don't respond to that other part you just mentioned.

MR. FARVER: Correct. And so, you know, our response is yes, we agree, you forgot the IMBA files but there's a dose of 4,800 picocuries per day of uranium intake that was not included.

MEMBER MUNN: None of that's captured in here.

MR. FARVER: Well no, because it's all in the original finding of the -- in the

report.

CHAIRMAN GRIFFON: That's the problem sometimes our matrix is --

DR. ULSH: So is this a NIOSH action item? We owe you something?

CHAIRMAN GRIFFON: I'm not sure.

MR. FARVER: Yes.

MS. BEHLING: However, wasn't this case compensated?

MEMBER MUNN: I suspect so. I'd be surprised if it weren't.

MR. FARVER: Yes.

MR. SIEBERT: The PoC is above 50 percent.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Which is okay but normally you would say we didn't need to do it because it already exceeded the dose or the PoC.

MEMBER MUNN: It's another one of those extra words needed.

DR. ULSH: Yes, is it like that

earlier one where it's a clarity issue? I mean, I'm not sure. I'm not intimately familiar with this finding. It sounds like we included a uranium exposure but didn't provide the supporting IMBA file? Is that?

MR. FARVER: Well, first off the IMBA files were not included.

DR. ULSH: Right, I understand.

MR. FARVER: Okay. That was part of it. Now, the second part was apparently there was a uranium intake because it was recycled uranium and the contaminants that were based on that uranium value were all calculated intakes, and you have those values and assigned those intakes. You didn't assign the uranium.

DR. ULSH: But what we did include pushed him over 50. So it sounds like what we should have said is uranium was not included because of --

MR. FARVER: Correct, if that's the reason. If the reason is you didn't

include it because it exceeded 50 that's fine. If the reason that you didn't include it was because you forgot then that's different.

CHAIRMAN GRIFFON: Then it's a QA thing. I mean, it does seem like it should have been a best estimate. I mean, if you're doing 25 IMBA runs. Not necessarily I guess.

MR. KATZ: No, that's fine. You just need I think, like Doug's saying you need -- normally there's a statement at the end that says we curtailed research on this case because it's above the compensable level. There's no reason to do more work.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: It just kind of stands out because you talk about recycled uranium contaminants and you assign doses for them but there's no uranium. So it kind of makes you scratch your head.

MR. KATZ: I understand. So it's not a QA, it's really just a clarity.

DR. ULSH: Well, what he's saying

is it might be a clarity issue. It could be that we didn't mention it because we just forgot to mention it, or it could be that we didn't do it because oops, we forgot.

MR. KATZ: I know, but I'm just saying the part about saying this is not a complete dose reconstruction because we -- that statement is missing it sounds like.

DR. ULSH: So how do you want to proceed? Consider it as a clarity?

DR. MAURO: Brant, you can't do the recycled uranium without doing uranium. So I mean, the way in which you do -- I mean, John Stiver is very familiar with this. We spent a lot of time talking about this on Fernald. So in order to do the RU contribution which is what I'm hearing you must have done the uranium.

CHAIRMAN GRIFFON: Well, they did the intakes of uranium. They didn't calculate a dose.

DR. MAURO: Yes, that's right. You

had to do the intakes of uranium in order to do the intakes of plutonium, et cetera.

CHAIRMAN GRIFFON: Yes. It seems a little strange that you wouldn't have the dose. But anyway.

DR. ULSH: So what do you want to do with it, Mark?

CHAIRMAN GRIFFON: I mean, either way it's closed, I just didn't want to figure out how --

DR. ULSH: I understand. The question is, is it a QA issue.

CHAIRMAN GRIFFON: Right.

DR. ULSH: I don't know the answer to that.

CHAIRMAN GRIFFON: Right.

DR. ULSH: I don't know that we could really get --

CHAIRMAN GRIFFON: Yes, I don't know that we'd have to exactly.

MR. FARVER: I don't know if this is a cut and paste where you're cutting and

pasting something into an IREP table and maybe the uranium part got cut off.

DR. ULSH: Or maybe we just didn't do it because it was enough. I don't know.

MR. FARVER: I don't know.

DR. ULSH: Is it worth it to you for us to go back and investigate this or do you just want to?

MR. FARVER: I don't know. Scott, what's it worth to you? It's Christmas, be generous to me and then you won't have to do it.

MR. SIEBERT: Well, I'm looking at the fact that it was September of 2005, so you know, trying to figure out the dose reconstructor's thought process six years ago may be a little difficult.

MR. FARVER: I'm not sure there's that much you can do about it.

DR. MAURO: Well, Doug, do you know whether we were -- very often when we do a review of a case we try to match the numbers

first in other words to see whatever the organ is, see if we can -- see okay, we can match the numbers, we know how you did it, and then we move on to determine whether or not we agree that that's a good way to do it or did you follow your instructions. What I'm hearing here is that, you know, if we match their numbers that means, you know, that we figured out what the intakes were and matched their numbers.

And so I guess what I'm asking is does the doses that they actually calculate for this person that was compensated, did we match their numbers and was it only, you know, just the plutonium? I guess I'm having a little trouble understanding how we can get a finding on this without actually reconstructing their, you know, matching their numbers.

MEMBER MUNN: They said the results were recreated from the file.

DR. MAURO: Because very often,

you know, I know that when -- I will try to match their numbers and I won't even look at your IMBA runs. I will just say, okay, here are the assumptions and I'll, you know, go ahead and try to match your doses and I won't look at the IMBA runs. But you're saying the IMBA runs were lacking from this file.

MR. FARVER: Correct.

DR. MAURO: But we could, I know we often audit to see if, you know, look at their protocol that was described and the fact that the IMBA runs aren't there as part of the documentation, I guess that's a deficiency. It's nice to have that there but it's not essential for us to do our audits.

CHAIRMAN GRIFFON: Right, but you're missing the one primary point, John, which is that they, everything was there except the uranium doses.

DR. MAURO: All the IMBA runs are there except.

CHAIRMAN GRIFFON: Well, I mean,

even the -- I imagine even the uranium IMBA run was there but they didn't sum uranium doses. Is that what you're saying?

DR. MAURO: Oh, I missed the point. Okay. All right.

CHAIRMAN GRIFFON: Maybe? I don't know. I don't know enough about -- I'm speculating here, but based on the little matrix items. I don't know the case intimately.

MEMBER MUNN: It says the 25 IMBA files were inadvertently left out of the claim file.

DR. ULSH: Right, but once we provided those the uranium is still not there I think is the situation, right?

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: Yes.

DR. ULSH: And so the apparent situation is we have a dose reconstruction where we did the recycled, the contaminants in the recycled part and the case is over 50. The

question is did we also do the uranium and forget to put it in or is this a situation where we didn't need it so we didn't include it but we should have stated that. And going back six years.

CHAIRMAN GRIFFON: Yes, my point is that you would have had to do the uranium first, right? To get the intake anyway.

DR. ULSH: Well, that's what John's saying.

CHAIRMAN GRIFFON: Yes, not dose necessarily.

MR. FARVER: Well and the problem that I have with it is everything's based on uranium.

CHAIRMAN GRIFFON: That's a separate issue.

DR. ULSH: That's a TBD. Or maybe an SEC.

CHAIRMAN GRIFFON: SEC issue, right, right.

MR. HINNEFELD: They would have

had to do the uranium intake.

CHAIRMAN GRIFFON: The others are based off the uranium intake, but you wouldn't have had to do the doses necessarily.

MR. HINNEFELD: What site is this from?

MR. FARVER: Fernald.

DR. ULSH: I should shut up too, I'm conflicted at Fernald too.

MR. SIEBERT: This is Scott. It's clear that the uranium had to have been -- the barium intake had to have been calculated because the recycled components are based on ratios from uranium.

CHAIRMAN GRIFFON: Agreed, yes.

MR. SIEBERT: And there's no doubt. As to why the dose reconstruction did not include that, as soon as it hits 50 percent if they specifically left it out they probably should have stated that.

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: I agree

wholeheartedly. And I honestly don't think we're going to be able to figure out six years down the road whether they looked at it and said oh, well I don't need to assign it, or I do. I mean, that's too far down the road to get in the dose reconstructor's head.

CHAIRMAN GRIFFON: I think I agree with that.

DR. ULSH: So we'll make you a deal, counselor.

CHAIRMAN GRIFFON: Possible QA issue.

DR. ULSH: We'll cop to the clarity issue.

MEMBER MUNN: Very good.

(Laughter.)

DR. MAURO: This is John. I do have a question for the Subcommittee. This record, the DR report and its associated records are really archives that represent, you know, a very important decision was made regarding this case. If there is confusion, a

lack of completeness or something about the archive that seems to be inappropriate or not complete it seems that for posterity purposes you try to do the best job you can and tell them your story. So the fact that we could sit here right now and sort of figure out, oh, it looks like everything's okay, is that good enough?

MEMBER MUNN: Is there any problem with an additional note being added to the file? Does that create a problem?

MR. KATZ: I think the only problem is that they don't know exactly what the situation was and they'd have to go do research to figure it out, and they may not be able to figure it out, and is it worth the lift.

MEMBER MUNN: I don't see that you necessarily have to do that. All you'd have to do is say one of two things. Either there was a clerical error here or there was just simply a decision made, just it's an obviously

compensable claim and there's no point in going any further. That one of those two things happened does not in any way affect the compensability.

MEMBER RICHARDSON: So in terms of -- we've bumped up against something which is what we're trying to decide like is this a QA/QC issue and one of the questions is how broadly do we want to use the term quality? Does quality encompass the quality of the report and the clarity of the information transmitted by it, or are we thinking of quality issues as more omissions or errors here? And I don't have a strong opinion but that's the only thing I'm struggling with here is do you call this a QA/QC issue or is it a communication/clarity/style issue. I mean clearly we don't know what they did and because of --

CHAIRMAN GRIFFON: I don't even know which bin to put that in yet.

MEMBER RICHARDSON: Right. So --

CHAIRMAN GRIFFON: It's a separate discussion of which is QA.

MEMBER RICHARDSON: As we kind of revisit what we're thinking about as QA/QC we might want to think about how large we want to cast that net and whether we want to pull in things like this.

CHAIRMAN GRIFFON: Right, right.

MEMBER MUNN: Well and we may have items of this sort that don't clearly fall into either one.

MEMBER RICHARDSON: Right, I meant potentially, but I guess for myself personally I don't have a clear definition quite yet of how broadly we want to throw out quality. But I do think that this is -- we're not going to be able to go much further with this other than to say that it's unclear what was done.

CHAIRMAN GRIFFON: For now it could be a possible QA issue but not worth pulling the string any further.

MEMBER CLAWSON: I think part of

this comes back to earlier on in this Subcommittee of explaining their work and why, you know, that's basically what it just comes back to. And this is six years old and they have been trying to continuously improve so it's back to that situation.

MEMBER MUNN: I still don't have an answer to my question. Is it not just a simple matter to add a note?

MEMBER RICHARDSON: Well, to me that's fine, but that doesn't make any --

MEMBER MUNN: No, it doesn't help us in the decision.

MEMBER RICHARDSON: Well, either the decision or to understand whether this is a problem with a particular case or whether there's --

MR. FARVER: There's more like it.

MEMBER RICHARDSON: Whether you would want to kind of point this out as a process issue which when decisions are made they need to be documented.

MEMBER MUNN: I suggest we add a note to the file. It could have been this, it could have been this, we don't know six years later. But in any case.

DR. ULSH: When you say a note to the file, are you talking about putting it in the matrix or are you talking about going into the claim file and inserting in a note?

MEMBER MUNN: I was thinking the claim file since as we pointed out before these really do become archive documents.

DR. ULSH: Can we do that?

MEMBER MUNN: And that's what I was asking, is it possible for us to do that.

DR. ULSH: It's a comp case. It's already been dispositioned.

MR. HINNEFELD: Well, we can put it on our side. It would be on DOL's side.

MR. KATZ: I don't see the point in it.

MR. HINNEFELD: I really don't see a point.

MR. KATZ: If it were not a comp case and it could come back that would be -- for a case that's been comped.

MR. HINNEFELD: There's almost no --

MR. KATZ: No utility to it.

MR. HINNEFELD: -- practically no way that anyone will ever get this back out and worry about the completeness of the record of a compensatory case.

MEMBER MUNN: Then we should not as a very minimum explain it a little more thoroughly in our closure box here?

CHAIRMAN GRIFFON: Which we just did.

MEMBER MUNN: Thank you. Our Chair has taken care of the whole issue.

CHAIRMAN GRIFFON: Absolutely.

MEMBER MUNN: I will now be quiet for the rest of the afternoon.

(Laughter.)

CHAIRMAN GRIFFON: You'll be quiet

for one more minute because I think we're going to close. I mean, we're on 192.2. I did say, I put in the explanation that it could have been a QA by omission, not doing the complete internal dose reconstruction, or it could have simply been an intentional decision by the dose reconstructor to stop the process without adequate clarification in the record. So it's one of those two and we'll just leave it at that. Yes. Alright. And, I mean the only thing I would ask is do we have any more on 192.2? I think there's just an observation.

MR. FARVER: No.

CHAIRMAN GRIFFON: There's nothing else to -- yes, observations. I don't even know what we're doing with observations.

MR. FARVER: We do not have to respond.

CHAIRMAN GRIFFON: Well, the one says no further action anyway, right? So. And I would argue that this might be a good time

to stop, right? We, I think --

MR. FARVER: Unless you just want to go to 193.1 and 194.1 and say that we concur with their answers.

CHAIRMAN GRIFFON: Well, you already did that. No further action, SC&A.

MR. FARVER: Gosh. Okay.

CHAIRMAN GRIFFON: Oh, wait a second, that's not true on --

MR. SIEBERT: 194.1.

CHAIRMAN GRIFFON: 194.1, do you concur on that one?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Okay, so that's new.

MR. FARVER: And then I would close.

CHAIRMAN GRIFFON: Can you tell us what 194.1 is about before we close it?

MR. FARVER: We were basically unable to confirm the source of photon uncertainty applied to the skin cancer and

then they explained it. And I think part of this arises because this is an old case. And they used a combination of correction factors. And it just wasn't very clear how they came up with that correction factor of 1.43. That's because they combined a couple.

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: Right. The normal correction factors we'd use were combined for a magical number without necessarily that being explained along the way. So it would be easy to understand why it wasn't seen easily.

CHAIRMAN GRIFFON: Okay. So that's closed then. And unless Doug wants to continue.

MEMBER MUNN: 194.3?

CHAIRMAN GRIFFON: He's hot, he's on a roll.

MR. FARVER: Let me look at my answer before I say I'll continue with it.

CHAIRMAN GRIFFON: Follow-up on NIOSH response. Oh, you've got your answer.

MR. FARVER: Okay, we'll concur with that one too. It's basically because there's just so much data that a day or two either way really doesn't matter. There's little change over the intake. We really are kind of quibbling about intake date.

CHAIRMAN GRIFFON: Okay.

MEMBER RICHARDSON: What number is this?

MR. FARVER: 194.3.

CHAIRMAN GRIFFON: This is on a --

MEMBER MUNN: Fernald.

CHAIRMAN GRIFFON: It is still Fernald?

DR. ULSH: 192 was Fernald. Is 194 Fernald as well?

CHAIRMAN GRIFFON: I don't know.

MEMBER MUNN: It says 94 is Fernald.

MR. FARVER: Fernald.

CHAIRMAN GRIFFON: Okay, thank you.

MEMBER MUNN: 94.4 says you may want to get guidance from the Fernald Work Group.

CHAIRMAN GRIFFON: Oh.

MEMBER MUNN: Which makes me believe this is probably Fernald.

(Laughter.)

CHAIRMAN GRIFFON: Thank you, Wanda.

MEMBER MUNN: Sorry, just a little parallel logic.

CHAIRMAN GRIFFON: It's that time of day.

MEMBER MUNN: Yes.

DR. ULSH: Maybe we should quit.

CHAIRMAN GRIFFON: Yes, I know.

MR. FARVER: I don't know if we want to go into the Fernald thorium issue.

MEMBER MUNN: Why not? The night is young.

DR. ULSH: You've got no non-conflicted NIOSH representatives here to

speak.

CHAIRMAN GRIFFON: So wait, is that 194.3? Are you agreeing with 194.3?

MR. FARVER: I'm agreeing with 194.3.

CHAIRMAN GRIFFON: Okay. That's on the uranium, right?

MR. FARVER: That's on the -- yes.

CHAIRMAN GRIFFON: So unless I hear something else, I'm closing out 194.3.

MEMBER RICHARDSON: Can I just ask about, there was a decision that was made there at the end. There was the choice of calling the sample a false positive or assuming that it occurred close to the high, I believe the intake occurred the day before the bioassay result. And has that been formalized since this DR was done or does it still remain, sort of, again, one of these decision points that in a different case might have gone -- in the future would go a different way still? You know what my

question is?

MR. FARVER: Yes, I understand your question. Typically, you would use the midpoint between two samples and that would be your intake date, but in this case they went through the goodness of fit and they had a better fit if they put it the day before -- the intake the day before the sample, the high sample. And what brought it to our attention was that it wasn't even close to the midpoint date, it was several days off, so why did you do that? And but, your question is has this been formalized on a way to do things? I don't know that it's been formalized anywhere.

MEMBER RICHARDSON: I would imagine not, right?

MEMBER MUNN: But this is claimant-favorable position.

MEMBER RICHARDSON: Right, and if it is, would it be useful to formalize as a claimant-favorable position to routinely implement or is this sort of an ad hoc-based,

something that's favorable for this claimant but not for other claimants?

MEMBER MUNN: I would suspect it might not be favorable for other claimants, as well. I would think this would be a case-by-case.

MEMBER RICHARDSON: Yes, well that's where I feel, you know, that's where it starts to get.

MR. HINNEFELD: Well, I mean, it was the intake date that fit the bioassay record, is that what it is?

MEMBER RICHARDSON: Yes.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: Fitted the best I guess, yes.

MEMBER RICHARDSON: But I mean, that's kind of the routine approach.

MR. FARVER: Well, I guess what brought it to our attention was it was, instead of taking a midpoint between the samples and calling that the intake date, you

know, one sample a month, another sample a month later, you split the difference and call it 15 days before. Instead, you just went to exactly one day before in the sample, the highest sample. And it was just kind of unusual that you would do that instead of taking the midpoint.

MR. HINNEFELD: Well, I think only in the sense that it really is dependent upon the subsequent bioassay, you know, because you have an excretion pattern that you expect from the intake and if your subsequent bioassay, I mean, if at the midpoint, apparently if we had used that intake at the midpoint and in order to have the bioassay result we had on the bioassay date, you have this intake back here and on that excretion curve, presumably the next bioassay date would have been positive but was not. Is that what happened?

MR. FARVER: Well, I guess part of this case is there was so much bioassay data afterwards, it really didn't matter whether it

was one day or three days or five days, it was still about the same dose. So we were just curious why it was just picked exactly one day before, which is unusual.

MR. HINNEFELD: Well, I think normally --

MR. FARVER: The reason you give is good but that's not what was in the -- it's not documented well in the report.

MR. HINNEFELD: Well, I would think that if you're fitting, if you're doing a fitted -- on a positive bioassay, if you're doing a fit, a fitted intake, that -- well, that person didn't like my argument. If you're doing a fitted intake -- either that or it's midnight and somebody turned into -- the moon came up and somebody turned into a wolf.

(Laughter.)

MR. HINNEFELD: If you're doing a fitted intake the fit very often, if you have a really robust bioassay record, the fit dictates the intake date because if you have a

lot of bioassay, the bioassay and what your later subsequent detection levels are and what your result is compared to detection level dictates your intake date. And the midpoint as a presumption is when there is not a bioassay point that would be essentially violated by having the midpoint as the intake. So in other words, if you've got, if your intake, put your midpoint -- intake at the midpoint and getting this bioassay result, and then as the next bioassay result is a non-detect and your non-detect that's when you choose the midpoint. If you have an intake on a particular bioassay date and the next bioassay take is non-detect and the only way to get there is to have intake the day before the original bioassay date, then that's what we would consider a fit, fitting the bioassay.

MR. FARVER: I agree. I mean, I agree with fitting the data like that, I'm just --

CHAIRMAN GRIFFON: And I think the

argument was if the only way to get a reasonable fit for this one high -- otherwise to get a better fit was to drop the high sample.

MR. HINNEFELD: Yes, call it an outlier and not include it.

CHAIRMAN GRIFFON: Right, call it an outlier. Right.

DR. ULSH: And the method, what Stu described is what we would do on any case, not just this one.

MR. HINNEFELD: Yes, not just this one. I mean, that is standard. The bioassay, the intake should fit the bioassay and that's a combination of magnitude and date. And then whatever your subsequent bioassay tells you about is there anything still around on the subsequent bioassay.

MR. FARVER: I mean, it's kind of a complicated case. You've got five acute intakes you're trying to fit over a period of five years. So it's -- with the best of

bioassay data. And our only question was why did you pick the intake the day before.

MR. HINNEFELD: It should be because that's what fit the data.

MR. FARVER: That's fine. It was not clear.

MR. HINNEFELD: And that is the standard. You know, it's not very often that we have to fit that many fitted intakes.

MR. FARVER: No, that's a messy one.

MR. HINNEFELD: Yes, that's why no one likes to do. Those are the ones that take over a week.

MR. FARVER: And those are the ones you can get into a lot of professional judgment on where they're kind of messy and there's a lot of intakes.

MR. HINNEFELD: Yes, best fits are always, even what is the best fit because the calculated best fit a lot of times doesn't look like the best fit.

MR. FARVER: And one of the things I'm looking forward to seeing on your comparison is how you handle cases like this that are kind of messy and complicated, how do they come out compared to what ORAU does, what NIOSH does. Let's look and see what comes out of the numbers.

MEMBER RICHARDSON: So, the one thing would be the sentence in here that in NIOSH's response it says, NIOSH agrees that this is not considered a standard practice. So if that, I mean maybe that needs to be revised or else I'm not following.

MR. HINNEFELD: I sure had a good story going there, didn't I.

MR. SIEBERT: This is Scott. I believe that statement was put in saying that normally we don't have to fit the bioassay data that closely because they do fall below if we're doing with acute intakes like that. In a case where this, although we would look at that in all cases, it's unusual we have to

move from the midpoint because of the subsequent bioassay. That's probably the better way to put it. Maybe not.

MEMBER RICHARDSON: If there's a known intake then you would usually do a series of bioassays after it to establish the excretion.

MR. SIEBERT: Correct.

MEMBER RICHARDSON: So that would seem, that to me would be the standard, I would imagine.

MR. HINNEFELD: The best intake. The best instance is that there was a known event with an intake, you know the intake date. That's the best instance. But quite often with a positive bioassay, there is not that event. And so you have to decide when did it occur. Well, it occurred sometime since the last bioassay apparently.

MEMBER RICHARDSON: But even if you have a positive -- if you have a positive bioassay result you would usually follow up

with a series of other bioassays afterwards to help understand --

MR. HINNEFELD: To help understand the curve.

MEMBER RICHARDSON: -- when it happened.

MEMBER MUNN: It's easy when you have a single incident. When you have multiple acute exposures over several years prior to this one --

CHAIRMAN GRIFFON: It's not always true that if you have a positive like at Fernald you wouldn't necessarily do follow-up because they had a fair amount of positives there, or you wouldn't do --

MR. HINNEFELD: There were sites where a positive meaning detectable --

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: -- was not an investigation point.

CHAIRMAN GRIFFON: Right, that's what I was trying to say.

MR. HINNEFELD: That you could have a positive bioassay that would -- a positive bioassay. If it didn't rise to the investigation level there wouldn't be follow-up. There were such like that.

CHAIRMAN GRIFFON: Right. So it may not necessarily be the case then. Anyway, yes, I think that is confusing, that sentence in there, but notwithstanding that I think you're comfortable with the argument on this case?

MR. FARVER: Yes. It's an unusual case.

CHAIRMAN GRIFFON: Right.

MEMBER RICHARDSON: That was the hardest case of agreement.

MR. HINNEFELD: We strenuously agree.

MEMBER MUNN: Closed.

CHAIRMAN GRIFFON: All right, so we close that and we close this meeting, I think. Is there anything else we want to --

any other issues before we officially close the meeting? Okay. Then let's wrap it up for today. Before we wrap it up today, do we want to look at calendars and try to pick a --

MR. KATZ: Why don't we do that?

CHAIRMAN GRIFFON: -- a next date. And a lot of it is going to be depending on obviously Brant's timeline for getting some of this work done and stuff. Other conflicting. January 1st is open.

DR. MAURO: I'm going to break, everyone. Have a happy holiday.

CHAIRMAN GRIFFON: Wait, John, we need your calendar.

DR. MAURO: I'll just wait to hear from Doug.

CHAIRMAN GRIFFON: Alright.

DR. MAURO: Thank you. Bye bye.

MEMBER MUNN: Clever you.

MR. FARVER: Put me in charge.

CHAIRMAN GRIFFON: Well, I mean realistically we're going to have to look at

least at sort of the -- well, the end of February is the meeting. I think we're at -- the full Board Meeting, right. Can we do something in the middle of February? Is that realistic to have?

MR. HINNEFELD: That doesn't give us much time. I mean, this year's done pretty much. You know, there's not going to be a lot. So you're looking into January.

CHAIRMAN GRIFFON: Middle of March?

MR. HINNEFELD: Middle of March is possible.

CHAIRMAN GRIFFON: End of March is better.

MR. HINNEFELD: Yes.

MR. FARVER: Next Board Meeting?

MR. HINNEFELD: Twenty-eighth and 29th of February and the 1st of March.

MR. FARVER: Because you'll probably be tied up with stuff for the Board Meeting.

CHAIRMAN GRIFFON: How about toward the end of March then?

MEMBER MUNN: How about the middle of March instead of the end of March?

CHAIRMAN GRIFFON: Why, are you conflicted at the end of March?

MEMBER MUNN: Kind of. There's a nice Wednesday, the 14th.

CHAIRMAN GRIFFON: There's a nice Wednesday.

MR. HINNEFELD: Sounds like you're ordering wine.

MR. KATZ: The 15th is TBD-6000. I don't know if that really affects anyone.

MEMBER MUNN: That will affect me.

CHAIRMAN GRIFFON: You don't like the 16th so much.

MEMBER RICHARDSON: The end of the week would probably be better.

CHAIRMAN GRIFFON: Better for me, yes.

MEMBER MUNN: You like the 16th

better than the 14th? I'll buy that. St. Pat's is the next day.

MR. KATZ: How's that with you, Brant? The 16th?

DR. ULSH: I don't think my calendar goes out that far right now. Let me look. I can't get to it right now. Let's go ahead and say it.

MR. HINNEFELD: There's nothing programmatically on the agenda, I don't think.

CHAIRMAN GRIFFON: We can always, if something comes up we can change this, but say tentatively March 16th, yes.

MEMBER MUNN: Which means --

MEMBER CLAWSON: While you have the calendar out, though, what does the end of January look like?

MR. HINNEFELD: That'll be in-person here I suppose, right?

CHAIRMAN GRIFFON: Is that it for us or do you have -- is this a separate issue?

MEMBER CLAWSON: No, I'm good.

That's a separate issue.

CHAIRMAN GRIFFON: Alright. So March 16th and I'm sure we'll see each other before then but that is our next meeting. And I will also email these revised matrices out within the next 45 minutes, because if I don't do it now it ain't getting done.

MEMBER MUNN: That would be great. It really would be great. Good.

CHAIRMAN GRIFFON: Okay, thanks. Meeting adjourned.

MR. KATZ: Thank you, everybody.

(Whereupon, the above-entitled matter went off the record at 4:17 p.m.)