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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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FRIDAY,
JULY 15, 2011

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The Subcommittee met in the Zurich 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*
WANDA I. MUNN, Member
ROBERT W. PRESLEY, Member*
DAVID B. RICHARDSON, Member*

ALSO PRESENT:

TED KATZ, Designated Federal Official
ISAF AL-NABULSI, DOE*
HANS BEHLING, SC&A*
KATHY BEHLING, SC&A*
ZAIDA BURGOS, NIOSH*
DOUG FARVER, SC&A
STU HINNEFELD, DCAS
JOHN MAURO, SC&A*
MUTTY SHARFI, ORAU Team*
SCOTT SIEBERT, ORAU Team*
JOHN STIVER, SC&A
BRANT ULSH, DCAS

*Present via telephone

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(9:09 a.m.)

CHAIRMAN GRIFFON: Welcome everyone. Starting our Dose Reconstruction Subcommittee meeting. And just for the sake of those who didn't bring the agenda like me, I'm going to read -- read it out, just so you have a sense of where you're going today.

The first item that I put on the agenda was discussion of the NIOSH ten year review, findings and recommendations, specifically those focused on dose reconstruction and the quality of science issues. If you remember the last Board meeting, we committed to reviewing this at the Subcommittee with the intent of coming back to the full Board with possibly a proposed -- some proposed recommendations to make to the secretary. There are comments on the ten-year plan.

MR. KATZ: Or to NIOSH really.

CHAIRMAN GRIFFON: Back to NIOSH, right.

MR. KATZ: Yes.

CHAIRMAN GRIFFON: Right, right. To NIOSH. So, that's the first item. The second item is the blind case reviews, which I believe are two, right, Doug? There are two of those.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Blind case reviews, which we've -- or maybe it's me, but we've neglected to put on the agenda for a while. They've been done for quite -- quite a long time, yes. And then we have the PER number 12 case selection, which I don't think should take us a terribly long time to do that. And then the 15-set case selection, and these are documents.

These sets of cases were set out

to everyone. So, I hope if you didn't get them, maybe email Ted while we're talking about the earlier items so you can have them in your computers when we come to the agenda. And then the last thing is our normal course of work, which is to continue on the case reviews, 7th, 8th, possibly 9th set.

So, is there anything else that we need to add to the agenda? I think that kind of covers it. Okay, so to start off, I mean the review of the NIOSH ten-year review, I -- there's -- I guess there's two documents out there, and I'm sort of looking at them this morning myself, but one was sent out before the Board conference call about a week ago, and that was a boiled down version is my understanding, of the larger, earlier document.

It was sort of proposed actions on some of the priority items, I guess is the way

it's laid out. And the other document that I was looking at was a -- it's a 14-page document, a draft final recommendations document, that is actually posted -- I don't know if both of these are posted on the web, but this one is in the website, and it was presented at our last full Board meeting in St. Louis.

So, if people have those documents, I think that's maybe where we can start our discussions. Everybody on the phone, you got those items?

MEMBER RICHARDSON: I have the boiled down action items. I'm still looking for the earlier one.

CHAIRMAN GRIFFON: Okay.

MR. KATZ: That was Member Richardson.

MEMBER CLAWSON: This is Brad. I'm in the same boat. I'm trying to look up

what was sent earlier.

DR. MAURO: And Mark, this is John Mauro. I have a document I'm holding in my hand, which I read carefully. It's 44 pages, dated 2011. It might be something different than you're looking at right now.

CHAIRMAN GRIFFON: Yes, the one I have --

DR. MAURO: It's a large document.

MR. KATZ: John, I just emailed you and Kathy the condensed version.

DR. MAURO: Okay.

MR. STIVER: It should be in there.

DR. MAURO: We should be working from that. Thanks a lot, John.

CHAIRMAN GRIFFON: Okay, I guess we can start at least the discussion of these items. I -- I mean I think -- I'm not sure that there were a lot of surprises. A lot of

it has been similar to what we've been finding all along.

One thing that -- two things that jumped out at me, and I'll just start the discussion. One is the QAQC focus, and actually Lew does include that on -- as one of his first items on some action items related to QAQC issues, and we've certainly been dealing with that on our Subcommittee.

And the other is the -- the question of using the overestimating approach, and whether we -- I think one of the findings was that raised some complications over the years for various reasons. You know, a lot of the biggest ones was another cancer coming up later, then having to report back lower numbers later. Things like that.

So, that question of how often or when should you -- should NIOSH continue to use that, how often, that sort of thing.

John, did you have something?

MR. STIVER: Oh, no.

CHAIRMAN GRIFFON: So, I don't know. I mean that's just a couple quick ones. I must admit I didn't extensively review this, but if others have items that they think either are in support of NIOSH's -- consistent with NIOSH's findings, their ten-year review, or different items, I guess that's what we're here for. So, Wanda, anything?

MEMBER MUNN: I don't believe so based on what Lew had to say at our most recent teleconference. I think the things that are applicable to what we're doing here are -- already are noted.

MR. HINNEFELD: If I could just offer an item or two?

CHAIRMAN GRIFFON: Go ahead.

MR. HINNEFELD: In the QA section of continuing review in my view relied very

heavily on the work of the Subcommittee and the work being done here. So, it probably sounds familiar to the Subcommittee. And we are -- we have been doing some work on that. We haven't ignored the issue, and have been looking at it.

There was a selected set of cases with specific -- specific findings related that ORAU has taken a look at in terms of positive factors for those errors, and I've also taken a look at. And I've got to tell you it's -- it's not -- thinking about it, it's not encouraging because the mistakes oftentimes were a lapse of attention on the dose reconstructor, and then you have a peer review process that doesn't specifically ask you to check that particular thing that was -- that was missed. It has general -- more general instructions in the peer review procedure.

And so, it got -- it has peer review also, whether it was inattention or just didn't happen to think of it at that time, or it didn't fit. You know, the questions in the peer review procedure didn't drive them to check that particular item.

And so, when you think about in QA terms of process improvement, what would you do about that? Well, what you try to do is design your system so that those mistakes -- you aren't putting yourself in a position to have those kinds of mistakes because that's going to happen when you do 30,000 cases. People are going to make a mistake.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And then, so if you -- in that kind of a situation, where you have people making all these independent decisions, all these decisions on all these dose reconstructions, then you have to rely

really heavily on the inspection process.

So, if you make a really thorough inspection process to avoid any kind of errors, then you really slow it down. You make it far more expensive, and you really impede the progress on dose reconstruction, which is -- I'm not saying that we shouldn't be doing it. I mean we definitely are trying to improve the quality of the dose reconstruction, but this is not an easy nut to crack.

I mean when you get into that kind of error, that is a tough one to fix. I think some things have been fixed by better and more robust tools, and more things are done automatically now than were done over the years in some of these cases that were done quite a while ago.

And so, I think there are a number of things that have been done, and maybe some

additional things that can be done, but I mean the classic response to, "How do you make sure those errors don't get out?" is you make a very specific and prescriptive inspection program. And so, just in the list of however many findings that was -- maybe 10 or 11 additional items to specifically check on inspection in order to drive the peer reviewer in order to find that mistake.

And so, if you did this, you would just continually build this enormous inspection checklist for the peer review. And so, it just doesn't seem like a winnable battle. So, we're going to have to be a little more creative than traditional on this and see what we can do. So, it's going to be a tough nut to crack.

Lou's opinion, and I agreed with his opinion, is that my preference is that this Subcommittee not find any mistakes in any

of the dose reconstructions. You know, that's my preference. I'm not sure we can attain that.

CHAIRMAN GRIFFON: Looking for them or --

MR. HINNEFELD: I'll take it either way.

CHAIRMAN GRIFFON: Right, right.

MR. HINNEFELD: But not matter how much you look, you shouldn't find any, and that's the way I feel about it. But boy, this is a tough one.

CHAIRMAN GRIFFON: Zero errors is tough, right. David, go ahead.

MEMBER RICHARDSON: Yes, I totally appreciate that. What I felt like coming out of the QAQC is -- is I don't have -- I don't have a starting point, like a place where I plant my stake and say, "This is where we are today." An action that you take following the

ten-year review is going to have a positive or negative impact on the quality of the work being done or the product that's being delivered.

And so, that's -- to me, that's concerning because in fact it's possible that you can introduce a tool or a new procedure, which has a not anticipated impact on the quality of the work product. And so -- and I feel like there's a little bit of a distinction, and it's probably between -- I mean this could be a difference between health physics and epidemiology in a sense of difference between a deterministic intervention where you're saying we have to have greater oversight on a record by record basis, and what I would call a probabilistic or stochastic evaluation process, where I would say I feel comfortable with a 5 percent or 10 percent sample, and getting from that

survey census perspective, getting an idea of the quality of the work product being delivered.

Now, one of those, as you said as you increase the -- kind of the types of deterministic interventions where you're going to have a more detailed inspection on every record as that increases, necessarily that's increasing the cost of and the time that's required for the evaluations.

But for -- in a lot of business models, you might say, "I'd be willing to accept a 5 percent or 10 percent increase in the cost of the process, and a 5 percent or 10 percent increase in the time," and we kind of bound that by the sample drawn, and we're going to run certain records blind the second time.

I mean that has -- it should be proportional to the amount of effort for that

quality assessment procedure, but that -- that's -- that kind of remains the sort of thinking that I'm having. You need to do that before you take any actions. You can bound the cost of that on the times that's required by the sample drawn, and then you take intervention and evaluate forward.

So, that's what -- that's what I was still hoping to see: something laid out in terms of coming out of the ten-year review. We feel like there's some questions about the quality of the product and we don't have a way of evaluating that yet, and an action item would be NIOSH is going to commit 5 percent of next year's effort to assessing that, and then doing that on a fairly kind of routine basis, in order to track their progress.

DR. MAURO: This is John Mauro. This might be helpful. It's just information. Stu and David, you know we basically review 1

percent of all completed DRs in the selection process used by the Board. Just for your information, the cost, and we do a very independent and very thorough review, where basically we're a complete separate entity.

In theory, having something of that form within NIOSH, a separate group that does basically what we're doing, the -- if you were to set something up like that and decide what percent you would want to sample, in our case the sample was 1 percent, but it costs anywhere between I would say 50 to 100 work hours per audit, and it's pushing closer to 100 these days because of the complexity.

Our hourly cost is about $130 per hour. So, I mean I think that is some raw materials that if you wanted to consider a sample and do the kinds of things that are only internal to NIOSH that SC&A has been doing, that's the type of cost you might

experience if you were to do something along those lines.

MEMBER RICHARDSON: I guess that's one way of looking at it. The other way is that you just -- you have a sense of what the cost per case is in terms of person hour/person time at NIOSH, and they're going to move the record back through. It could be exactly through the same process that everything else is processed through.

I mean there is an advantage to having an independent group doing their oversight, but there's also an advantage in getting a sense of the reproduced availability of a result as it moves through -- a second time through the same process.

MR. HINNEFELD: Well, I think all are good suggestions, and I think it's helpful to hear additional discussion about avenues to pursue here. I think David really hit a mark

with me in his comment about we don't have measuring stick today.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: We don't know what our statistic is today that we would improve on intervention.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: And so, that sounds -- that's an important thing to pursue, and the way to do that is you want to choose people who are familiar with the process probably.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And so, what we would do is we could carve out some section of our people or a couple people, and give them assignment like that. Alternatively, this probably would not work because it influences the independence of SC&A. The other thing that comes to mind is to task SC&A on our own,

not through the Board. But that might not be doable because --

CHAIRMAN GRIFFON: No.

MR. HINNEFELD: So, it has given me a lot of refreshing thought because this is something that you deal with everyday and you don't really, and you don't take time to think about it. So, I think I certainly will take the feedback, and I think that we can probably make that part of our response because we've been struggling a little bit. Like I said, I'm struggling with what I do --

CHAIRMAN GRIFFON: Well, what jumped out at me was the baseline too.

MR. HINNEFELD: And we don't have a measurement and that's really important.

CHAIRMAN GRIFFON: Because you -- you -- even at our presentation, they talked about all the tools to avoid data entry mistakes, which everybody around the table

felt like that was reducing errors, but there was no benchmark to demonstrate that it definitely did --

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: So, I think that's a good point. I mean I --

DR. H. BEHLING: This is Hans Behling. Can I make a comment to an issue that I raised some time ago?

CHAIRMAN GRIFFON: Sure, yes. Go ahead, Hans.

DR. H. BEHLING: One of the things I always thought was missing here in this whole issue of QAQC is the following: Obviously SC&A has had a chance to review most of the documentation to determine whether or not the guidance documents used by dose reconstructors are in fact consistent with contemporary science, consensus science, and I believe it is.

And the other thing is, are the guidance documents clear and -- and crisp enough for dose reconstructors to follow consistently, meaning that there's no real room for subjective interpretation of the guidance provided in such documents?

And one of the things that I've always thought might be really helpful is the following: It's to basically get a dose reconstruction that has yet to be done by anyone at NIOSH, and assign that to ten independent dose reconstructors and assess their outcome. And that would give you an understanding of how readily are the guidance documents being followed. Are they being followed consistently?

In other words, if we have guidance documents that are scientifically correct and properly written so that there's really no room for subjective interpretation,

then 10 individuals following those same guidance documents should come within a reasonable dose estimate of the original dose in question that would be within a matter of maybe 5 percent of high and low.

And if that's the case, then obviously we have a very firm handle on whether or not the -- the working methodology that we're currently using for dose reconstruction is functional, and it would obviate the question of is it the luck of the draw for a claimant to define his dose for reconstruction that determines compensability.

I've often look at -- when I was still very much involved in the dose reconstruction, I often questioned what would happen if the same dose reconstruction were offered to different groups of different individuals out there? How much difference would you have in terms of compensability,

especially those that are above 40 percent or 45 percent?

Would there -- is there enough slop in the dose reconstruction guidance documents that allows for some leeway that would potentially have one person below 50 and the other dose reconstructor above 50? And that whole issue should potentially be resolved if we went to at least one exercise where ten different dose reconstructors were given the identical dose reconstruction to do, and then assessing the consistency by which the dose reconstructors end up with an organ dose and a PoC value, and I think that has never been done, and I think it might be worth doing.

DR. MAURO: Hans, I'd like to add a little bit to that. I think you're on the track of something very important. You see, you need a metric, as David pointed out, and

one way to get a metric and a baseline is to do -- let's say you do just that. You do a -- once a year, you do a blind. I call it a blind. We have ten people each independently reconstructing some selected, or maybe one or two cases, similar to the blind dose reconstructions SC&A did, which we'll get to later.

And that -- and then analysis of that would give you insight into the variability that exists for different people doing the same case, and a diagnostic as to, okay, the magnitude or the differences and the reasons for the differences. And then of course that finding would drive any actions on how to improve.

So, it allows you to start to focus in on the causative agents for the differences, and it may be ambiguity in the procedures, etcetera. And then you do it the

following year, and the following year, and then maybe just once a year, and it becomes a system that -- to track improvement. And you would hope that the spread gets tighter and tighter in each of the causative agents if there's some root cause and you can identify that way and fix.

So, I mean this would be something that I think would be very manageable and not -- perhaps not that costly as compared to the -- the earlier item I mentioned, where you would actually sample and check. That would be a direct method, but to actually have a metric and to track performance and diagnostic that may not be that costly.

So, this is a suggestion, and Hans, I think it's a good one.

DR. H. BEHLING: Yes, and I think what you're really looking for is the variability that I believe may come into play

here in terms of errors that we identify in the reconstruction audits is that maybe our guidance documents aren't as prescriptive.

If you have a very, very prescriptive guidance document that leaves no room for error, no room for subjective interpretation, then it is reasonable, it is axiomatic to conclude, that you would end up with ten different people's dose estimates that are very consistent with each other. And I think right now we don't know how prescriptive it is.

As John just mentioned, if we had ten people doing this, and then compare and say: Where do they differ? Why is it that one person interprets a guidance document in one way, and another person interprets it another way, and you end up with a difference that may make the difference between compensability and non-compensability?

I think it would be a very easy way to determine just how good are our guidance documents that would allow ten different people to come to the same conclusion.

DR. MAURO: This is offline.

CHAIRMAN GRIFFON: I think Brant has something to say, similar to what I'm thinking.

DR. ULSH: I don't know.

CHAIRMAN GRIFFON: I mean from a practical standpoint. Yes, go ahead.

MEMBER CLAWSON: This is Brad. I've just -- I've got to echo kind of what John and Hans is kind of saying. This is kind of like when we pull a sample out there. We've got three or four known blanks or certain ones that are going to go through to see how they're processed and everything else like that.

I think this would -- you know, I've got to agree with what Hans is saying. This would show us, because so many times in dose reconstruction, when we've been reviewing these, I've heard, "Well, this is just how the dose reconstructor does it," and there's such a variance there.

But if -- I think that way, it would give Stu what he's looking for of where he can hone in on a benchmark for it, but also so we can show a sign of improvement too. I've got to agree with both Hans and John. I think it's a good idea to kind of look that way.

MR. STIVER: This is John Stiver. If I could say something here? We have -- I have some direct experience in this through the DTRA Program with the Atomic Veterans. We had exactly the same issue come up as result of the National Academy Review of 2003. They

were looking at the quality metrics. We instituted a blind dose reconstruction exercise, and initially, we had different people coming in for the same type of case, same exposures.

So, there was about a factor or two of each other, and we were able to identify just areas of the procedures that needed improvement, and we were able to bring it down to about 5 to ten percent over a period of a couple years. And the costs were not that high.

Now, I realize it was a different paradigm in terms of the scope of the -- or the magnitude of the program here, but it worked very well for us, and I think it's a good idea that might be worth pursuing here.

MEMBER PRESLEY: Hey Mark?

CHAIRMAN GRIFFON: Yes?

MEMBER PRESLEY: This is Bob

Presley. I've got to say something. We've been doing this for ten years. We ought to have a pretty good handle on our QC on this program. Instead of going out here and spending another $1 million plus, and no telling how much time, and we don't know what it's going to tell us.

You know we've had blind reviews before, and we haven't gotten a whole lot of feedback off of them. I would love for us to find out some of the feedback that we've gotten before on some of this stuff that we've got ongoing, before we go out here and we reinvent the wheel ten years down the road.

DR. MAURO: I could help a little bit, a couple of items that might be useful. One is based on our cost, if you were to do ten per year, blinds, in the matter we just discussed, it would probably cost about $150,000 a year. So, I don't think -- and

it'd be offline.

CHAIRMAN GRIFFON: With ten different people?

DR. MAURO: Yes, where you pick one case and have ten different people. I base that simply on 100 hours per case per person. I think I did it right. I have to check again. I just did a quick calculation. I mean if you want to get an idea of the cost, the burden, the economic burden on the program, you could assume ten people are each doing a case.

Each person might require as many as 50 to 100 work hours, and each work hour would probably cost about $130. I'm just assuming the cost that NIOSH would experience is not unlike what SC&A experiences. So, that's the kind of cost.

The benefit would be it'd be offline. It would not be a step in the

process. You still have your normal QA that you're doing of course, which -- but if this is offline, that -- the process would be independent of the production. And it would not slow things down, but of course it would impose this additional cost, which I -- unless I did my numbering wrong is really not that large and should give you a lot of information.

DR. H. BEHLING: Well, also John -- this is Hans again. If in fact such a QA program would result in fewer errors, think about the cost savings associated with the resolution of the errors that we're currently finding in our DR audits, meaning that the investment of $150,000 would improve the quality of dose reconstruction resulting in fewer findings in our audits of such dose reconstructions, there would be a gain in reducing the number of hours for conference

calls and revolution of these problems would have to be factored into that cost.

Hopefully such a QA program would result in fewer mistakes, reduced numbers of findings, and reduced time in their resolution.

CHAIRMAN GRIFFON: Ted has something.

MR. KATZ: Yes. I mean the thing I was just wondering about, this methodology like throwing the same case at ten people or whatever; considering this program, the diversity of sites and all that and you're assuming -- I mean there's one thing -- there's the kind of errors that are made that are just strictly straightforward errors in procedure, not a matter of judgment or what have you, and those I suppose you could take any kind of sample and look at them intensively and get a better handle.

But if you're -- if you were to assume that you're going to have very different performance on different sites, different kinds of dose reconstructions at all, yes, the real problem with throwing ten people per case and getting any good picture of a diverse program like this and -- so, I mean the idea of peer review I think that's absolutely right. But I'm not sure that kind of horsepower would be affordable in a broad sense for this program.

CHAIRMAN GRIFFON: Yes. Wanda and then Stu.

MEMBER MUNN: Ted has touched on something that is of concern to me. One of the big questions I have is do we have enough data on the reviews that have been done to make any estimates at all, even of trends, towards the base cause of the types of errors that we are seeing?

I have not seen anything that has laid out for me any kind of an overview that would lead me to believe that we even know which are the most predominate errors we're seeing. What's -- what's the cause of the error that we see if we're going to do the kind of oversight program that John and Hans are suggesting?

I can see that there would be great benefit in that, but that doesn't leave me with the feeling that such an oversight would tell me anything more than I already know about what causes the errors in the first place.

Are we seeing repeated human error calculation? Are we seeing repeated misinterpretation of instruction? What are we seeing?

I have no strong feel about the source of the errors. Is there any way we can

get a feel for that before we begin to make decisions about how we might address direction?

DR. H. BEHLING: Well, this is Hans, and at least from my exposure during the time when I was very heavily involved in DR reviews, it's that I think the principal source, if I can just generically identify a cause, is the potential subjective interpretation that sometimes comes with following a guidance document that allows people a certain amount of latitude in things, such as my interpretation of how I want to reconstruct this guy's dose.

And I believe the prescriptiveness or degree of prescriptiveness of guidance documents may require some tightening and saying there is reduced action for interpretation.

CHAIRMAN GRIFFON: I appreciate --

DR. MAURO: Let me add to that.

CHAIRMAN GRIFFON: Hold on. Hold on, John. Just let Stu -- Stu had a comment.

MR. HINNEFELD: I had a comment with -- about one of the -- I was going to say in terms of cause of errors, that first group of selective findings, we're pretty close to accounting for what was the cause of those errors. After we'd run through them, I kind of gave them a look and added my piece to it. It's just something I just finished, so we haven't sent it over.

But there are some things that are interpreted a particular way. Some of them came because the dose reconstructor made some sort of judgment and defining questions to that judgment. There are some like that. The one that caused -- that struck me, and this is strictly anecdotal - I don't know if it's not -- is the one I mentioned coming in, was that

the instructions were clear.

They -- he just made a mistake. He put something on the wrong line, or he didn't include something that he knew he should've included, etcetera, etcetera, etcetera. And it wasn't caught. That was fairly prevalent cause in the findings, that first collection of findings, that we were to look at.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So, those are the kind of things there. Now, back to the point. I was just going to reinforce the point I was going to make. I was going to reinforce Ted's point about the difficulty of making broad judgments from taking a particular claim and having multiple people do it. Because the instructions are pretty site specific.

And so, the -- so the clarity and the lack of ambiguity of the instruction that

you will learn will be for that site, instructions for that site. The Hanford instructions are either ambiguous, or they can be very clear because we -- so, we're not talking about one case, ten dose reconstructors.

You're talking about -- if you want to get a broader view, one case, ten dose reconstructors gives you a view of one site.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And one other thing is that we probably don't have ten dose reconstructors who are experts on any specific site.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And you want to have somebody who knows what they're doing. You don't want somebody to have to learn it in order to do this duplicate analysis. You want --

CHAIRMAN GRIFFON: Especially where it comes to professional judgment. Because assumptions on internal doses --

MR. HINNEFELD: Yes. And so, I don't know. Now, ten is an artificial amount. So, I mean as long as you don't hold it to ten, I think there's a way to go about this, but we got to think about how we're going to do this.

And the final thing I'm going to say, and I think I'll probably be quiet for this, is whatever we decide, the options that we decide we're going to try, we're going to have to cost this out and decide what's it going to take to do this, and what do we not do instead? Because we spend all our money.

Every year, we spend all our money. And so, if we're going to do -- so, when we cost this out, what are we not going to do instead. So, that's part of the --

that's part of the equation as well.

CHAIRMAN GRIFFON: I think the one concrete thing, just to go back to David's initial statement, the most concrete thing I've heard is that we need a baseline.

MR. HINNEFELD: Yes. I agree. I like that.

CHAIRMAN GRIFFON: And then you can -- I like that part a lot.

MR. HINNEFELD: Absolutely.

CHAIRMAN GRIFFON: And how you get there, I have several of the same concerns. The site, the type of cases, I mean internal dose -- predominately internal dose cases, you rely more on professional judgment and you're likely to have a bigger spread in your errors, and ten dose reconstructors? You could be -- I don't know.

And then you get into the AWEs. You got a lot of AWEs. The AWEs -- they

should be automatic. So, they might be a lot tighter.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: But that doesn't necessarily mean you're -- if you only look at like ten of those cases, then you can say, "Oh, we're doing great." You know? It could be a false indicator.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: There's a lot of parameters working in here that you need to consider. The other thing is -- hold on. Just one more thing.

The other thing that struck me was, as a possibility, maybe not necessarily to get -- to measure on the whole effectiveness of this program, but to the customer side of this, is that -- and we talked about this in earlier stages, and we laid out this notion of -- of having different

levels for different levels of cases.

For instance, the 45 to 50 percent PoC range you may want to -- you may consider those more critical, and therefore, you might have a different level of review or level of sampling, as David was saying. You know, something like that.

I could even see a situation where some things close to the percentile, you automatically put a procedure in place that says

we redo this case with another dose reconstructor, and if one has 49 and one has 51, you say, give the benefit of the doubt and compensate the claim, or something like that.

That's another -- that's sort of another thing, but if it -- it made me think about what Stu had presented earlier, and I think this is probably over a year ago, but the idea of possibly looking at different

levels of review for different -- you know, the significance level of the PoC to some extent to have more robust reviews for certain types of cases.

Was that David that had a comment?

MEMBER PRESLEY: No, it's Bob. You are right on the money on that.

CHAIRMAN GRIFFON: Thank you.

MEMBER RICHARDSON: And I did have a comment.

CHAIRMAN GRIFFON: Yes.

MEMBER RICHARDSON: In thinking about this, I was -- I think right now, what this Work Group is doing moves between two types of evaluations, and there's -- and it's very valuable I think, the information and insights that are coming from these evaluations. But they're -- some of it relates to what I would call external validity or -- or kind of this -- this logical and

scientific basis of the -- of the dose reconstructions.

And so, you have somebody outside of the process who is taking an independent look at the dose evaluations, and saying, "Are they scientifically credible? Do we agree with them?" And then there's also, in that same process, there's some evaluation of reproducibility of the results by an independent auditor.

So, that's the kind of sense of this audit. And that -- I think that's appropriate with kind of small samples because there's a different type of evaluation, which is the evaluation of -- of a -- what is -- and from my view, it's kind of a large scale production process in creating a work product for a consumer, and there's a question there about the -- this is where I was thinking about kind of the quality assessment, the

internal consistency, and the reproducibility of the process. Not in the sense of is it accurate, is it getting to the most scientifically valid result, but in this sense, just is it consistent? Because that also has an invitation for fairness.

And so, that -- that evaluation can't really be done by an auditor, in my opinion. It has to be -- you have to run the same input through the process and see if you're getting the same output by the people who are doing it. And this is where I would still come back to saying that you need -- that NIOSH needs to budget that.

It's probably not even really -- I mean I think this Working Group could have some say on it, but it should be part of the process of running -- running the operation.

And in terms of cost, I agree it's expensive. You have to decide what you're not

going to do, but I don't see how you can avoid it. Again, the way I would pose it is what would NIOSH do if there was a five percent increase in the number of claims next year?

I think that there would be a modest lag, but that's what you would be generating through the hypothetical of resampling a random five percent of the cases, and putting them back through the process. Could they handle it, and what would the cost be?

I mean there is going to be a cost, but I think that's part of -- at least for a period of time, figuring out the internal consistency of the process because when we were talking to ORAU, they haven't been doing that yet, and that's -- it doesn't catch the kind of -- one type of mistake, but it catches -- we should get some sense of what's -- what's the prevalence of those

mistakes where the instructions were clear, but the people handling the claims are making some sort of kind of random mistakes due to kind of just not -- you know, errors?

MR. HINNEFELD: Your takeaway point on that again was what is the action that we would take in order to do the internal consistency review? Is that a -- a multiple dose reconstructor doing the same claim? Is that what you are talking about?

MEMBER RICHARDSON: Well, I'm going back to my initial case that there needs to be a random sample of the cases. It can't be something that's evaluated by pulling one or two cases out and doing an assessment of -- that's going to be most useful for understanding the validity of the reconstruction. But I'm interested in the reproducibility of the dose reconstruction.

MR. HINNEFELD: So, in your --

MEMBER RICHARDSON: And that requires going in and running them through multiple times.

MR. HINNEFELD: Okay, so again, you would randomly sample a set of dose reconstructions, and then our -- our action would be to redo them several times with different dose reconstructors, or do we do them in order to -- for this sampling, this is our issue: consistency of the output?

MEMBER PRESLEY: Stu?

MR. HINNEFELD: Yes?

MEMBER PRESLEY: This is Bob again. You said something that really bothers me. Randomly sampling. Now, is it worth sampling somebody that's got a PoC of 3, or is it worth sampling somebody that's got a PoC of 49.5?

MR. HINNEFELD: Well, I mean you can randomly sample without being completely

random. I guess you can -- I guess it wouldn't be random. It'd be random within your selection parameter.

MEMBER RICHARDSON: I would advocate that you want to get a -- what if that -- until you know that probability of compensation of 3 percent is actually a valid number by some -- by first evaluating the process and seeing if there's a gross error, you just -- you just -- you want to run the claims through so that they're -- you've got a duplicate on a subsample, a random subsample, of all the cases. That's going to --

MEMBER PRESLEY: You spend $130,000 to do that on something that low. That really is bothering me.

DR. H. BEHLING: You're dealing with maximized doses, which are by nature subject to a wide range of interpretations that have no meaning.

DR. MAURO: You don't want to use those. They've got to be best estimates. They've got to be.

DR. H. BEHLING: Best estimates.

CHAIRMAN GRIFFON: I think we're talking about two different things. I mean that's what David's point was. You're talking about consistency versus validity. And maybe, I don't know that the two options -- what I would like to do from the Subcommittee is write out some options that NIOSH can consider. I think that's where we should go with this.

Then NIOSH can examine these further and come back. But I mean I think David has got one scheme. Maybe they're not -- maybe it's not one or the other. Maybe you use some combination, and use other techniques to check validity as well internally. Even though we're doing that to some extent here,

you may want to do some validity check internally.

MEMBER MUNN: This is Wanda.

CHAIRMAN GRIFFON: Hold on. Wanda's got the floor.

MEMBER MUNN: I have to agree pretty strongly with what David had to say. If a truly objective perspective of random selection means exactly that, a random selection. If an error has been made on a low percentage PoC case, it is just as important to know why that error was made, as it is to know why the error was made on a high PoC case.

I would argue that it would defeat one of the major purposes of such a -- the cost of such a review if we limited our "randomness" to a specific level report that we had seen. It will tell us as much if we see the same kinds of errors in low PoC

numbers as if we had high ones, and one can't be -- if -- it depends on what our purpose is.

If our purpose is to try to define where the error is occurring and why it occurs, then the sample, if we do suggest such a thing, would need to be, in my view, random.

DR. MAURO: Wanda, this is John. The idea is -- see, when a person does a deliberate maximizing or minimizing, there is subjectivity there, where the person stops, and that's allowed.

So, you would expect there to be differences because you stop -- you pick your -- you wouldn't expect the same result to come, or even come close if you're doing a maximizing and you come up with a low dose, or you do a minimizing and you come up with a high dose.

You're just trying to quickly screen and put this to bed. So, you would --

the outcome of that -- certainly, you could review the results of these and see the decisions and judgments that were made, but you would not expect two different people to come to the same place, but you would expect people to come to the same place when doing a realistic best estimate.

CHAIRMAN GRIFFON: Yes, I mean --

MR. KATZ: I mean keep in mind this is not just an evaluation for the sake of evaluation and just for determining root causes. It's -- you're talking about a QA process here, and for a QA process, your primary worry is the outcome of quality flaws, and there are different levels of quality flaws if you look at a proper QA system, and ones that don't impact the world don't matter very much.

So, I would focus your resources on where it matters the most, and that is

getting the right decision, which sort of lends to what John is saying about focusing more of your resources on those close cases because at the end of the day, that's what you worry most about. You want to get the right decisions out.

I mean I agree that randomly you could still get a root causes no matter what cases you look at, but it's a QA process. It's not just an evaluation process. And you want to -- you want to assure that your products have quality, and the primary quality, the most important quality, is that they come to the right decision, and everything else is of lesser importance, although still important.

So, that -- that was one thought I just wanted to throw out there. And a second, just sort of related to David's thing about sampling, is typically in a QA process, until

you know the reliability of your system, you do have an intensive inspection process, and what -- typically with QA systems, as you get a better handle on your reliability, you can reduce your sampling rate.

In extremely reliable systems of course you sample very little, and it costs very little because you already know. And that's the way QA systems work. So, I mean I think you should think in those terms.

That might mean that in this case, on the front end, it's the more expensive process. You have to endure delay and so on until you get a handle on your level of reliability of your system. But down the road as you improve, it'll require less inspection and less -- less QA effort and intensity.

That's the way QA systems work. I mean so they're front loaded with effort. As you improve your system, there's less work to

do and inspection.

DR. H. BEHLING: With regard to David's recommendation too, we sample old cases that have already been reviewed or have already been dose reconstructed. The potential risk, I would throw out, is that given the fact that there -- these results are documented and readily available to -- to a person who is now redoing it would potentially introduce a risk of bias.

If you already know a previous dose reconstructor came up with a PoC of 48 in a given does, organ dose, for the cancer of a certain value, redoing that case by someone who already knows the end result of a previous evaluation would have a tendency to bias that individual, and that was the reason why I suggested early on when I made comments to take a case that has not yet been done, and do it by at least several people to see

consistency.

Because at this point, you do not have the risk of someone already knowing what the endpoint is that he might want to aim towards.

MEMBER RICHARDSON: Hans, there are two issues there, both of which maybe I wasn't clear about. The first was these are blind reviews. The second is we spent a lot of time already, and I felt somewhat frustrated by it, reviewing old cases and ORAU coming back and saying, "That's not the way we do things anymore."

The process I was envisioning and hoped to describe is one in which as cases -- that you do this sample of cases coming in, and there's a probability of sampling somebody for going through the system twice.

And I was imagining, again, something like ORAU, when as they're sampling

-- as they're getting 100 cases coming in, they're going to do a processing on 104-105, because it's a 5 percent sample. Can they handle that? What's the cost? Those are the questions. But then you would have basically a five percent resample.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: This is John. If it helps, when we get to the blinds, you're going to find that we did exactly this. We had two cases, which were independently done. And the bottom line, by the way you're going to find this interesting, for both cases the independent a factor of 2 difference.

In other words, we got one data point here anyway from a blind, where we -- well, two data points, where we did two cases. And coincidentally, two of them, actually the outcomes you'll see later, is that two different independent analyses both came out a

factor of 2 different.

So, this is an -- at least two examples of what you might expect.

DR. H. BEHLING: John, I will correct you on this. You didn't follow the guidance document on plan B.

DR. MAURO: That is correct.

DR. H. BEHLING: Those differences will not necessarily reflect what we would expect under the conditions for two dose reconstructors following the same guidance document.

DR. MAURO: That is correct.

DR. H. BEHLING: It's not a correct analogy.

DR. MAURO: That's another point, by the way, David and -- we've been talking within the context of given the procedures, will everyone reconstruct the doses the same way? Now, I'd like to point out though when

we review the cases for AWEs, where basically there really is no data and there really is no person-specific dose reconstruction; it is a matrix.

That's a generic matrix very often, where -- and what we review, and I do a lot of these, is the matrix that's being used. The default set of assumptions. So, in effect, I -- and I have to say in being part of this quite a while, the places where the -- the -- where there are differences in doses, when -- when we review DOE site cases, we'll find -- we find some errors, whether they be manual errors just made by the dose reconstructor or interpretive errors.

The errors, I have to say, are relatively small. You know, factors of 2. When I review AWEs, where I'm looking at the procedure they're using to reconstruct it, and I look at the fundamentals of did they come up

with a matrix that seems to be appropriate for a particular facility, Bridgeport Brass, I find -- my findings are on the order of factors of 10 and higher.

So, now, when you talk about quality issues, I think it is important to make a distinction between following your procedures and getting the same result, and of course the deeper issue is are the procedures appropriate?

It sounds like from the point of view of quality, the conversation we're having now is given the procedure, are they -- are those -- as being valid, the question that is being asked is are those being followed in a consistent way? If that's what you're objective is, fine. But --

CHAIRMAN GRIFFON: That's what I said. John, that's what I just said. There's two different factors, and I don't think

they're mutually exclusive. I mean the consistency versus validity, and I think they're two things that are coming up again and again by different options.

DR. MAURO: The big one -- the big ones are validity. I mean consistency, yes, we're picking that up. And you have our quality report and all the data that we've summarized as part of your review for the first 100 cases. It lends a lot of insight into that.

But I have to say that the place where I believe the greatest is the underlying assumptions that are built in, at least at the AWE sites. I've picked up, as you know -

CHAIRMAN GRIFFON: Yes, it's like profile reviews. Yes, that's why you're doing mini Site Profile reviews on the AWEs.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: That's why we

have the Site Profile reviews for the other sites.

DR. MAURO: Exactly.

CHAIRMAN GRIFFON: If there are bigger things, that's where they come out.

DR. MAURO: Yes, yes.

CHAIRMAN GRIFFON: Yes, or in the SEC reviews.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Here's what I would propose. I want to put together a memo to the Board, and I'll try to summarize some of what we've come up with and propose options for NIOSH to consider in implementing the action plan, sort of as Lew described or whatever. And I'll circulate that to the Subcommittee and get input. We can work on the language of it and then try to deliver it to the Board in the August meeting.

If I can move people off the QAQC

item for a second, I think I got sort of a handle on some ideas to put in there. You know, I'll be sharing this and getting input from everyone, but I -- I'd like to know on other issues on dose reconstruction, and the one I brought up earlier was this question of using over-estimating techniques and whether we as a Subcommittee have an opinion on that matter, whether we -- I mean I know Stu has even raised it in our Subcommittee that maybe at this point where they've kind of caught up in their level, maybe the merits of using the over-estimating techniques may not be there anymore, and it may be better off just to use the best estimate.

MR. HINNEFELD: I have something to offer on that.

CHAIRMAN GRIFFON: Okay, go ahead.

MR. HINNEFELD: The -- in the context, and I'm talking about the context of

what we're facing in DCAS now, we have a ten-year review with about 20 priority recommendations. There are probably 70 total.

Twenty priority recommendations, a few of which may be pretty much accomplished, but most of which would require effort, i.e. cost, to do. And so, I believe that there is value in not doing over-estimates because you cannot explain it to the -- you can write in the dose reconstruction, "This is an over-estimate. If conditions change, the dose will likely go down."

You can write that all you want. If it was the first sentence in the dose reconstruction, it doesn't matter.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Person says, "I had 44. Now I have 38 with another cancer."

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Okay? It doesn't

matter. You cannot explain it. So, there is value in not doing it, but there's a cost in not doing it as well. And so, this is going to be weighed in the light of everything that we're going to be doing including actions for these 20 priority recommendations, most of which are going to cost money. Is this going to make sense?

That was my response, and that's actually how the recommendation --

CHAIRMAN GRIFFON: I think -- I think the other value -- I think you hit it on the head. I think the other value for not doing them is that not only is it hard to explain, but it also I think would improve the trust of the folks getting the dose -- you know, the --

MR. HINNEFELD: You can't explain something they don't trust.

CHAIRMAN GRIFFON: Trust and

credibility, I think. Yes, yes. They're important.

MR. HINNEFELD: Now, I think our best focus is to do some half measures. Because I think it's going to be too costly. But I think we can do some half measures. For instance, we could say don't ever overestimate a medical exposure. Why bother?

That's not enough of a short cut in math. You know, then they take the bulk numbers and they get a certain value, and if they redo it later, they say, "Well, this person didn't have one every year. They only had one every other year," and they cut down the number of medical -- you know, why bother overestimation. That's not even enough to worry about.

The other thing is once a case comes back the first time, you cannot overestimate it at all. You have to do a best

estimate. Then that way, you at least won't have the repetitive. Time and again, people come back with additional answers and repetitive lowering of the PoC.

So, there are some half measures we could do, which I think are probably more promising than doing away with them altogether. Because you only get about 10 or 15 percent of the ones you do back.

CHAIRMAN GRIFFON: Anybody else have comments on that? I mean I think I want to include it in our memo.

MR. HINNEFELD: Absolutely.

CHAIRMAN GRIFFON: I'll probably put something to the effect -- similar to what you said, that NIOSH should consider.

MR. HINNEFELD: I agree.

CHAIRMAN GRIFFON: I mean we only make recommendations anyway, but NIOSH should consider moving toward this.

MR. HINNEFELD: Well, you can put some -- if you can put priorities maybe on the -- maybe give us some priorities. "We really think that if you can't do anything else, this is the thing we think you should do."

I mean that's going to help because I mean there's a lot of -- a lot of stuff here. And like I said, all 20 of these recommendations, I don't see any way they're not going to cost somebody.

MR. HINNEFELD: Right.

MEMBER MUNN: Stu's comments are certainly well taken here. There's no question that we've had more grief than joy out of our need to overestimate in the past. But from the reports that we had, one gets the impression that the case load balanced against the available dose reconstructor personnel list is not as bad as it was five years ago, hopefully, and perhaps more manageable.

Certainly, I agree with Stu's concept that there may be something in between the two extremes that would work, and be more easily seen as fair to the claimants.

MR. HINNEFELD: Just so everybody knows, things that usually -- money is taken away to do dose reconstruction, and the dose reconstruction on path. If it's taken away to meet the objective, and it'll be taken away as necessary to maintain to make sure we don't build up another backlog.

The work that drops off the table is the investigation of findings on Site Profiles first. That's what drops off first.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And the second thing is the continuing discussion of SEC that we've looked at an Evaluation Report. Once we've looked at an Evaluation Report, it drops that back down to only slightly above a --

CHAIRMAN GRIFFON: Right. Anything else on overestimate? I'm just raising some of these things that came out of the recommendations from our group and from the ten-year review. I think I can summarize the position on overestimating.

Any other items? I mean I have -- one other item that comes to mind for me is the question of, and this came up in several of our findings in the first five sets review, was the use of personnel -- or the questionnaire.

MR. HINNEFELD: Oh, the CATI?

CHAIRMAN GRIFFON: Yes, the CATI. CATI, thank you. I forgot the name.

MR. HINNEFELD: That is in here, I believe. I believe that's in a different section. It was in quality dose reconstruction. There might be a quality --

CHAIRMAN GRIFFON: Yes, it might

come under --

MR. HINNEFELD: It may not have made the priority list.

CHAIRMAN GRIFFON: Yes, it may not have. I'm just drawing off my head. I'm remembering outside of your review that was -- in terms of number of findings, we had several that fit into that category. I know that.

MEMBER MUNN: The issues -- and where appropriate make improvement in such vehicles. I'm assuming communication vehicles.

MR. KATZ: Excuse me. Someone on the line is not muted. Can you mute your phone? Star 6 if you don't have a mute button.

CHAIRMAN GRIFFON: Thank you,

MR. KATZ: Thanks.

CHAIRMAN GRIFFON: I mean I think that gets to my point. I agree with the

communications issue, but I've always said for several years that it's more than just explaining to the worker that the way we did this dose reconstruction more than adequately covers any incidents that you raised in your report, or -- and then it turns into boilerplate language in the dose reconstruction report that goes out to the individual.

And the reality is NIOSH never goes back to -- or very few cases I guess was determined that NIOSH goes back to actually investigate anything along those lines, like an incident or a -- you know.

MR. HINNEFELD: It's very unusual --

CHAIRMAN GRIFFON: And I'm not saying that would be done or ever be done.

MR. HINNEFELD: It's not very common to -- to call, but incidents are

sometimes best through contact with the site, a specific search inquiry or essentially information or other confirmation --

CHAIRMAN GRIFFON: Right, right. This is just perhaps a little harsh, but from the beginning I said this CATI should not be about sort of a PR move to show the public that you care and you want their input into this process, and you never use it.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: And never is strong, I know that. But it's pretty rare. And if there's no value in doing it, then perhaps you don't do the CATI. I mean that's a cost savings if you want to look at it from the other side.

MR. HINNEFELD: I actually suggested that one time a couple of years ago.

CHAIRMAN GRIFFON: Did you?

MR. HINNEFELD: I was laughed out

of the room.

CHAIRMAN GRIFFON: That's interesting. I'm encouraged that they laughed you out of the room.

MEMBER MUNN: It's hard to imagine not supporting the idea of direct communication -- that seems like such a basic form of communication. It's so much more personal than --

CHAIRMAN GRIFFON: Yes, but I'm trying to take it one step beyond the communication that there's actually valuable information that can come out of these questionnaires. And I get the sense that from a dose reconstructors standpoint, they really don't see it that way. I mean they really don't see much value in the data they're getting back.

MR. HINNEFELD: Actually, I asked dose reconstructors at the time we were going

through this, the CATI form, and I even -- I gave them the opportunity to say, "Hey, do we even need to do anything like this?" And the answer I got back from the ORAU side was, "Yes, we use it for this, this, this and this."

CHAIRMAN GRIFFON: That would be good to hear and know exactly how they use it.

MR. HINNEFELD: I'll reconstruct that.

CHAIRMAN GRIFFON: Yes, that would be good. I think that would be good.

MR. KATZ: I think just as an example though of what I think Stu is talking about, which I think I used to hear about a lot, was I mean whether they -- whether an incident is followed up is one thing, but there's a lot of stuff on the CATI other than that.

CHAIRMAN GRIFFON: Work history,

and --

MR. KATZ: Yes, work history and so on. And I think a lot of times, they find the work history they got from DOE may not match up with -- from the person they interview in the CATI and they follow up on that, and they end up finding other information related to work history.

MR. STIVER: I am also going to add that sometimes these incidents are not followed up because NIOSH will reinsert accounted for an overestimating process in dose reconstruction.

CHAIRMAN GRIFFON: Sometimes that's the case, especially the incidents, yes.

MR. FARVER: It depends on the dose reconstructor and if they used the CATI information. Some are better than others. Some of the reports we look at are very good

about including incident information, and some aren't. And I think it comes down to the person actually writing the report.

MR. KATZ: My only point was that it's not just incident information in the CATI.

CHAIRMAN GRIFFON: Well, I mean the example that we've run across many times is the neutron exposures, where we have to say, you know, "Were they ever in building whatever?" And we've -- I think we've had that finding a few times, where -- and then we might've had a disagreement with our resolution, but at least we -- you know you did consider that work history part to determine if they were ever in an area where there were neutrons.

So, yes, there's other value, but I just raise it because it's come up.

MEMBER MUNN: Well, and it is one

of the points that Lew makes under the communication category as well is that DCAS will consider it's current communication strategies as they might present perceived burdens to claimants and petitioners, particularly in light of the real burden felt by those individuals through their interactions with the DOL.

We've certainly heard a lot about that.

CHAIRMAN GRIFFON: Yes, that's sort of the flipside is that people get nervous that if they can't complete this -- they don't have all this information; they feel like they're going to get shortchanged.

MEMBER MUNN: They hear the term burden of proof a lot.

CHAIRMAN GRIFFON: Right, right.

MEMBER MUNN: They feel badly.

CHAIRMAN GRIFFON: Yes. Okay, are

there other issues on the -- you know, priority issues that people want to discuss? I mean we have these two documents. I'm going to try to, like I said, put a summary memo together in the next couple weeks, and circulate it so we have time to get something to the Board by the end of August.

And if you think of something once you see a first draft, it might prime people to think of other things so we can always modify this as we go.

Okay, anybody on the phone have other thoughts before we -- I'm thinking of taking a quick break, but any other thoughts on this topic before? After the break, we'll come back and start our blind review discussion. David, any other words of wisdom?

DR. MAURO: Yes, Mark, I've got a couple words of wisdom. This is John. Real quick. Has the -- has the Subcommittee

thought --

CHAIRMAN GRIFFON: David, is that you?

DR. MAURO: This is John Mauro.

CHAIRMAN GRIFFON: I know. I know.

DR. MAURO: Okay. I would be very surprised. There might be some things that the Subcommittee may want to do. I know the conversation has been oriented towards recommendations that the Subcommittee would have NIOSH do with regard to quality.

But a subject that is not on the agenda, but just to leave you with this thought is what are some of the things that the Subcommittee might want to do in light of the recommendations in the ten-year report?

CHAIRMAN GRIFFON: Like catch up on our backlog.

DR. MAURO: Yes. In any event, I

just wanted you thinking in those terms also.

CHAIRMAN GRIFFON: Okay. That's a good thought. All right, why don't we take --

MR. SIEBERT: Mark, I'm sorry. This is Scott Siebert. Since we're taking a break, maybe you guys could help me out. I do not seem to have copies of the blind audit report. So, if somebody could send those to me, that would be very helpful to me.

MR. HINNEFELD: Yes, Scott, I'll send them. I'm pretty sure I can find them.

MR. SIEBERT: Thanks, Stu.

MEMBER RICHARDSON: Could you send them to me as well?

MR. HINNEFELD: Who's that?

MEMBER RICHARDSON: David Richardson.

MR. HINNEFELD: David, okay.

CHAIRMAN GRIFFON: Okay, we'll take a 15-minute break because by the time you

get them sent and they look at them a little bit. So, let's take 15 and come back in 15 minutes.

(Whereupon, the above-entitled matter went off the record at 10:23 a.m., and resumed at 10:42 a.m.)

MR. KATZ: Okay, we're back.

CHAIRMAN GRIFFON: All right, yes. We're back. We're going to start with the next agenda item, blind reviews. And does everyone have those two reviews, first of all?

MR. KATZ: I sent them on to -- David, I sent them to your CDC address, and I sent them to Wanda's CDC address, and I sent them to Stu to distribute to ORAU.

CHAIRMAN GRIFFON: Okay. Scott and David, you have -- you received them?

MR. SIEBERT: Yes.

CHAIRMAN GRIFFON: Okay, I'll turn it over to SC&A to introduce these, and then

we can go from there.

MR. FARVER: John, do you want to do this, or do you want me to do it?

DR. MAURO: I'll start it off. I'll sort of kick it off. I'm opening them up right now. Let's do the first one. The first one is the Portsmouth case.

If you guys are open to it, I'm actually opening it right now as we speak. Give me one second. And we can just work off the executive summary. As preferences to sort of set the table for this discussion, the blind dose reconstructions were a concept originally conceived in the request for proposal goes back nine years now, as being one of the types of activities the Board's contractor would do by way of evaluating and independently reviewing the DR process.

The idea being that if you take a case and have SC&A review a case without

seeing the results of NIOSH's work, so in other words as if we were doing it from first principals. We were given basically the idea SC&A's given all of the Department of Labor and Department of Energy records, dosimetry records, internal and external, etcetera.

So, we have all that information, and we do the dose reconstruction to see what we get. And we do not see, and we have not seen, NIOSH's dose reconstructions. So, right now what you have in front of you in this first one is SC&A's independent dose reconstruction for a worker at Portsmouth, a worker that I believe had bone cancer.

Let me go into the numbers here. Had a couple of cancers, and multiple skin cancers I believe. Yes, multiple skin cancers, and a type of bone marrow, a type of leukemia, I believe.

And so, the idea being for SC&A to

do the blind dose reconstruction on their own, and then eventually working with you folks, we would compare our results to NIOSH's results, which we have not yet seen.

But it turned out the way SC&A ended up doing this was sort of interesting. What we said we would do -- there was a bit of a debate within SC&A regarding, "Okay, but when we do the blind dose reconstruction," this is actually a debate that Hans and I had, "is it our intention to take the procedures, all of the procedures, the kind of thing we were talking about before, and say, 'Okay, SC&A will now do the dose reconstruction as if we were NIOSH, and use all of their procedures in as explicit accord as best we could following their procedures, and to see what we get?'"

And then later on, we would see if we get the same number as NIOSH got. That was

Hans' perspective. I said, "You know, Hans, I think no. That's not what we're trying to do here." I think we're doing something that is -- if a health physicist were to do it as best he could, given the data that is available, what dose would he get, not necessarily following the procedures, but using all the information available to him and using his judgment on how best to do it?

So, we had these two different concepts of what a blind dose reconstruction was. This matter was discussed and it was agreed with the Subcommittee, or the Work Group I guess it might've been at the time, that we would do both.

So, what you're looking at right now is the results of SC&A's blind dose reconstruction for this worker, where two different independent methods were used, one based as best we could explicitly, using the

spreadsheets, workbooks and procedures as specified by NIOSH, and the other done by the -- someone that is familiar with doing dose reconstructions and used his own knowledge and all the information available, including the Site Profile and all the other materials available, but not necessarily using NIOSH's workbooks and spreadsheets.

Okay, I'll move to the -- we'll start from the big picture and get down as much detail as needed. But the bottom line is that if you go to Table ES2, it's in the executive summary. The bottom line is that the doses differ by a factor of 2, whether we're talking about -- whether we're -- and the doses really consist of two doses: one, the dose to the skin to reconstruct it because of the skin cancer that the person experienced, and the dose to the bone.

And if you look at the rollup

numbers in ES2, you can see more or less that there -- we're talking about method B, which is what we call the hand calculations, came in at about a factor of two higher.

And there's -- and the paragraph above that table summarizes the reason for that difference. But when all is said and done, the root cause difference for the reason the two-fold difference is the hand calculation. When it took -- it took the -- think about this worker. He's got external exposure records for both beta and penetrating radiation, or -- or not penetrating, penetrating radiation, and there are actual data, which we used.

But he also has missing data. There were time periods when he was not monitored, and there were time periods when the results came back below the limits of detection for his film badge. The main reason

for the difference between the two doses is when I looked at the -- the -- to try to come up with a coworker dose for this worker -- think of it like this. We have all this data, this data representing the worker population at Portsmouth, the external data, beta and gamma, and given that, you say, "Well, here's the distribution. What would you assign to this worker within that distribution for the time periods when he wasn't monitored but perhaps he should've been monitored?"

That was how the thinking was at the time. I picked the upper 95th percentile of the distribution, while the procedures that were used in method A by I believe Hans and Kathy, or Doug - I'm not sure who actually did that - picked the 50 percentile as being the most appropriate value to use.

And the outcome was a factor of 2 difference. Now, there are other reasons for

the differences, but if you're going to say, "What's the root cause here?" This one turned out to be relatively simple. That's the main difference, and it has to do with the external exposure.

We did it differently internally, but the outcome didn't differ that much. This would be for the long dose. The -- the external dose to both the skin and the bone that is the reason for the two-fold differences for those two organs.

Now, we're at a point now where we're anxious, quite frankly, to find out what the doses are that NIOSH came up with, and whether or not they're close to the values we came up with. The value of this exercise, one, was to -- I think it communicates a sense of how different the doses could be when two different people do it.

Now, keep in mind though in method

B, we did not try to follow the procedures explicitly in the workbooks. In Method B, it was more of like how would a knowledgeable health physicist do the calculation not necessarily using the workbooks?

So, it really tests it in a broader sense, as Hans pointed out earlier. So, we're at a point now where we'd like to see NIOSH's results, and work out if there are differences, what those differences are, and why. I think this goes toward the first conversation.

MR. HINNEFELD: Well, we've not really prepared a lot to discuss here, and there's more analysis to be done, but I've found the dose reconstructions. I can tell you that the skin doses, there were apparently four skin cancers. The skin doses in our dose reconstructions, range from 2.92 rem to 3.8 rem.

DR. MAURO: That's very close to our values for method A.

MR. HINNEFELD: And dose to the red bone marrow, which is the other one that was calculated, was about 12.3 rem.

DR. MAURO: Oh, yours came in a little higher than ours. Okay, well, I mean we're all within that factor of 2 thing that I mentioned.

MR. HINNEFELD: So, we -- we can look at differences. I mean I haven't done that. I just found the summary of the dose reconstruction. That's not too bad in terms of the skin doses, the bone --

DR. MAURO: I think that's great.

MR. HINNEFELD: Now, one thing puzzles me, though. John, your reported dose on the one cancer is the bone dose.

DR. MAURO: Bone marrow.

MR. HINNEFELD: Oh, marrow?

DR. MAURO: Oh, I should've said that. Yes, bone marrow.

MR. HINNEFELD: All right, so, bone marrow. All right, so, I don't know what that difference is about, but -- because we haven't really looked at exactly what was done. I think it could be done.

DR. MAURO: Yes, but the numbers -- I got to tell you I was concerned that we might come into a factor of ten apart. You know, completely blind here. But we're close, especially the external -- I'm sorry, the skin. You're coming in higher on bone it sounds like, somewhat. I'm sorry, did you say your skin was 2.3 rems? Is that right?

MR. HINNEFELD: It ranged from 2.9 to -- what did I say, 3.8?

DR. MAURO: Yes. So, you're coming in very close to method A. You probably used the 50 percentile. You probably

did exactly the way that Doug I believe did. Doug, did you do this?

MR. FARVER: Yes.

DR. MAURO: Yes. You probably did -- the fact that you're coming so close to Doug's numbers means that in this case, these two independent calculations of the skin dose are coming in very, very close because you probably both used the same workbook.

MR. SIEBERT: John?

DR. MAURO: Yes

MR. SIEBERT: I'm sorry, this is Scott Siebert. Can I ask for a clarification? When you're saying 50th percentile, are you talking about coworker dose?

DR. MAURO: Yes.

MR. SIEBERT: Or missed dose?

DR. MAURO: Coworker.

MR. SIEBERT: Okay.

DR. MAURO: Absolutely. Yes, the

missed dose difference is not the driver. It's the coworker dose, where I used the 95th percentile. I believe you folks used the -- well, when I say you folks, Doug used the 50th percentile.

MR. SIEBERT: Just clarifying. Thank you.

DR. MAURO: Yes.

MEMBER RICHARDSON: John, can I ask for a clarification of one other thing?

DR. MAURO: Sure.

MEMBER RICHARDSON: This is David Richardson. So, Table ES2, where there's skin doses under method A, and the -- the value of 2.9 or 3 that you're talking about is summing up what -- what values in a column? Because the total is 5.7.

CHAIRMAN GRIFFON: Right.

MEMBER RICHARDSON: And if Stu is talking about the total, or he was talking

about the comparability of the summation of a subset of values that you were referring to as summing up to about 3 rem.

DR. MAURO: Oh, I'm sorry. I was looking at the -- yes, we're -- yes, one of the skin doses. There were multiple skin cancers, and yes, you're correct. One of the skin doses, the one to the back and shoulder, came in at 5.7, which yes, it's -- I'm sorry. My mistake. I was looking at the right hand side. It's somewhat higher than -- I take it back.

CHAIRMAN GRIFFON: I guess that's what we're asking is did -- Stu, when you said your numbers, are you including the occupational, medical and the internal? Okay. We're comparing apples and apples then.

MR. HINNEFELD: The numbers I gave are described in the dose reconstruction report as the totals. There are like four

different skin cancers.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: Each one has it's own dose --

CHAIRMAN GRIFFON: So, we're looking at the total on this table. Yes.

MR. HINNEFELD: So, the one is certainly lower, our 3.9 to their 5.7.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: But we're about two-thirds of theirs or something.

DR. MAURO: It looks like the occupational medical dose, as would be expected, is the driver for the skin doses, and at least for two of those skin cancers.

MR. HINNEFELD: Yes, I mean more complicated analysis is going to be a little difficult for me on the fly here. Let me see what I got here.

MR. FARVER: You're almost going

to have to go back into the details of the report for each of the two methods and start comparing.

CHAIRMAN GRIFFON: Yes. What's our path forward here? Do we -

MR. HINNEFELD: What do you guys want to do?

CHAIRMAN GRIFFON: Do we now reveal the case number, and then let SC&A --

MR. FARVER: We know the case number.

MR. HINNEFELD: Is this still blocked to you guys?

DR. MAURO: We just didn't look at it.

MR. FARVER: I don't know. I never tried to look at it.

MR. HINNEFELD: I mean we blocked access to -- so they were really blind. We gave them certain key information, but we

didn't give them access to -- now, you guys have the case number and if you're not blocked from that folder, you can pull up our dose reconstruction.

DR. MAURO: I know I didn't do that. Doug, did you --

MR. FARVER: I didn't look at it.

MR. HINNEFELD: It can go either way. If you want us to do it, we can do it. It doesn't matter to me.

CHAIRMAN GRIFFON: I think both groups can probably look at it and be ready to discuss any differences. For method A, maybe that bone marrow, you question what -- it seems like a little bit of a spread. Maybe there's different assumptions that -- that SC&A made.

MR. FARVER: You got to look at the details.

CHAIRMAN GRIFFON: Right. I think

you got to dig into the details a little, yes.

MR. HINNEFELD: There are -- I mean there was -- there was IMBA fitting and bioassay data on those. It wasn't like a missed dose. It was a --

MR. STIVER: Well, once again, you're looking at the unmonitored photon, two different keV and the driver for the bone --

MR. FARVER: And it depends what uranium you used, recycled uranium, enrichment. There's just a whole lot. I couldn't really summarize in two sentences.

CHAIRMAN GRIFFON: Right, right. Sure, sure.

MR. KATZ: So, should we have this as an action item?

CHAIRMAN GRIFFON: A task for both groups, I think, to look at the -- you can go over the Oak Ridge example too, if you want. But I think --

DR. MAURO: It's sort of the same story that comes out of Oak Ridge, the Y12 case.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And what we have here is the fellow that had the gall bladder, the bile duct cancer. And again, the difference, if you want to open to it, the executive summary of that document, you go to table ES1 on -- let's see. What page is that? Up in the front there, page 10.

It summarizes again method A, method B, and again method B comes in two times higher. You know, I'd have to go back and look at the summary text above it. The reason for the difference --

CHAIRMAN GRIFFON: Data dose.

DR. MAURO: Oh, it's the internal dose in this case. How the plutonium and beta dose. Plutonium and the -- plutonium and the

beta radionuclide doses were calculated. That's what the driver is. This was a Super S issue. There were -- I guess the way in which you modeled the intake and the bioassay data, and so this probably is pretty complicated.

I see that there is a mix of radionuclides; strontium is the driver, and then -- but they have some other radionuclides mixed in there also. That would be the beta contribution. And there's assumptions regarding whether it was like a chronic exposure versus a series of acute exposures.

So, again, the driver in this case, opposite from the -- even though we're still a factor of 2 difference, but in this case interestingly enough, it's not the external but it's the internal that drives the difference, not surprisingly since it is the bile duct and you would expect the internal emitters to be more important than -- I guess

you would external.

But in any event, same story, and where it would be worth probing. Where did you folks come in, by the way, on this one?

MR. HINNEFELD: I'm getting there.

CHAIRMAN GRIFFON: Either way, while Stu is looking at that, I think the tasking is going to be that both groups look at the SC&A DR's and the NIOSH DR's, and we'll come back and see if there's any areas of learning out of this.

MEMBER RICHARDSON: John?

DR. MAURO: Yes?

MEMBER RICHARDSON: This is David Richardson. One thing that was interesting to me is the two methods in terms of the external dose, you notice the tables are flipped in terms of method A is giving you a total external dose of 24, and method B is like a 12 to 14.

So, differences would be even more pronounced, for example, if the two methods had given you similar external doses but different internal doses because they're -- there's like 10 or 12 rem of external dose that wasn't added in through method B.

DR. MAURO: Yes, yes.

MEMBER RICHARDSON: And that would be interesting.

DR. MAURO: Yes, we've got to poke around. There's a lot of probing to do. I just tried to give you the 30-second sound bite, but there's a lot to this.

MR. HINNEFELD: Well, our value was about 15.3 rem. So, it's considerably less.

DR. MAURO: You guys came in at 15.3?

MR. HINNEFELD: Yes.

DR. MAURO: Okay. So, that's

about half the value for method A, okay. You know, that's interesting. Your approach also was about one-half the value we came at method A for the Portsmouth case also. So, this should be -- this factor of 2 is hanging in there.

MR. HINNEFELD: Yes, with skin and gall bladder I wouldn't draw a lot of conclusions.

CHAIRMAN GRIFFON: Right.

DR. MAURO: No, no. I know.

MR. HINNEFELD: And we'll just have to do the analysis because it's impossible to tell. This again was a fairly complicated -- there are a number of IMBA runs in there. So, it looks like there will be --

CHAIRMAN GRIFFON: That's why we picked them.

MR. HINNEFELD: Yes. Oh, gee, good.

DR. MAURO: You know what's interesting? This little discussion we're having is sort of like a mini-version of what would happen if NIOSH had an internal program of their own that did this sort of thing. Maybe having four or five people doing the same case.

CHAIRMAN GRIFFON: Are you trying to talk me out of --

DR. MAURO: And then probe it.

CHAIRMAN GRIFFON: Right.

MR. SIEBERT: Hey, Mark, this is Scott. Just one thing to keep in mind for this kind of a comparison, it would really help us or whoever is doing the review on our side, to have the supporting files, the IMBA files.

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: All the other supporting files. Not just the report.

CHAIRMAN GRIFFON: Yes. I knew what you were going to say as you were speaking. Yes, that's a good idea.

MR. SIEBERT: Thank you.

CHAIRMAN GRIFFON: We can make that happen, right, SC&A?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Doug is saying, "Yes, definitely. No problem." I got him with me right here. I was going to dig through his old computer that he did it on four years ago.

MR. KATZ: And what about you, John? Your envelopes, did you save them?

DR. MAURO: We're all fine. Yes.

MR. HINNEFELD: And if you guys cannot get access to these folders on NOCTS if you're blocked, because we did block you at one time I think. Just let us know and we'll take that off. Because all of our stuff will

be on there. Our reports are on there.

If you want a guide, give us a call. Give Brant or me a call. We'll guide you through what's there and what you can see. But it's not just plain docs. There's a whole lot of documents there, including the dose reconstructions, the IMBA files, the IREP files and so on. They're all there.

MR. FARVER: I really think it's going to come down to where it's going to go back to a basic assumption that we made, and that's where the difference will --

MR. HINNEFELD: It may come down to how we fit the bioassay.

MR. FARVER: For the internal, yes.

MR. HINNEFELD: And this is probably -- this is gall bladder. This has almost got to be an internal one.

MR. FARVER: Because if you read

through just our two reports on internal, they're actually different.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Just the number of intakes, the type of intakes. I think it's going to come down to --

CHAIRMAN GRIFFON: But that's good. That's good discussion that we can have.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: And John, we're just wondering around the table; did you use a slide rule for all these, or did --

DR. MAURO: Of course.

CHAIRMAN GRIFFON: -- you cheat? Okay.

DR. MAURO: I got help from my IMBA people. Don't worry. I wish I was that skilled.

MEMBER MUNN: The abacus is so

much faster.

CHAIRMAN GRIFFON: The abacus, yes. All right, I think we'll move on from blind reviews to -- I don't know what it says on the agenda, but I'd like to do the case selection. Well, we can take on the DR 12 case selection first, if people have looked at that.

MEMBER RICHARDSON: Mark, could I ask for one piece of clarification as I'm thinking about how to -- how to make sense of what's going to happen from the comparison between, say, three different approaches to reconstructing the dose?

I'm wondering -- I'm -- we might be leaving with different ideas about what that kind of summary evaluation is going to look like. I'd be interested to see, for example, what John and Stu think the next steps are going to be.

MR. FARVER: Well, I can tell you what my plan was when looking at this. If you look at Table ES1, I plan on putting in another column that lists the same type values for the NIOSH dose reconstruction, like we normally do when we review a case.

And then when there's major differences, we'll try to explain what -- why the differences occur, and what the basic assumptions are. So, that's kind of what I was looking at.

MR. HINNEFELD: Well, that's the accepted analysis. If you're talking about what happens after that, I would say that we in this Subcommittee would discuss the relative merits of the three approaches or whichever one is discussed and the Subcommittee could recommend to -- or the Board could recommend that these be changed.

Or, we may -- I mean we may

conclude that based on merits that needs to be changed, or the Subcommittee or the Board could make such a recommendation to -- you know, to me, the function of the Board is to recommend it to the Secretary. And if the Board in its deliberations finds -- points out things that we say, "Oh, gee, that should be changed," we change them. And so, that's what will happen.

If there's some disagreement about whether something should be changed or not, then it might be above my pay grade.

MEMBER RICHARDSON: So, am I right in understanding that DR method A should -- the intention was that it was a blind replication, using the methodology that should've been used also by NIOSH?

DR. MAURO: Yes.

MEMBER RICHARDSON: So, there -- the hope would be that there's kind of

consistency and reproducibility there between column A and what will be column C? And if there's not, we've got categories of explanation, which are human error or ambiguity in protocols or perhaps as you're saying with -- I mean maybe those would be the two categories.

If there's different judgments on the internal dosimetry, it's because the protocols that have been written leave some things open to subjectivity of the dose reconstructor?

MR. HINNEFELD: I think that might be the case. I think it's a little hard to judge what we're going to find when we look at these, but it might be. And one of the questions that we could very well run into since IMBA fits on both these is which fit is better? You know, is this fit good enough? Or, is - do I need to do this additional work

and do this fit? So, that may be one of the questions we run into on this.

MEMBER RICHARDSON: Okay, and then comparing column B to column C is where I was thinking of questions of scientific validity of the procedures as opposed to reproducibility -

CHAIRMAN GRIFFON: Right, yes.

MEMBER RICHARDSON: -- aligned to the methodology.

CHAIRMAN GRIFFON: Yes. I think that's sort of why we ask SC&A to do that. John described that correctly. They kind of came back and said, "We'd like to do it this way," and we as a Subcommittee agreed. It might've even been a full Board discussion. I can't remember, but that was part of the reason we asked for two methods by SC&A.

MEMBER RICHARDSON: Right. I remember that. Sort of kind of face validity.

CHAIRMAN GRIFFON: Yes.

MEMBER RICHARDSON: John was going to look at these records. This would be kind of a -- I don't know if it's a ballpark, or if it's -- if it's kind of a different approach to deriving an estimate.

DR. MAURO: You know, it's really a -- there's no doubt that I was part of it, but I certainly had help, was not -- not trying to religiously follow workbooks, your procedures, although we certainly took the procedures, the Site Profile, and all of the vast amount of knowledge that was accumulated by NIOSH and took advantage of that.

So, it's not that it's our own invention by any means. We're using the -- we're standing on your shoulders, so to speak, saying, “Okay, given all this information, we're not going to use your workbook, but given all this information and data that we've

learned over the years, how would you do it?"

We try to document that, and you'll see -- and you'll notice that there is a difference, this factor of 2, between the two methods. Now, the degree to which that is insightful or helpful I'm not sure.

Once we get into it and we start to see what the differences are, I think it might lend itself toward an evaluation of the precision that is achieved or accuracy that's achieved by the sophistication that you folks have brought in.

And Ted, as you recall, we had a bit of a discussion on the sophistication of the workbooks, the complexity, and what this should reveal is that there's no doubt that NIOSH and the contractor have gotten to a level of sophistication that is admirable.

This kind of comparison will start to reveal what -- what -- you know, by going

to the workbooks where things get very complex, there's added value, and we may very well find that when you do that, your doses come down a little lower by sharpening the pencil, so to speak. And this comparison might help reveal what it is that you achieve by bringing in that level of sophistication.

MEMBER RICHARDSON: So, that is where I guess I would be interested in framing the comparisons between column A and what will be column C in terms of an explanation of certain categories of ambiguity or error that lead to differences in two people reconstructing the dose, whereas with column B, it'd be interesting for you to have a judgment about whether the assumptions that you employ to kind of end up with a higher dose you feel are better assumptions or are -- were weaker assumptions of convenience which led to an overestimation, where if you had

"sharpened the pencil," it would've gone down the other direction.

DR. MAURO: Yes. I think that's where the value lies, yes.

MEMBER RICHARDSON: Okay, thank you. That was useful for me to think about where we'll be going with this next.

CHAIRMAN GRIFFON: I think we can move onto the next topic, the case selection on the PER 12, and there was an Excel spreadsheet sent around by Brant or by -- yes. I'm going to ask that someone refresh my memory. How many cases did we agree that we wanted to pick for this review? Did we put a number on it? I forget.

DR. ULSH: Maybe I'll give a little bit of background.

CHAIRMAN GRIFFON: Yes, go ahead. Go ahead.

DR. ULSH: For those on the phone

who may not be aware of the history, just briefly, PER 12 is a Super-S PER. And so, number of cases came back to NIOSH, and under the auspices of this committee, looking at whether or not we appropriately executed our PERs, some of those were picked, PER 12 in the first one, and this committee committed to looking at those of those cases to make sure that we followed the PER and implemented it appropriately.

So, PER 12 is the first one. SC&A reviewed that, and proposed -- you see the report where the proposed a number of criteria for selecting cases, and I'll turn it over to Scott in a little bit to let him walk you through that. But there was a matrix of different categories of cases that would be selected from.

So, then it came to NIOSH -- it became NIOSH's task to identify cases that fit

each of those criteria, and that's what you see here in this spreadsheet that Scott actually prepared and I distributed.

I don't know; did we decide on a specific number of cases or were we just going to try to pick some on each matrix box?

MR. KATZ: Well, Hans had -- this is based on Hans laying out characteristics of cases that would need to be looked at to examine implementation. So, I believe Hans is on the line, isn't he?

DR. H. BEHLING: Yes, I am.

MR. KATZ: Do you want to just speak to the number that you were looking for in total?

DR. H. BEHLING: Yes. Basically, I did not identify a select number, but I said based on the fact that the issue of Super S plutonium, the reconstruction of doses has multiple different methods by which dose

reconstruction or revised dose reconstruction would have to take place, and it's a matrix that's defined by the type of target organ in question, and there were four.

There was the lung and the lymph nodes, the thoracic lymph nodes, extra thoracic lymph nodes, GI tract and systemic organs. So, there were four different target organs that would be affected by Super S plutonium.

In addition, the potential reconstruction of doses would also be affected by the method by which the original dose reconstruction was done; namely was it done by urine analysis, by lung counts, by fecal sample, or air sampling?

So, in effect, you had a matrix that allowed up to 12, except that we said that air sampling would not apply to extra thoracic or GI tract, so that in essence there

were -- I identified 10 different methods by which a revised dose reconstruction would take place, and I also threw out the caution that perhaps not all of those particular pigeon hole sampling dose reconstructors would necessarily be represented among the 1,577 claims that were affected by the Super S PER.

So, I left it as a minimum. If you were able to find a case for each of those particular cases involving the four target organs and the four different methods by which original dose reconstruction was done, you would end up having to sample at least 10 cases in order to take one case for each of those different procedures that were done to reconstruct the original dose.

Now, I haven't really looked at what was forwarded to us, but I suspect that perhaps NIOSH was able to find at least some cases for each of those individual cases that

I identified as a potential case for review.

So, if the Board were to say, "We will take one of each of the ten cases," then the number of cases that may have to be reviewed would be 10. If there's more than one case for each of the types, then obviously it would be a multiple of 10. But that's a decision that has not been made.

CHAIRMAN GRIFFON: Go ahead, Brant.

DR. ULSH: Well, at some point, I'd just like to have Scott walk you through the email that was sent out, and the spreadsheet. I don't know if you want to do that now.

CHAIRMAN GRIFFON: Yes. I'm trying to figure out the four -- I mean you're saying four organs and four --

DR. H. BEHLING: Yes, yes, Mark. Can I ask you if you have access to the report

that I submitted March of 2010? It's really on page 15, and it's Table 2 that provides the matrix that identifies the target organs and the method by which the original dose reconstruction was done, which gives you the ten choices that you may have to make in selecting a case for each of those different categories.

CHAIRMAN GRIFFON: All right. I don't have that handy. Does anybody else have that? I mean I'm just trying to understand simple mathematics here, Hans. Four target organs, four different methods. To me, that comes out to 16 cases. Am I looking at that wrong?

DR. H. BEHLING: Yes -- no, but in fact, if you have Scott's write up, he also has it on page 1, and it identifies the four different organs, lung, ET GI tract systemic, and then he has air monitoring, fecal, urine

and in vivo.

So, that matrix is concluded in Scott's handout.

MR. SIEBERT: Yes. Like I said, this --

CHAIRMAN GRIFFON: All I have is the spreadsheet unfortunately.

(Simultaneous speaking.)

MR. SIEBERT: For me to walk through, I --

CHAIRMAN GRIFFON: Go ahead, Scott.

MR. SIEBERT: I didn't have the list of Hans' 10, so I started from the beginning of a matrix of 4 by 4; the four types of monitoring, air monitoring, fecal, urine and in vivo, and the four types of organs, where you make different adjustments based on lung, ET GI tract.

And Mark, you're right; when you

do that straight matrix, you're talking 16 different categories.

CHAIRMAN GRIFFON: All right.

MR. SIEBERT: I did not remove any categories. When I went through the claims, I tried to find something for every category just to be on the safe side. Hans is right; there are times where Super S adjustment is not appropriate based on the type of monitoring and the type of organ. However, I tried to include at least one claim to demonstrate the fact that we did that appropriately, even though it doesn't need to be applied.

DR. H. BEHLING: That's it, Scott. In my matrix, I said no to -- to the 3 cases involving lung counts, where we talked about extra thoracic GI tract and systemic organs because they're not part of a lung count.

CHAIRMAN GRIFFON: Okay.

DR. H. BEHLING: And I also said no to the air sampling involving extra thoracic GI and systemic. So, I ended up with ten different potential cases, versus your 16.

CHAIRMAN GRIFFON: Those six that you excluded again, Hans? A little slower?

DR. H. BEHLING: On the lung counts, I said no to extra thoracic GI tract and systemic organs because a lung count wouldn't reveal any information regarding those.

CHAIRMAN GRIFFON: Okay, and the other three?

DR. H. BEHLING: The air sampling involving extra thoracic GI tract and systemic --

CHAIRMAN GRIFFON: It's the same thing.

DR. H. BEHLING: That goes back to why I excluded dose 3 as well. It's been over

a year since --

CHAIRMAN GRIFFON: Okay.

DR. H. BEHLING: But in essence --

CHAIRMAN GRIFFON: At least I understand your 10 now. Thank you, yes.

MR. SIEBERT: Right, and I agree that all six of those categories do not use adjustments.

CHAIRMAN GRIFFON: Yes, okay.

MR. SIEBERT: So, we're on the same sheet of music. How scary is that?

CHAIRMAN GRIFFON: That's pretty good. That's pretty good. Maybe we should go home.

MR. SIEBERT: Okay. Second? So, once we had the matrix of 16, I talked to Brant for a while, and some of these categories were much easier to find than others, just based on the types of claims, and some were much more difficult.

The more straightforward ones would be fecal sampling because, as we all know, fecal sampling is less prevalent across the complex. So, we have many fewer claims that actually used fecal sampling. So, those were a little bit easier to find by tracking the claims where that is stated in the dose reconstruction report.

So, that was actually the first category I went down, and went right through the column that dealt with fecal sampling. And unfortunately, I could not find one from every category. I found one for fecal sampling that was a lung claim, and four for systemic, but I just could not find any for ET or GI tract.

Once again, it's just because of the limited number of claims there were. So, those are the ones that we have on the list: one for organs, being lung and fecal, and the

organ being systemic and fecal, four of those.

So, that was the fecal sampling. The next category that was relatively easy to find was air monitoring, and the reason for that is, number one, OTIB-18 is, although it's an overestimate, it is based on air monitoring results.

So, I could flip through all the OTIB-18 claims, and ensure that any plutonium that was done as part of OTIB-18 had Super S applied appropriately. Also, there are some sites that use air monitoring to assign plutonium. Pantex is the main one.

So, it was relatively straightforward for me to find air monitoring claims and I have six for the -- where the organ of interest is lungs. And then as Hans said, you really don't have to review ET GI tract and systemic because it doesn't apply. However, I did put two claims from each of

those classes just so if the Subcommittee wanted to ensure that we considered it and determined it was not appropriate, you could always look at those.

So, that covers air monitoring and fecal. Before I go on, are there any questions? Okay.

CHAIRMAN GRIFFON: Guess we got you so far.

MR. SIEBERT: Good. The next one that was relatively straightforward was ET. So, I switched from monitoring to organ type.

Once again, like fecal sampling, this was straightforward just because there are not many claims that use ET as the organ of interest. If you go into OTIB-5 and look at how many ICD-9 codes refer to the ET region, it's just not that many.

So, I could track through all those, and as I already said, I had air

monitoring covered. I could not find one for fecal, but I did find four claims for -- that used your analysis, and two claims that use chest counting in vivo.

So, those categories are covered as well. So, I've gone down the matrix and I've gone across the matrix, and if you notice, that's left a few things open, which is urine sampling and chest counting for lung, GI tract and systemic.

And from that point on, it was just brute force reviewing claims to find claims that fell into those categories, and the latest list that I believe Brant sent out does have I believe eight claims for -- would be four organs of interest is the lungs, both for urine, and eight for chest counting.

Found five of them where we used urine sampling. And for the GI tract there was only one claim I could find where the GI

tract used chest counting, which is not really surprising because there wouldn't be very many.

And also, as Hans said again, for chest counting, your ET, your GI tract, is systemic. There are no correction factors for that. So, I felt that finding one from each of the systemic and GI tract was enough to demonstrate that we took it into account.

And I know I've kind of been dancing around the categories a little bit. The one that's left over is urine sampling and systemic, and I found eight claims -- I'm sorry, four claims -- that were representative of that.

So, we've actually -- for the 10 that Hans was stating, we actually got a pretty good chunk of claims in each of those categories except for fecal sampling for ET and GI tract just because of the small number

of fecal sampling claims.

That's where we got the numbers that are in the matrix, and the claims that are pulled, and it totals up to 50 claims, which is I believe what we were originally focusing on putting together so that you guys could pull from that list.

CHAIRMAN GRIFFON: Which if we look at it from -- from SC&A's proposed method, I think we -- this would bring us down to maybe eight cases -- eight categories anyway, yes.

MR. SIEBERT: Because there are no claims in two of them.

CHAIRMAN GRIFFON: Right, yes.

DR. ULSH: Just to make sure before we go on, I sent out the partial list on Friday, but then I sent out the full list on Wednesday. So, make sure you're looking at the message I sent out on -- the spreadsheet

that's got all the stuff that Scott was just talking about.

DR. H. BEHLING: This is Hans. Just a quick question for either Scott or Brant. Among the cases he identified, how many of them were compensated? How many were not compensated? How many were not compensated among the non-compensated? What's the distribution with PoC, and if there's a selection process, could we focus on the highest that were below 50 percent, but he highest among those groups?

CHAIRMAN GRIFFON: Yes, we have the PoC numbers in here. So, we can consider that, Hans, at each end of the table.

MR. KATZ: Keep in mind, I mean the purpose of this is very different from the DR review purpose. It's to see that PER was implemented correctly.

CHAIRMAN GRIFFON: Okay, any -- I

mean I am kind of looking over. Everybody has the table open, I suppose, the spreadsheet. And I assume I'm looking at the correct one. I mean I have 50 cases listed.

MR. SIEBERT: That would be the right one then.

CHAIRMAN GRIFFON: Yes. It's highlighted very well. So, you can follow along from different categories. And I mean again I would say we're really looking at the category matrix item. If you look at column K, it has matrix category. Just to simplify it, you want to target -- based on the discussion by Hans and Scott -- target matrix item 1, 5, 8, 9, 10, 11, 12 and 13.

MR. SIEBERT: Correct.

CHAIRMAN GRIFFON: And then whether we want one from each category; whether we want more than one, I guess we have -- that's open to discussion. And we have the

other factors in the matrix to help us make a decision.

I might've lost a little bit of your discussion, Scott. I think for some of the air monitoring cases, you said that they really were PROC 18; am I getting that correct? You said they were --

MR. SIEBERT: Yes, that's fine.

CHAIRMAN GRIFFON: Can you explain that again? I might've missed some of that.

MR. SIEBERT: That's fine. Since -- it's actually OTIB-18. OTIB-18, the overestimating approach for internal dosimetry, based on air monitoring, or for a program that had air monitoring, obviously based on the title, that is based on air monitoring. So, the correction factors for OTIB-49 Super S plutonium would apply and need to be determined. When we do OTIB-18, whenever the plutonium is assigned, we need to

also look at the fact of what the calculation of Super S plutonium in that is, to determine if it's more claimant favorable and gives a larger dose than anything else that OTIB-18 kicks in.

So, it's another step in the process, where we apply OTIB-49 Super-S correction factors to the doses that come out of OTIB-18.

CHAIRMAN GRIFFON: And you were saying none of those cases are -- they're all OTIB-18 is what you're saying, right?

MR. SIEBERT: No.

CHAIRMAN GRIFFON: No?

MR. SIEBERT: The ones that are listed as Pantex --

CHAIRMAN GRIFFON: Oh, right.

MR. SIEBERT: Pantex is a site that does use air monitoring results to assign plutonium. So, Pantex claims will have direct

values out of the TBD, where OTIB 49 is applied to them.

The other sites other than Pantex I believe are all OTIB-18s.

CHAIRMAN GRIFFON: Okay, thanks for that clarification.

MR. SIEBERT: Sure.

CHAIRMAN GRIFFON: All right. Any thoughts on how we should go forward selecting the cases? How many? What kind of stratification? I mean other than these categories, I think we -- we did -- I don't know if the Board approved SC&A's approach, but I think we -- we -- yes, I think we accepted it.

MR. KATZ: I mean I think you're just trying to check here. I don't think you need a statistical sample.

CHAIRMAN GRIFFON: No, no, no. I'm just saying --

MR. KATZ: But by that example that you just talked about, if Pantex is really dealt with differently, then you might want one of each.

CHAIRMAN GRIFFON: Right. Two from those guys, right. And I don't know if there's any other distinctions here, but -- so, for item -- for category one, for instance, we want Pantex 1, and line 6, the fifth one down, Hanford. It's something -- you know --

DR. ULSH: Can I bring up an issue? Just something everyone should know. The spreadsheet contains Privacy Act information.

CHAIRMAN GRIFFON: Right.

DR. ULSH: So, when we're talking about particular claims, don't use the last name or --

CHAIRMAN GRIFFON: Or the Social

Security number.

MR. HINNEFELD: Yes. Use the line number, like you did, Mark.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: The line number; that is the appropriate way to select these, I think.

CHAIRMAN GRIFFON: But we can say site I think.

MR. HINNEFELD: You can say site, and the things that are on the normal compensation selection list, which would include site, IREP model and PoC, you can all talk about. You cannot say -- but I couldn't go much farther than that.

CHAIRMAN GRIFFON: That's good. I thought Brant was going somewhere else, actually. I thought you were bringing up that question we talked about with regard to -- with conflicts. If people have conflicts, can

we select cases on sites that we have conflicts on? Is that an issue still?

MR. KATZ: That would be an issue.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: You can't -- you can't select cases where you have a conflict.

CHAIRMAN GRIFFON: Or you just can't vote on certain ones, right?

MR. KATZ: Really should not be involved on your own site on anything.

CHAIRMAN GRIFFON: Right.

MR. KATZ: So, just simply if it's a case on your site, you should be silent about it.

CHAIRMAN GRIFFON: Right, just be silent about it. Right, yes. We can't just constantly step away from the table.

MR. KATZ: No, no, no. Nobody has to go anywhere.

CHAIRMAN GRIFFON: Yes. Okay.

MEMBER MUNN: I would suggest that we start with one of each of the categories that we identified as being most important, since I personally have no feel for how long each of these is going to take, and we're time constrained here. So, let's try to at least cover one of each of five categories.

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: This is Scott again. One thing that Wanda just stated, and it may not be -- I'm just curious. Is this a full review of the claim, or is it a review to ensure that Super S plutonium was applied correctly in the PER assessment?

MR. KATZ: It's the latter.

CHAIRMAN GRIFFON: I think it's the latter, yes. I think we -- we just --

DR. H. BEHLING: Well, this is Hans. In my original write up regarding the review of PER, I did make a distinction. If

as a result of the PER a claim that was initially a best estimate would be -- there you would confine yourself basically to only those issues that were subject to being revised under the PER.

However, if it was a maximized dose, which as a result of the PER then comes close to being compensated like the reorganization that was a maximized case would then cause NIOSH to say, "Hey, now. Wait a minute. We gave you certain doses that we are now no longer willing to give you because we're going to go over the 50 percent limit. And so, we're going to revise the best -- we're going to revise the maximized to a best estimate. Then it may turn out to be a full blown review."

MR. KATZ: No, Hans. This was discussed in the Procedures Subcommittee. That's true what you're saying, but the

Subcommittee was very clear that this isn't -- the point is not to do a full blown dose reconstruction to make sure that this is applied correctly, PER-12.

DR. H. BEHLING: Well, the question then becomes was the revision of the maximized dose to a best estimate done correctly too? And that gives an awful lot of latitude to -- to say, "Well, we're going to knock it down in other areas in order to avoid the compensation."

That's my feeling is that if it was a maximized dose up front, that is now being revised as a result of PER, perhaps a full blown review might be appropriate.

CHAIRMAN GRIFFON: But different purposes I think is what we're getting at. There's different purposes. And I think we want to make sure in this review that if a maximized approach -- they added Super S on,

and it went above 45 percent, where you then kick into full -- if it went above the 45 percentile that it actually kicked in the best estimate. But we wouldn't want to review the best estimate case.

We just want to make sure the system is working as it should be, and that it was applied correctly. That way, NIOSH caught -- NIOSH made the correction with Super S, and then in their system it went into the right place. It went into a best estimate approach.

But we're not -- that's not our purpose here for this -- for these PER case reviews. We're not doing our full audit kind of thing. That's my take on it anyway.

DR. H. BEHLING: Okay, if we want to be -- give the benefit of --

CHAIRMAN GRIFFON: It doesn't mean we're not interested in it Hans. It just means not for this part.

DR. H. BEHLING: Okay. You're more trusting than I am.

CHAIRMAN GRIFFON: I don't know. I think I could give you a battle on that.

DR. ULSH: We shouldn't expect to see findings on environmental dose or medical dose.

MR. KATZ: No.

DR. ULSH: It'd be internal.

CHAIRMAN GRIFFON: Yes, yes. This is like targeted task that the Subcommittee has been given to look at this -- whether this PER was implemented correctly. That's my understanding.

MR. KATZ: The reporting out is to the Procedures Subcommittee.

CHAIRMAN GRIFFON: Right.

MR. KATZ: What the Dose Reconstruction Committee is doing here is making the selections.

CHAIRMAN GRIFFON: Right.

MR. FARVER: And if you make note of those cases that were redone, then you can always go back at a later date and say, "Okay, maybe we want to have another look at this one, or this one."

CHAIRMAN GRIFFON: Yes. We can make notes or comments.

MR. HINNEFELD: It might or might not be a hint whether there was an adjustment made. There might be; depends on what the dose reconstruction says.

CHAIRMAN GRIFFON: Well, we can at least ask NIOSH, and you can follow up. Is that possible?

MR. HINNEFELD: If it's not apparent, it won't be apparent to us. Now, it could very well be that the dose reconstruction -- depends on the year that the dose reconstruction was originally -- when it

was done. I don't remember for sure when we did this. It may very well say that these were the changes that were made from the first to the second, in addition to the PER. It may say that, or it may not.

MR. SIEBERT: Most of them should say that, Stu. I agree.

MR. HINNEFELD: Okay, thanks. Okay, then it will be apparent from the language and dose reconstruction.

CHAIRMAN GRIFFON: Okay, with that in mind, to go back to Wanda's model of -- I tend to agree with that. I just want to make sure. I would say generally, one case from each of the eight categories would be where we could start here, with the one exception that Scott pointed out, possibly making two from that air monitoring category. One Pantex and one other. You know?

Any other comments on how we

should select?

MEMBER MUNN: I suggest we start with 1 and 4 Pantex item from category 1.

CHAIRMAN GRIFFON: Volume 4?

MEMBER MUNN: Yes. It's lymphoma and myeloma -- it's a very low PoC.

CHAIRMAN GRIFFON: Yes. That is an odd one. Am I not understanding that? It has lung checked, but it shows the IREP model as lymphoma, multiple myeloma. What does that mean?

MR. SIEBERT: The reason for that is for multiple myeloma, as you remember from OTIB-12, when we changed this, this is a lymphoma myeloma with a change in organs. Sometimes the organ of interest is the lung, and that's one thing I guess I should have pointed out. Remember this is based on the organ of interest, not necessarily the IREP model of interest.

CHAIRMAN GRIFFON: Right, right. Okay.

MEMBER MUNN: It's under the Pantex one, but we have plenty of items that we can --

CHAIRMAN GRIFFON: And I would say perhaps that one is borderline, but it didn't hit the 45 percentile, did it? I was going to say line 5 might be a good one after that.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Line 4 opens, okay? And line 5.

MR. SIEBERT: I apologize. I should've numbered the cases with a separate number. It would've been easier.

MEMBER MUNN: No, that's okay. There are plenty of numbers.

CHAIRMAN GRIFFON: As long as we don't resort these, we'll be okay.

DR. ULSH: In my notes, I'm

writing down the NIOSH ID numbers.

CHAIRMAN GRIFFON: And that covers the matrix 1. We just stepped out into the green column.

MEMBER MUNN: Right.

CHAIRMAN GRIFFON: That gets us through matrix 1. Then there's really only two that fall into the second category.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: So, I mean I guess line 8 is okay.

MR. SIEBERT: You were skipping categories 2, 3 and 4, right?

CHAIRMAN GRIFFON: Oh, yes, yes. I'm sorry. You're right. Sorry about that.

DR. ULSH: Numerically the next category that you said anyway was category 5.

CHAIRMAN GRIFFON: Five.

MEMBER MUNN: Five.

CHAIRMAN GRIFFON: Yes, you're

right. Thank you, Scott. So, that's line 14. Yes, 14.

MR. SIEBERT: Definitely a multiple cancer claim. So, it covers two different categories.

CHAIRMAN GRIFFON: Yes. I would say you might want to do 8 separately as well, but 5 --

MR. SIEBERT: I agree.

CHAIRMAN GRIFFON: So, around 14 we'll take. That's going to raise 8, and I would suggest taking another one because 8 -- anybody have any preferences over those next four?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Wanda has a preference.

MEMBER MUNN: Seventeen.

CHAIRMAN GRIFFON: Seventeen?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Seventeen it is. For those on the phone, if you have a difference of opinion, speak up. Category 9 now we're looking at. Ninety-third percentile.

MEMBER MUNN: And 22.

CHAIRMAN GRIFFON: Yes, 22 is exactly the one I was looking at. So, that's good. We're thinking alike again, Wanda. I said I think there was one other time in ten years.

MR. SIEBERT: Line 22? I apologize. I couldn't hear that.

CHAIRMAN GRIFFON: Line 22, yes.

MR. SIEBERT: Thank you.

CHAIRMAN GRIFFON: Then down to matrix 10. Four choices. They're all from the same site, yes. Why does that one say, "SRS 2008?"

DR. ULSH: Revision.

CHAIRMAN GRIFFON: Yes. What does that mean?

MR. SIEBERT: Because it has been reworked since due to other technical -- either -- I want to say actually an additional cancer. So, we have to -- if you pick that one, it has to be ensured you're looking at the version that was done first after the PER was put in place.

CHAIRMAN GRIFFON: Right. With that in mind, we'll pick another one. Twenty-nine maybe? Twenty-nine, is that okay?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: And then where are we at, 11?

MEMBER MUNN: Eleven. Site perspective on --

DR. ULSH: -- line 35.

CHAIRMAN GRIFFON: Yes. Okay, 35, but I would still pick another 12 separately.

Not the same site maybe.

DR. ULSH: Thirty-eight or 39.

CHAIRMAN GRIFFON: Yes, so 38 or 39? Any preference?

MR. SIEBERT: I want to point out the difference between 38 and 39 is -- 39 is based on coworker data, and the application of OTIB-49 on it.

CHAIRMAN GRIFFON: Okay, well, I still think that's okay. Thirty-nine is okay for me. Thirty-nine. And 13, last category of interest. Still in this category mostly from the same three sites, I guess. Maybe we should pick 47 since we haven't had that site.

MEMBER MUNN: That'd be nice.

DR. ULSH: Forty-seven?

CHAIRMAN GRIFFON: Yes.

DR. ULSH: Okay.

CHAIRMAN GRIFFON: So, that should give us nine cases. Is that okay? Everyone

on the phone okay with that?

MEMBER RICHARDSON: Yes. That's fine.

MEMBER PRESLEY: That's fine.

MR. KATZ: Did 39 make it in or not?

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: I'll re-read the cases for Scott and others. Line number 4, 5, 14, 17, 22, 29, 35, 39, 47.

MR. KATZ: Okay, so I had line 8 too. That thrown away?

CHAIRMAN GRIFFON: That's thrown away.

MR. KATZ: Okay.

DR. ULSH: We're not picking from that matrix. That was my fault.

MR. KATZ: Got it. Okay.

CHAIRMAN GRIFFON: Okay, then that

takes care of that. And I actually don't think that we'll open up the case 15 case selections until after lunch. So, maybe we'll break for lunch a little early, then do the -- if people have time to peruse over lunch that large number of cases.

I think the difference -- Stu described to me the difference that's done. We have a lot of cases there to select from, but they're not all necessarily finally adjudicated. So, we might want to make our sample a little bigger with the anticipation that we're going to lose some when they go through Labor.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: So --

MEMBER CLAWSON: Well, how many are you thinking about, Mark? This is Brad.

CHAIRMAN GRIFFON: Well, what do we usually -- we usually pick, John?

DR. MAURO: We usually shoot for 30 eventually to be approved, but you start off to bring to the Board a little bit more than that.

CHAIRMAN GRIFFON: Right. So, we'll probably want to get 50 from this maybe. At least 50.

MR. HINNEFELD: If you remember, we usually -- after this step, we get information from ORAU on what was done --

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And there's another selection. That's usually what happens. I mean taking that step, I'd get at least 50. Maybe more than 50.

MR. KATZ: But the next step will be hopefully to have a -- we don't have time for another DR Subcommittee meeting.

CHAIRMAN GRIFFON: Right. Well, we can just bring them more detailed

information back to the full Board, and do that selection there.

MR. KATZ: Yes.

CHAIRMAN GRIFFON: But the question I'd have is if we give you 50, I think you might want to find out before you get all the detail, find out if they're finally adjudicated. Because you can just not bother to do that step if they're not finally adjudicated, right?

MR. HINNEFELD: Yes. That's the preference because that's time consuming.

CHAIRMAN GRIFFON: Right. And then come back with that narrowed list to the full Board, and we can make the final selection there.

MR. HINNEFELD: Do this at the August Board meeting.

MEMBER MUNN: Right.

MR. HINNEFELD: Okay.

DR. MAURO: The next Board meeting after August is not until December?

MR. HINNEFELD: Right.

DR. MAURO: Yes, if we could do that in August that would keep the pipeline full.

DR. ULSH: What about DOL?

MR. HINNEFELD: Well, they've never had a long list before.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: They've only got like 25-30. When they got 25-30 --

CHAIRMAN GRIFFON: Yes. Well, if we give them 50, it should be two days.

MR. HINNEFELD: I'd go 50-60. It shouldn't take them very long.

CHAIRMAN GRIFFON: A couple days, yes.

MR. HINNEFELD: And I'd call them and say, "Hey, quick as you can." Just to

give ORAU as much time as possible, because a lot of that is time intensive.

CHAIRMAN GRIFFON: Right. I know, because sometimes you have to open up the case to see --

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Okay. So, we'll shoot for 50 to 60 off this bigger list today. And like I said, if you have a moment while you're eating your lunch, try to peruse them.

MR. HINNEFELD: It may -- we selected cases that were completed all the way up until two months ago. It'll probably improve our odds of getting ones that are adjudicated if we go back six months and just don't look at any that were done between six months or newer.

CHAIRMAN GRIFFON: Okay, that's a good idea.

MR. HINNEFELD: That'll improve our chances to give them to DOL.

CHAIRMAN GRIFFON: So, new cases but not real, real new cases. No, I'm just saying on the phone. The other thing for folks on the phone, Kathy Behling sent around -- I think everyone got it - a summary of the statistics for the cases selected so far. So, you might want to also look at that in terms of our selection out of this set.

MR. HINNEFELD: When did she send it?

CHAIRMAN GRIFFON: I know we got it recently. I'm not sure.

MS. K. BEHLING: Excuse me. I'm on the phone. Stu, I'll send that to you. Can I see your Excel file?

CHAIRMAN GRIFFON: So, this has a breakdown of 356 cases. It's called "356-case Statistics Document."

MS. K. BEHLING: Yes.

CHAIRMAN GRIFFON: To all the Board Members on the phone, if anyone needs it, just let us know. That might be something that you want to look at while you're looking at the 15th set list.

MR. HINNEFELD: Did Kathy ask me for something?

DR. ULSH: Kathy asked for the spreadsheet that we're looking at.

CHAIRMAN GRIFFON: Okay, all right. And with that in mind, I think we're ready to break for lunch, and come back at 1:00.

MEMBER PRESLEY: Mark?

CHAIRMAN GRIFFON: Yes? One more question.

MEMBER PRESLEY: This is Bob. I got to go to work.

CHAIRMAN GRIFFON: Okay, all

right. Well, we'll miss you, Bob. And have fun at work.

MEMBER PRESLEY: Yes.

CHAIRMAN GRIFFON: I got to go to work too at lunch. Alright.

MR. KATZ: Thanks, everyone.

(Whereupon, the above-entitled matter went off the record at 11:54 a.m., and resumed at 1:01 p.m.)

CHAIRMAN GRIFFON: We're ready to start on the case selection for the 15th set of cases. And everyone should have the spreadsheet that was sent around. And although I asked people to work at lunch, I myself didn't work at lunch.

So, I can tell you two things -- one thing that I've done is I narrowed this down to at least as a first cut to look at cases between the 45th -- well, actually I went to the 40 percentile between 40 percent

PoC and 50 percent, and then sorted based on most recent cases, and using Stu's advice that we probably don't want to get anything too recent because it probably would not be a finally adjudicated case by Department of Labor, I still end up with about 160 cases.

Having said that, I haven't shared my sort with other Members. So, I'm not sure how to best walk through this whole thing.

DR. ULSH: You said you sorted on PoC and beta --

CHAIRMAN GRIFFON: Yes.

DR. ULSH: I'm making my own sort right now. Down to 45 you said?

CHAIRMAN GRIFFON: No, about 170. Oh, 40 percent? Yes. Sorry. I know we should only select from this range, but it was just hard for me to look at all 865 or whatever. And we can still look at the last three digits of that last column, right, Stu

or Brant? That's the identifying number.

DR. ULSH: Yes.

MEMBER MUNN: So you stipulated part of your criteria. Do you have any other criteria we're balancing against?

CHAIRMAN GRIFFON: Nothing.

MEMBER MUNN: Nothing?

CHAIRMAN GRIFFON: No.

MEMBER MUNN: Nothing below 40?

CHAIRMAN GRIFFON: I think we should try to keep in mind the statistics that we have. You know, that were presented to us. I'm just wondering if I should forward this, my sort, to people.

MEMBER MUNN: It might be easier. But if we're not going to go down them one at a time.

CHAIRMAN GRIFFON: That's what I mean. If I'm going to go through my numbers, it'd be all over the place on your

spreadsheet.

MR. STIVER: I got the same sort. It'd probably be better for all of us to extract that through a different file.

CHAIRMAN GRIFFON: Yes. You might be -- what was your total number?

MR. STIVER: 186.

CHAIRMAN GRIFFON: 186. Yes, that's about right.

MR. STIVER: I didn't restrict the dates.

CHAIRMAN GRIFFON: Yes. I got 202, but I also noticed that I have like a couple 39. So, I might've went a little below.

MR. STIVER: The highest was 50.02.

DR. ULSH: If you just give the selection ID to me --

CHAIRMAN GRIFFON: Yes. Yes,

that's true. Well, I can just take an initial crack, but if other people had others, I don't want to exclude other options.

MR. STIVER: You don't want to restrict it up to January 2011 to make sure that --

CHAIRMAN GRIFFON: Yes. I was saying I was looking at my others starting in January. So, I have -- I mean I have one here that's interesting. It's case number 129. You going by the last four digits on column A?

MR. STIVER: 129?

CHAIRMAN GRIFFON: Yes. PoC is 49.523421. Very precise.

MR. STIVER: Not precise enough.

MEMBER MUNN: And we are sure that all those digits are --

CHAIRMAN GRIFFON: It's an item, okay? So, I don't think we've had a lot of items. That's one to start us off. Okay with

that one?

MEMBER MUNN: And the number again was?

DR. ULSH: 129.

MEMBER MUNN: 129.

CHAIRMAN GRIFFON: Next one is 332. This does jump around a bit.

MR. STIVER: The Argonne.

CHAIRMAN GRIFFON: Yes.

MR. STIVER: 42.9?

CHAIRMAN GRIFFON: Right. Yes, and we haven't done as many as Argonne West.

MEMBER MUNN: Next?

CHAIRMAN GRIFFON: Next one I have is 530. This is going in order on yours.

MR. STIVER: Are we going right down?

CHAIRMAN GRIFFON: Yes. I'm not necessarily going to take all these, but this one is a Hanford. It's got all digestive and

a skin. Should be pretty close, John. Basically the same sort. I went a little lower than 40, I think. So, I got some 38-39. I think I must've gone down to 38.

MR. STIVER: Restricting up through January?

CHAIRMAN GRIFFON: Yes. So, that's 530. That's three cases so far, right?

MEMBER MUNN: Yes.

MR. STIVER: Are you just kind of identifying every fifth one, or just go straight down the line? I guess it really doesn't --

CHAIRMAN GRIFFON: Well --

MR. KATZ: Either way, it's random.

CHAIRMAN GRIFFON: True. Skipping some of these that are -- there's several skins here. I mean I have this Spencer Chemical. Have we done Spencer Chemical? I'm

looking at the other chart.

MEMBER MUNN: I don't think so.

DR. ULSH: Case number?

MEMBER MUNN: Let's see. Spencer Chemical -- I don't see it.

MS. K. BEHLING: No. I don't see a Spencer on here.

MEMBER MUNN: Kathy didn't have it. Kathy didn't --

CHAIRMAN GRIFFON: Okay. Number 676, that's just below 40. You shouldn't have that one on your -- 676.

MEMBER CLAWSON: I show a Spencer Chemical in Jayhawk Works.

CHAIRMAN GRIFFON: Yes, yes. That's it.

MR. KATZ: Want to do that one?

CHAIRMAN GRIFFON: That's the one.

MEMBER MUNN: Seventy-six?

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: That's supposed to be --

CHAIRMAN GRIFFON: Last three digits, not the line number. Right?

MR. STIVER: Yes. Look at the date. It's 12/29/2010.

CHAIRMAN GRIFFON: Yes. All right, next one I have is 28. This is multiple cancers, multiple sites really. Oak Ridge and X10 Y12. Thirty years. It seems like a complicated work history one.

MR. STIVER: What's the date on that?

CHAIRMAN GRIFFON: 12/28/2010. It's number 28.

MR. STIVER: PoC?

CHAIRMAN GRIFFON: 48.8.

DR. ULSH: Up to 5 right?

CHAIRMAN GRIFFON: Yes. Plugging away here. I have 41, a Hanford. Many years

of experience.

MEMBER MUNN: What number?

CHAIRMAN GRIFFON: Forty-one.

MEMBER MUNN: Forty-one. Thank you.

CHAIRMAN GRIFFON: And then also 42, Savannah River. 669, Pantex. 741, Fernald. On the phone, if people have opinions on these, please chime in. I'm pausing a little to give people time to look at the line. 705 is the next one I have, Allied Chemical. Did we do Allied, Kathy?

MR. STIVER: We've done Allied.

CHAIRMAN GRIFFON: We have done Allied.

MR. STIVER: Actually did one myself.

MS. K. BEHLING: Yes.

DR. MAURO: And we have an active Site Profile review also going on for Allied.

Just letting you know.

MS. K. BEHLING: And to Allied, 2.5 percent is 4.

CHAIRMAN GRIFFON: Okay, we can keep it in there for now. I think we -- Stu wants a larger list than a smaller.

MR. HINNEFELD: Larger is better than smaller. I think we'll lose a lot.

CHAIRMAN GRIFFON: Yes. That's ten. We're a fifth of the way maybe.

DR. MAURO: Mark, this is John. I got a question. While you're going through the process and sorting through candidate cases, a thought we had amongst ourselves here at SC&A was while you're doing this, you could actually create a pool so that it represents -- actually accumulate cases, and leave -- you know, pick the ones -- the Board will pick the ones that they wish to pick.

CHAIRMAN GRIFFON: Yes, Doug

brought that up too.

DR. MAURO: And leave the pool behind.

CHAIRMAN GRIFFON: Yes, we vetoed that already, John. Sorry.

DR. MAURO: Oh, we did veto that. Okay.

CHAIRMAN GRIFFON: You're out of order.

(Laughter.)

DR. MAURO: Never mind.

CHAIRMAN GRIFFON: We want to stick with our batch processing for now.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: I know what you're saying. We got a little system. I think we --

DR. MAURO: No -- no problem. No problem.

CHAIRMAN GRIFFON: Yes, for now.

MR. KATZ: Case 705?

CHAIRMAN GRIFFON: Case 705 was the last one. Next two I have are -- I have 269.

MR. KATZ: 269, General Atomics?

CHAIRMAN GRIFFON: Yes. That's also 49.7 percent. And then 638, which is Mound. Again, these are also -- I sorted from most recent to older cases. So, these are all fairly new cases. I'm at 10/1 now on that one. That was processed October last year.

MR. KATZ: Kathy, what are some sites where we have sort of -- on the low end of percentage we've sampled up till now?

MS. K. BEHLING: Well, let's see here.

MEMBER MUNN: Bethlehem Steel seems pointless.

MS. K. BEHLING: Yes, Bethlehem Steel, Fernald. These are not -- actually

Hanford. I know we had a few of those.

MR. KATZ: Okay.

MS. K. BEHLING: K25, Paducah, and even Savannah River, believe it or not.

CHAIRMAN GRIFFON: So, even though we're picking a lot of those cases, they're still -- yes, a lot of claims right? Yes.

MEMBER MUNN: Yes.

MS. K. BEHLING: Y-12.

DR. ULSH: Are you committed to not looking at any compensable cases?

CHAIRMAN GRIFFON: No, no.

DR. ULSH: There's a site here, C.H. Schnorr. I've never heard of it.

MR. KATZ: What case number is that?

DR. ULSH: Well, the selection ID is 590.

MR. KATZ: Case 590.

MEMBER CLAWSON: Which site was

that, Brant?

DR. ULSH: C.H. Schnorr.

MEMBER MUNN: Sounds like a bad joke.

MR. KATZ: S-C-H-N-O-R-R?

DR. ULSH: Yes.

CHAIRMAN GRIFFON: Hopefully there will be no snoring in here later.

DR. ULSH: PoC is 65.8 unchanged.

CHAIRMAN GRIFFON: But you're right; we want to look at the site too. So, yes, yes. All right, that's 590. You got that? Let me get through -- I'm not committed just to doing these in the 40 to 50 range, but we're about halfway through the list.

So, maybe we can -- that was my first cut. Then maybe we'll go back to the part of the -- the other thing is for like Bethlehem Steel, even though we're low on numbers, I don't think we need anymore because

it's a one-size-fits-all.

MEMBER MUNN: Pointless.

CHAIRMAN GRIFFON: Yes. So, there's certain reasons why we can not try to match our --

MR. KATZ: Oh, absolutely.

CHAIRMAN GRIFFON: Yes, yes. Alright.

MEMBER MUNN: Ignore it. They have what they wanted.

CHAIRMAN GRIFFON: I have 623 as the next one I found, which is an X10, and it's stomach and all male genitalia. And 561, which is a Hanford and PNL, yes. 531, this is an all-male genitalia, also interesting because it's K25 X10, a Rocky Flats multiple-site kind of thing. 531, that is.

Number 20, X10, stomach cancer. This one is -- well, I don't know, this one is unique to me. Well, it's skin cancer, but

it's Albuquerque Operations Office. This is 43. So, I think the job site of it is kind of unique, right? It must be a DOE Albuquerque Operations Office, right.

MEMBER MUNN: Got to be.

CHAIRMAN GRIFFON: Yes. Let's see 102, oral cavity and pharynx.

MR. FARVER: On 102, column E, is that the years worked?

CHAIRMAN GRIFFON: Yes, that's the other reason I like that one. The person worked 99.5 years. We want to examine this person.

MEMBER MUNN: Fascinating.

MR. STIVER: This other guy's got 200.6 years.

CHAIRMAN GRIFFON: Yes, yes. I know.

MR. KATZ: What site, sorry?

CHAIRMAN GRIFFON: Battelle Labs,

King Avenue. I don't even know if -- yes, something is up with -- a couple that have years worked show weird things. Okay, 675 is Los Alamos. That should have us at 20. Does that agree with your numbers, Ted?

MR. KATZ: Yes.

CHAIRMAN GRIFFON: Okay. Oh, I haven't seen this before. Amchitka, has to be a skin cancer. Yes, Amchitka, but they also worked at Lawrence Livermore.

DR. ULSH: What's the case number?

CHAIRMAN GRIFFON: 323. That may require a site visit.

MR. HINNEFELD: He worked on the Pacific Proving Grounds, too, Johnson Atoll and Amchitka.

MEMBER MUNN: That means be careful.

CHAIRMAN GRIFFON: How about 66? This is again the multiple Oak Ridge things,

E25, X10, Y-12. 210 is a Hanford case, 48 percent, and multiple cancers.

MEMBER MUNN: What's that number again?

CHAIRMAN GRIFFON: 210. 101 is a Hanford case, stomach cancer is obvious. I'm also just thinking about decade worked. Kathy, on decade worked, are we weak in -- for a while, we were running weak in the 80's and the later decades. Is that still true? I mean, given that cancer is --

MS. K. BEHLING: That's true, yes.

CHAIRMAN GRIFFON: -- a reality. Yes.

MEMBER RICHARDSON: Could you tell me what that means? Was that the decade of hire?

CHAIRMAN GRIFFON: Decade -- yes, decade of hire. Decade first employed.

MEMBER RICHARDSON: Okay.

CHAIRMAN GRIFFON: So --

MEMBER RICHARDSON: Which explains why that goes back to the 1920's or --

MEMBER MUNN: Yes.

MR. HINNEFELD: So did AWE. If the person worked in the AWE. No, it'll go earlier --

CHAIRMAN GRIFFON: Oh, because they were employed before.

MR. HINNEFELD: If they were employed at that AWE before --

CHAIRMAN GRIFFON: Got it. Sometimes they're typos.

MEMBER RICHARDSON: Yes. When I sorted by that, it goes from the 1920's to 2000's.

CHAIRMAN GRIFFON: Yes, yes.

MR. STIVER: What was the last one you called out?

CHAIRMAN GRIFFON: 101 was the

last one I had. Next one I have is 319.

MR. KATZ: What site?

CHAIRMAN GRIFFON: Los Alamos and Nevada Test Site. I'll just leave it there. I was looking. I haven't sorted by decade, but I was starting to look for related decades, and it is difficult to find this one.

MR. KATZ: While Mark is doing that, someone else may want to do SRS, Paducah, Fernald. Those are all ones that we're weak on. We've picked up some K25 and Hanford in this batch already.

CHAIRMAN GRIFFON: Yes. I have 34 as a Savannah River option. 212, a Hanford case. This is interesting to me because it's 49.9, a lung case and the person worked there 0.8 years.

MR. KATZ: Wow.

DR. ULSH: It was approved April 20th of last year.

CHAIRMAN GRIFFON: Yes, last year. Should be going back in.

MEMBER RICHARDSON: Mark, is there any concern about the -- kind of validity of -- of that information in that column?

CHAIRMAN GRIFFON: Yes. That's why we get another cut at this, David. Remember the -- NIOSH is going to go back and pull stats together, more information on these cases, and bring it to the full Board meeting. Then we'll get another cut at this list. So, as it turns out, that should come out at the next meeting.

MEMBER RICHARDSON: Okay.

CHAIRMAN GRIFFON: All right?

MEMBER RICHARDSON: Thanks.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: 212 listed how many --

MR. KATZ: Case 212, yes.

MEMBER MUNN: Oh, I thought you said some huge number.

CHAIRMAN GRIFFON: No, 283: huge if you don't like to work, I guess.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Here's a Fernald case, 349. It's only 3.3 years' experience, but it is in the 1990's. It's a later time period. Excuse me?

MR. STIVER: It's a lot of different cancers.

CHAIRMAN GRIFFON: Yes, lots of cancers.

MEMBER CLAWSON: Hey, Mark. This is Brad. I'd also like to compliment Kathy on this breakdown that she put out for us. It sure makes it a lot more interesting to me.

CHAIRMAN GRIFFON: Yes, that was very helpful. Case 30, Savannah River. Brant, are you up to 29?

DR. ULSH: Yes.

CHAIRMAN GRIFFON: Okay. Just wanted to make sure I didn't miss one on my own list.

DR. ULSH: You're halfway home.

CHAIRMAN GRIFFON: Excuse me. Number 45, another Fernald case, multiple cancers. That's 30. Yes, I think we should probably shoot for 60. Almost through this list of high PoC, and then we'll go back to the full. 613 and 48, two Savannah River cases.

MR. KATZ: Case 48?

CHAIRMAN GRIFFON: Yes.

MR. KATZ: Why doesn't someone hunt up some Paducah cases in this batch?

DR. ULSH: Is that 32, Mark?

MR. KATZ: Yes, that's 32.

CHAIRMAN GRIFFON: 32. If someone else wants to sort this whole thing by site,

we can look at it that way. We've done General Steel, correct?

MEMBER MUNN: GSI?

MR. KATZ: We've done a number of cases.

CHAIRMAN GRIFFON: We've done a number of cases, right.

MR. KATZ: How are we on a percentage sense, Kathy, on GSI?

MS. K. BEHLING: Four out of seven.

CHAIRMAN GRIFFON: Isn't it a one-size-fits-all kind of --

MEMBER MUNN: They're halfway through them, but it wouldn't hurt to have some more.

CHAIRMAN GRIFFON: Well, let's put 317 on the list. Just a GSI pancreas, with one difference maybe. Have we done Alcoa, number 584? We've done one? Have we done

any?

MS. K. BEHLING: Yes, we've done one.

CHAIRMAN GRIFFON: Okay.

MS. K. BEHLING: And 2.5 percent is 1.

CHAIRMAN GRIFFON: 2.5 percent would be 1?

MS. K. BEHLING: That is correct, yes.

CHAIRMAN GRIFFON: We would've done our quota? All right, maybe we don't need that one. Forget that one.

MEMBER MUNN: Well, we might as well over-quota on some of these.

CHAIRMAN GRIFFON: Yes, it's true, but I don't care. I'm indifferent on that one. Let's skip it. And Medina, we have done Medina. Correct, Kathy?

MS. K. BEHLING: Yes, Medina 1 and

2.5 percent is 1.

CHAIRMAN GRIFFON: All right, we'll leave it at that.

MR. KATZ: John, can you sort by Paducah? Pull up some Paducah cases?

CHAIRMAN GRIFFON: Ted really wants some Paducah cases.

MR. KATZ: Well, I just think we ought to --

CHAIRMAN GRIFFON: I know. I know.

MR. KATZ: It's a little under-represented. That's all.

CHAIRMAN GRIFFON: I would be doing it if I wasn't doing it.

MR. KATZ: Well, no. That's why I'm asking John.

CHAIRMAN GRIFFON: How about ElectroMet, Electro Metallurgical, 545? But I want Kathy to --

MS. K. BEHLING: We've done one, and two is the 2.5 percent.

CHAIRMAN GRIFFON: All right, we'll do one of those, 545. Okay, 407 is X10, Y-12, liver cancer.

MR. STIVER: Ted, is there a particular site you're interested in?

MR. KATZ: Paducah. We've gotten quite a lot of Hanford in this batch now. We've gotten in several Fernald.

DR. ULSH: Oak Ridge sites, so.

MR. KATZ: Yes, we've gotten okay on K25, I think. Well, we've got a couple of K25.

MR. STIVER: There are four -- about seven Paducah cases.

CHAIRMAN GRIFFON: Actually, I'm at the end of my list. The last one is Paducah, and it's 48.9 percent. I think we should probably do that. Number 44. So,

that's --

MR. KATZ: Thirty-six.

CHAIRMAN GRIFFON: -- 36.

MR. KATZ: John, what are another couple Paducah ones that look good?

MR. STIVER: Oh, let's see. We've got a couple that are above the payoff. Let's see. There's one at 50.5 percent, number 430.

DR. ULSH: About two years worked.

MR. STIVER: About two years. Another one from 1970's, which is 50.1. These are both skin cancers. There's a 34th percentile colon for only a half year worked.

MR. KATZ: What case number is that?

MR. STIVER: That's 264.

CHAIRMAN GRIFFON: Wait. I didn't get the last one.

MR. STIVER: Last one was 430.

DR. ULSH: Are we going to pick

that one?

CHAIRMAN GRIFFON: Hold on. I have it sorted differently. So, 430. Yes, I mean, it's skin cancer. It's above -- it's above 50.

MR. STIVER: That was 430. There's another one that's kind of interesting. It's a fairly low PoC. It's only 34. About half a year of work in the 1950's.

MR. KATZ: What case number is that?

MR. STIVER: That's 364.

CHAIRMAN GRIFFON: 364 is a half a year worked.

MR. STIVER: Only a half year worked and colon as well as skin cancers.

DR. ULSH: So, you want that one?

CHAIRMAN GRIFFON: Yes, it's fine.

MR. STIVER: So far I've got 44,

430 and 364 for Paducah. Three is enough?

CHAIRMAN GRIFFON: I just did a different sort of years -- of year worked, work decade I mean. I sorted work decade backwards to look at some of the later -- and actually going from 1994, there's only eight cases, which makes sense. But maybe in the 80's, I know that we don't have very many in the 80's, or even in the 70's for that matter.

So, I was just going to -- there is a Fernald, 759. It's over 50 percent, but it was starting decade 1980.

MR. KATZ: Did you say Fernald?

CHAIRMAN GRIFFON: Yes, 759.

MR. KATZ: Okay.

CHAIRMAN GRIFFON: There's a 354, Savannah River, 49th percentile, 1980 decade. That brings us to 40, correct?

DR. ULSH: That was 359?

CHAIRMAN GRIFFON: 354. And 367,

also Savannah River, but also 49 percentile. I hope I didn't overlap any of these because I'm doing them in different --

MR. KATZ: Nope.

CHAIRMAN GRIFFON: So, tell me if I do an overlapping number.

MR. KATZ: Okay.

CHAIRMAN GRIFFON: 638 is a Mound site, 48 percent in the 1980's.

MR. HINNEFELD: We already got that one.

CHAIRMAN GRIFFON: Okay, sorry. It's from the same sheet. That's how that happened.

MR. STIVER: I missed the number for the Fernald case.

CHAIRMAN GRIFFON: 367.

MR. STIVER: I thought that was Savannah River.

CHAIRMAN GRIFFON: No.

MEMBER MUNN: That's 354.

MR. STIVER: Yes, 354 I have as the --

CHAIRMAN GRIFFON: You missed the -- Fernald was 759. Did you get that one?

MR. STIVER: Okay, I got that one.

DR. ULSH: Another interesting site for you, complicated project, Gnome Nuclear Explosion site.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: It's 109.

CHAIRMAN GRIFFON: 109? That's the -- PoC, what is it?

DR. ULSH: PoC is 50.4, lots of cancers, organ, skin. It's NTS in Project Gnome.

MR. KATZ: How do you spell Gnome?

DR. ULSH: G-N-O-M-E.

CHAIRMAN GRIFFON: 109.

DR. ULSH: Do you want that one?

CHAIRMAN GRIFFON: Yes. I have 176, Pinellas Plant. Again, I'm going by decade. That's why I'm going for that one. It's 1980.

MR. KATZ: How are we, Kathy, on Sandia, in terms of representation?

MS. K. BEHLING: Sandia we had one case, and we should have eight.

MR. KATZ: Okay, so that's one to -- Sandia.

CHAIRMAN GRIFFON: Did you see any for Sandia that you're interested in?

MR. KATZ: No. I haven't seen any.

CHAIRMAN GRIFFON: Alright. Have we done this extrusion plant, Reactive Metals, Inc.?

MS. K. BEHLING: Let me look here.

CHAIRMAN GRIFFON: Case 720.

MS. K. BEHLING: I do not see

that, no.

CHAIRMAN GRIFFON: It says Extrusion Plant, Reactive Metals, Inc.

DR. ULSH: RMI?

CHAIRMAN GRIFFON: RMI, okay. I'm not used to seeing --

MS. K. BEHLING: Okay, we have done one.

CHAIRMAN GRIFFON: You've done one of those?

MS. K. BEHLING: Yes.

CHAIRMAN GRIFFON: And we probably needed one, right?

MS. K. BEHLING: That's right.

CHAIRMAN GRIFFON: All right. So, let's skip that one. I'm not used to seeing RMI. That's why I didn't -- here's a Paducah. I'm moving to decade -- the 70's. I'm in the 70's now. Number 110. It's compensable, but it's -- yes, it's fine. What does that bring

us up to, 42?

DR. ULSH: It would be 44.

MR. KATZ: The last four, Mark, are 367, 109, 176 and 110.

CHAIRMAN GRIFFON: All right, I'll trust you guys. I lost track of the list of --

MR. KATZ: So, while we're working on this, John or Doug, can you hunt up some Sandia?

CHAIRMAN GRIFFON: He's multi-tasking. That's good.

MR. KATZ: Just to get us there.

CHAIRMAN GRIFFON: It's like radio silence in this meeting.

MR. STIVER: I only got three for Sandia here. The highest PoC is case 250, 1960's --

CHAIRMAN GRIFFON: 250?

MR. STIVER: 250.

CHAIRMAN GRIFFON: Alright, let's get that one on there.

MR. KATZ: We could use another one.

MR. STIVER: Let's see. 657, low PoC for gall bladder.

MEMBER MUNN: What was that number?

MR. STIVER: 657.

MEMBER MUNN: 657?

MR. STIVER: Correct, yes.

CHAIRMAN GRIFFON: What's the PoC?

MR. STIVER: 22.5, gall bladder.

CHAIRMAN GRIFFON: That's fine, 657. How about this one, sticking with the gall bladder, 797? It's Brookhaven National Labs. I don't think we had many. We may have. 1970, though again. I was looking at the decade.

MR. KATZ: 797?

CHAIRMAN GRIFFON: 797, yes.

MR. KATZ: Yes.

CHAIRMAN GRIFFON: Is that okay with everybody? Brings our total up to?

MR. KATZ: Forty-seven.

CHAIRMAN GRIFFON: I like this 670, Y-12, liver, started in the 70's, 35 years experience.

MEMBER RICHARDSON: So, this is focusing on -- I was wondering about -- looking at the report, the breakdown by cancer type, there aren't that many livers there.

CHAIRMAN GRIFFON: Right. Yes, and I was also thinking, David, that I'd just -- I'm doing this from my head because I don't have Kathy's chart up. If I'm remembering this correctly, we've been a little lower on the 70's and 80's and 90's as far as looking at those decades of first hire. You know, part of it is just because you're -- the older

people are getting cancer.

So, I was trying to get some samples from -- we also have different issues, especially in the 80's when you start the clean up regime and different kinds of issues to look at. So, where are we at, 49?

MR. KATZ: Eight.

CHAIRMAN GRIFFON: Forty-eight. If we can get 10 or 12 more, I think that would make Stu happy, Brant happy. The more the better. I know. How about Hooker Chemical? Kathy, have we had a lot of Hooker Electrochemical?

MS. K. BEHLING: Let's see here. Yes.

CHAIRMAN GRIFFON: We have what we need?

MEMBER MUNN: We have exactly what we need.

CHAIRMAN GRIFFON: Okay.

MEMBER MUNN: Going by Kathy's chart.

CHAIRMAN GRIFFON: All right. How about Reduction Pilot?

MR. HINNEFELD: That's also called the Huntington Pilot Plant.

CHAIRMAN GRIFFON: Oh, it is Huntington. I thought that had a different name.

MEMBER MUNN: That's something else then.

CHAIRMAN GRIFFON: So, we have Huntington then.

MEMBER MUNN: We have Huntington.

MS. K. BEHLING: Yes.

MEMBER MUNN: We didn't even have any requirement on that.

CHAIRMAN GRIFFON: Okay. How about NUMEC, NUMEC Parks Facility?

MS. K. BEHLING: We had one NUMEC

Parks Township out of two.

CHAIRMAN GRIFFON: All right, how about number 448? How about BWXT?

MS. K. BEHLING: No, we don't have any BWXT. No.

DR. ULSH: I saw one in here. What's the number?

CHAIRMAN GRIFFON: Number 439.

MR. KATZ: That makes 50.

CHAIRMAN GRIFFON: That's 50?

MR. KATZ: Yes.

CHAIRMAN GRIFFON: What is BWXT? Where is that?

MR. HINNEFELD: Lynchburg, Virginia.

CHAIRMAN GRIFFON: That's right. Okay.

MR. HINNEFELD: It's a commercial plant. Actually, mainly makes Navy fuel, but they had non-Navy contracts for a while.

CHAIRMAN GRIFFON: Okay. Let's see. There's a Hanford: 689.

MEMBER RICHARDSON: What about K-25?

CHAIRMAN GRIFFON: Yes, did you sort by site?

MEMBER RICHARDSON: Yes.

CHAIRMAN GRIFFON: Let's put 689 on the list first, and then go ahead, David. What do you got?

MEMBER RICHARDSON: Well, do you have 417 on there right now?

CHAIRMAN GRIFFON: Stand by.

MR. KATZ: No.

MEMBER RICHARDSON: That's K-25 in the 1970's, with a skin cancer, and I think all three of those are categories that are under-represented.

CHAIRMAN GRIFFON: 417, okay. We'll add that one.

MR. KATZ: Yes.

CHAIRMAN GRIFFON: Good.

MEMBER RICHARDSON: And there's another one that's similar. It's 717.

MR. KATZ: That's also K-25?

MEMBER RICHARDSON: K-25 from the 1970's with a skin cancer.

CHAIRMAN GRIFFON: We didn't get that one before, did we?

MEMBER MUNN: No, we didn't.

DR. ULSH: That's 58 years worked.

CHAIRMAN GRIFFON: Yes. Something happened with the years worked.

MR. HINNEFELD: Sometimes that is from the individual years that the --

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: But I don't know if that's what happened here or not.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: What may have

happened is, oftentimes when we get a referral from Oak Ridge, there won't be a record of which plant, and they'll refer all three. And then they'll include a years-worked, and it may include the same period for all three because they don't know where they worked. So, that's probably --

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: He probably worked there about 20.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: Kathy, when you do your accounting, when someone has worked at multiple sites, do you put them in each of those?

MS. K. BEHLING: Yes, I do.

MR. KATZ: Okay, that makes sense.

CHAIRMAN GRIFFON: I just sorted by site to flip through -- just to see if I see anything different.

MEMBER RICHARDSON: And 341, this lung cancer case, K-25, 52 percent.

CHAIRMAN GRIFFON: That's fine. So, we have Santa Susana. How many do we need from there?

MS. K. BEHLING: We did one Santa Susana, and we can do seven. We should do seven.

CHAIRMAN GRIFFON: All right, there's a couple of those on here. I mean, maybe number 502. It does have multiple sites, but it does have Santa Susana.

MR. STIVER: Is that the only one we have for Santa Susana?

CHAIRMAN GRIFFON: No, there's a couple more, but they're not -- well, number 815 is the last.

MR. STIVER: Yes, restricted Santa Susana.

CHAIRMAN GRIFFON: Yes. That's

only that site. Yes. I didn't know that that plant was Santa Susana. Where is the BONUS Reactor Plant, and the Puerto Rico Nuclear Center?

MEMBER MUNN: Must be Puerto Rico.

MR. HINNEFELD: Facility in Puerto Rico.

CHAIRMAN GRIFFON: Definitely site visit on that one, yes.

DR. ULSH: What case is that?

CHAIRMAN GRIFFON: 126.

MR. KATZ: Do you want it?

CHAIRMAN GRIFFON: I mean, is this -- is this one that we have -- you guys have never heard of it before, right?

MR. HINNEFELD: Well, I've heard of it.

CHAIRMAN GRIFFON: You've heard of it?

MR. HINNEFELD: But I don't know

anything about it.

CHAIRMAN GRIFFON: Right. I'm not sure we need that. I mean I don't even know if there's a handful of claims. It might just be --

MR. HINNEFELD: Well, you can keep going. I'll --

CHAIRMAN GRIFFON: Yes, okay.

MR. HINNEFELD: I'll let you know.

CHAIRMAN GRIFFON: All right.

MS. K. BEHLING: Mark?

CHAIRMAN GRIFFON: Put down 126 as a star right now while Stu looks. Go ahead, Kathy.

MS. K. BEHLING: Can I suggest Heald Machine Company? There are several on this list, and that has it's own exposure matrix, and there's none on the list.

CHAIRMAN GRIFFON: Okay, that's the input I want.

MR. KATZ: What case number?

MS. K. BEHLING: Well, there are three. It's 840, 736, 718.

CHAIRMAN GRIFFON: Heald Machine Company, yes. The PoC's are very low.

MS. K. BEHLING: All lung, but we have not done that exposure matrix.

CHAIRMAN GRIFFON: Yes, looks like exposure didn't -- it's a natural background. Yes, so I think selecting one of those would be -- since there's a matrix, right? 736 is fine.

DR. ULSH: 736.

CHAIRMAN GRIFFON: The one with the high PoC.

MEMBER MUNN: What about Cincinnati Milling Machine?

CHAIRMAN GRIFFON: Anybody know that site?

MEMBER MUNN: Cincinnati Milling

Machine.

CHAIRMAN GRIFFON: I mean, I think Kathy's input was good. If there's a matrix on it, then we know there's probably more than one individual case.

DR. ULSH: What case number is that, Cincinnati Milling or whatever?

MEMBER MUNN: 811.

CHAIRMAN GRIFFON: Does anybody know if there's a matrix on it?

MS. K. BEHLING: There is.

CHAIRMAN GRIFFON: There is on that one?

MS. K. BEHLING: Yes. Yes, there is. There's an exposure matrix for that, and we hadn't looked at any of those cases. So, I thought this would give us an opportunity to look at that.

CHAIRMAN GRIFFON: No, for Cincinnati Milling Company.

MS. K. BEHLING: Oh, Cincinnati? I'm sorry, no. No, there's no separate exposure matrix.

CHAIRMAN GRIFFON: There's no matrix for that one?

MS. K. BEHLING: No.

CHAIRMAN GRIFFON: Which tells me it's likely very few claims, right?

MR. HINNEFELD: Probably. There are two claims from the BONUS reactor.

CHAIRMAN GRIFFON: Yes, so, I don't know that that's --

MR. KATZ: That's Puerto Rico you're talking about?

MR. HINNEFELD: No, that's the BONUS reactor. Puerto Rico Nuclear Center has three. I suspect --

CHAIRMAN GRIFFON: This person worked --

MR. HINNEFELD: -- two of them are

doubled, and there's one. It may be -- actually there were three originally submitted for each of those two sites. There's a pulled -- one case showed up as pulled on the BONUS reactor. There are none showing up as pulled on the Puerto Rico Nuclear Center.

So, somewhere around probably four total claims from the combination of the two sites. And the one we just asked about was Cincinnati Milling?

CHAIRMAN GRIFFON: I'm not sure on either one of those. I'm waiting. I mean we can put the BONUS one down. We can discuss it at the full Board, if we want to.

MR. HINNEFELD: There are six total claims from Cincinnati Milling. I doubt that there's a Site Profile.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: There's a W.R. Grace claim in there.

MR. HINNEFELD: Have we selected anything from BONUS, Puerto Rico Nuclear Center or Cincinnati Milling?

MEMBER MUNN: No.

CHAIRMAN GRIFFON: Not yet.

DR. ULSH: 126, I thought.

MR. KATZ: It's tentative. We didn't -- they hadn't decided.

CHAIRMAN GRIFFON: Do people want that? It's -- it's --

MR. KATZ: It's Puerto Rico.

DR. ULSH: Puerto Rico.

CHAIRMAN GRIFFON: What are the particulars in that case again? Is it --

MR. HINNEFELD: 35 PoC, 35 percent PoC. It's all-male genitalia and malignant melanoma. Started work in the 1960's, worked for 6.75 years.

CHAIRMAN GRIFFON: I don't want to rule it out, but it's probably some generic

overestimating approach that they had to use --

MR. HINNEFELD: I don't know. That might be. I don't know.

CHAIRMAN GRIFFON: Let's put it on the list. We can -- you can at least tell us if it was full internal, external or whatever.

MR. KATZ: At the Board meeting.

CHAIRMAN GRIFFON: So, 126 is on. What about Cincinnati Millworks?

MEMBER MUNN: I don't see any yet, but we do -- there's a W.R. Grace on there with a 35 PoC.

CHAIRMAN GRIFFON: Alright.

DR. ULSH: Just to keep track, with BONUS in and with the Cincinnati Milling Company not in, then --

MR. KATZ: Fifty-three.

MR. HINNEFELD: Fifty-eight.

MR. KATZ: I mean eight. Sorry.

Two more slots.

CHAIRMAN GRIFFON: All right. W.R. Grace, Kathy, do we have? We've done that before, right?

MEMBER MUNN: We've done it, but we don't have --

CHAIRMAN GRIFFON: Okay, which one?

MEMBER MUNN: 810, 25 years.

CHAIRMAN GRIFFON: Sounds okay to me.

MR. FARVER: Have you done Combustion Engineering?

CHAIRMAN GRIFFON: I think so, but -- Combustion Engineering, Kathy?

MS. K. BEHLING: I do not see that on the list, no.

CHAIRMAN GRIFFON: Oh.

MR. FARVER: There's about 20 of them.

MR. KATZ: Okay.

CHAIRMAN GRIFFON: Let's look at those. All pretty low. Yes, oral cavity and pharynx. Yes, 832 looks okay.

MR. KATZ: 832?

CHAIRMAN GRIFFON: Yes.

MR. KATZ: And that is 60. Site is what again?

CHAIRMAN GRIFFON: Combustion Engineering.

DR. ULSH: That takes you to 60 cases.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: So, I'm missing one then, I guess. My last case before that was 736. Do you have a case after that?

CHAIRMAN GRIFFON: 126. Or no, you got that one.

MR. KATZ: Yes, I got that one.

MEMBER MUNN: 810.

MR. KATZ: And what site is that?

MR. HINNEFELD: W.R. Grace.

MR. KATZ: Okay.

CHAIRMAN GRIFFON: So, that brings us to 60. Anybody else have any others they feel strongly to add? Otherwise, we can end this activity.

MR. KATZ: No. That's 60.

CHAIRMAN GRIFFON: All right, so the next step is that NIOSH will take this list back. First, I guess find out whether any of these were adjudicated, and then take the adjudicated list and get more detail to bring to the Board for August. And then we'll make the final selection as a full Board.

MR. KATZ: And if we could -- if we could aim to have it at least a week before the Board meeting.

MR. HINNEFELD: We can aim.

MR. KATZ: That's a start at

least. Because otherwise, it'll be like watching paint dry at the Board meeting, which is even more difficult.

CHAIRMAN GRIFFON: Yes, yes.

MR. KATZ: Hate for it to mold before it dries.

MEMBER MUNN: And that can happen.

CHAIRMAN GRIFFON: Okay, let's take ten minutes to re-gear ourselves here, get the other matrix up. We're going to start with the 7th and 8th matrix discussions next. So, if you can find those spreadsheets, then pull them up. We'll take ten to stretch and then start into that.

(Whereupon, the above-entitled matter went off the record at 2:09 p.m. and resumed at 2:24 p.m.)

MR. KATZ: Alright, we're back.

CHAIRMAN GRIFFON: Okay, we're going to start and work on the 7th and 8th

matrix items, and it's 2:30 now. Realistically, I'd say we work until 4:00, 4:30. I don't know who has flight stuff, but I know my options are either 3:00 or 7:00, I think. So, are your --

MR. STIVER: Mine are 7:00.

MR. FARVER: Ten until 6:00.

CHAIRMAN GRIFFON: So, we'll be fine. Okay, so maybe until 4:30.

MR. STIVER: That gives us plenty of time.

CHAIRMAN GRIFFON: So, starting on the 7th set of cases, then. We're just going to push through these. And I do want to save some time at the end because I think we should think about schedule, and maybe as Ted suggested, maybe scheduling something a little sooner to -- to speed up our progress.

We just selected cases for the 15th set, and here we are working -- and we're

running into this situation as David described that we're looking at findings from cases that are older than what we want to be looking at, or than that are important. So, we sort of want to catch up.

Anyway, so we should save a little time at the end for scheduling. But looking at the 7th set of cases, I have the first 121.1. It still looks like it's an open item for NIOSH. Is that right?

DR. ULSH: I don't know. In the resolution column, there's a yellow highlighting dated 4/18/11 for NIOSH to come back.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: But then in the NIOSH response column, there's something from April, but I'm not sure which is older and which is newer.

CHAIRMAN GRIFFON: I think that

was -- that came into that meeting. That was your response coming into the meeting.

DR. ULSH: So, 4/18, then is an additional action item after that one?

CHAIRMAN GRIFFON: Yes, I believe so. Was 4/18 our last meeting? Yes, so 4/18 was from the last meeting, yes. So, that would be the --

DR. ULSH: Well, unless Scott is going to exceed my expectations here, we spent all of our time getting this PER case selection set up.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: I don't know that we've done any action on this.

CHAIRMAN GRIFFON: Scott, close this out for us.

MR. SIEBERT: I hate to not exceed expectations, but no. I don't have anything on 121 or 122 because they're sites that I'm

not working on. They're Aliquippa and Simonds Steel -- or Simonds Saw and Steel.

CHAIRMAN GRIFFON: All right, I'm just going to -- it's not to be punitive in any way, but I'm going to put down 7-whatever today. I'm just going to put down 7/15 remains a NIOSH action.

DR. ULSH: Yes.

CHAIRMAN GRIFFON: Just so we don't lose track of it.

MR. SIEBERT: I'm going to have to say I'm not sure I recall a discussion on 121.1. It says, NIOSH will look back at procedure for doing overestimate cases versus the Site Profile used in this case. The discussion, the last time we were talking about it, was the film badges, whether they were representative for this claimant. And I don't know what the path forward is on this. I guess that's my question --

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: -- is what we're looking for.

CHAIRMAN GRIFFON: Yes, that's a good question. Doug, do you have any idea? I'm trying to --

MR. FARVER: The one -- I was ahead of you. So, where were you --

CHAIRMAN GRIFFON: On the first one, yes. What we were actually -- sometimes that's the problem, if we haven't met in a while and we forget what we wanted to do. Made sense at the time, I think.

MR. FARVER: Yes, it did.

MR. SIEBERT: The basic background on this one, if I remember correctly, was whether the values that we used to assign to this claimant were claimant-favorable based on him being near -- in the furnace area.

CHAIRMAN GRIFFON: Oh, yes. This

is the furnace.

MR. SIEBERT: And what we discussed in April is the fact that the 20 film badges in the study that actually came up with it, we looked through those and determined the one that was in the general area where he was, was not in the higher end of the 50th percent -- the top 50 percentile, but using the 50th percentile made sense in this -- in this case.

I am not sure what the path forward is for the overestimating, because it appears to me that it's appropriate based on the actual badging. That was Scott saying all that. Sorry.

CHAIRMAN GRIFFON: That's okay. We got it. And this wasn't -- was this an overestimating case? This wasn't --

MR. HINNEFELD: I think it was done with the Site Profile, wasn't it?

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: It's Aliquippa. So, I'm sure it was just following the matrix of what's in the TBD.

CHAIRMAN GRIFFON: Right. Was this the -- this may have been a question of the policy for when you would apply the 95th versus 50th. I'm stretching here for any kind of --

MR. FARVER: That would make sense given this last statement for the overestimating cases.

CHAIRMAN GRIFFON: I mean can I ask -- it sounds like we're going to have to pull the transcript at this point. And if you pull the transcript and it doesn't seem like there's any action, then leave it at that and report back to us. Is that okay, Brant?

DR. ULSH: Sure.

DR. MAURO: Scott, this is John

Mauro. Aliquippa Forge, I was listening to your summary of this issue. I don't actually have the matrix in front of me. Is this the site where they were suspending film badges?

MR. SIEBERT: Yes.

DR. MAURO: And collecting external data from suspended film badges? And I do recall, this maybe in a comment that I raised that the -- this particular claimant was in the furnace area.

CHAIRMAN GRIFFON: Yes, right.

DR. MAURO: And I think I recall that the concern was that, well, now the badges were suspended, and there's some distribution of numbers that you would read off. Now, I was listening to you, but I was somewhat in the distance. Were you saying that the median for this distribution seems to be appropriate for this particular worker? Because I think that was my concern.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: That is, you may have taken the median when the worker was in an area that may very well have experienced the high-end exposures. So, I -- I didn't hear your reasoning for why the numbers are okay. I lost that.

MR. SIEBERT: No, you heard that correctly. It's based on the fact that we looked -- we went back and looked at where the badges were that were used in the study to create the median, and the distribution. There actually was a badge that was in the -- in the furnace area where this individual was working.

So, that is, you would think, a representative for what that individual was doing, and it was not in the upper 50th percentile.

DR. MAURO: Oh, okay. I didn't

hear that. I didn't hear that. Okay, I can see why that would -- yes, I wasn't aware of that.

MR. SIEBERT: Okay.

DR. MAURO: Very good. I mean, I could see why that starts to move you toward closure of this issue. I understand your rationale that -- so, in other words, what you're saying is the -- the information you have indicates that, no, the furnace area was not at the high end.

MR. SIEBERT: Correct.

DR. MAURO: Got you.

CHAIRMAN GRIFFON: Well, I'll still ask NIOSH to look back. Because that comment was there before when we discussed this last time.

MR. FARVER: It's still a discussion point.

CHAIRMAN GRIFFON: Right. So, if

you could just look back and clarify what we meant by that, and if you still think it should be closed, then we'll close it out. All right, and the next one, similar situation, or do we know what -- I know you haven't done any work on this. Do we need clarifying on the action?

MEMBER MUNN: Looks like it's still hanging out there.

CHAIRMAN GRIFFON: This is really, I think, more succinct: evaluate the use of TIB-70 on 6000, and then place where it was first used in the case.

MR. STIVER: Okay, so we were going over those very procedures yesterday.

DR. MAURO: If you could conceptually describe the issue again? Because we've done a lot of -- TIB-70 has gone through quite a bit of discussion, and there's some aspects of it that are fine, and some

aspects of it -- I mean SC&A's position is there's some aspects of it that are fine, and there's some aspects that are problematic.

The problematic aspects are in the process of being resolved. Jim, yesterday, Neton explained some changes that are being made have to do with the 1 percent per day decline rate. That was the main area we had a concern with. And TIB-70 is being revised to change that rate of decline. This would be during the residual period. Is that issue -- if we knew a little bit more about this issue, perhaps we are close to closure on it. I mean, perhaps yesterday's discussion is applicability to this particular issue.

MEMBER MUNN: Well, it may or may not, John.

MR. STIVER: This is for estimating photon dose.

MEMBER MUNN: These matrix values

are not assigned as a constant, but rather as a log-normal distribution. The median value of 0.25 millirem, and GSD of 1.5 based on the rationale stated above. This approach is claimant-favorable. That's the issue that's being pulled for this one.

DR. MAURO: Okay.

MR. STIVER: John, this particular worker started in 1948, and the residual period didn't begin until 1958. So, this is a pretty small portion of his overall photon dose. So, I don't know the extent to that would really apply that change in the depletion for the residual period.

MEMBER MUNN: Probably not much

MR. STIVER: Not much.

MR. SIEBERT: And I believe -- this is Scott again. I believe this is really more an overall TBD versus OTIB-70 and 6000 issues in this actual claim itself.

MR. STIVER: That's kind of more over-arching.

CHAIRMAN GRIFFON: Right, I agree.

MR. SIEBERT: So, is it asking us, or NIOSH and us, to look at the claim as if we were using 70 and 6000 instead of the TBD and do a comparison? I guess I'm still --

CHAIRMAN GRIFFON: I think that's what we're asking is not necessarily to do a full-out comparison, but to assure that it's still not going to change any decisions that -- you know, decisions on compensability, I guess.

MR. STIVER: This one hasn't been addressed in the last three meetings. So, I think that's --

MEMBER MUNN: Practically, everything on 121 is in NIOSH's court.

CHAIRMAN GRIFFON: Scott, I think that's my sense of it anyway was that it was

asking for that comparison, but not necessarily to the extent that you rework the whole case.

MR. SIEBERT: But more specifically to the TBD compared to those methods versus this specific case?

DR. MAURO: Yes. I think I recollect we had this discussion before, right? And the comment again was, given the limited data -- I guess you had a limited amount of data, was there anything about TBD -- OTIB-70 and TBD-6000 that might shed more light on the -- whether or not the approach we're taking is appropriately claimant-favorable.

CHAIRMAN GRIFFON: Yes, that's the point. And the next one in 121.3 talks about TIB-70 more on the internal side, right? I think that's the only ones we have outstanding, is actually these first three.

So, that's the main issue. These were done before those were available, and are they still claimant-favorable?

Then I'm looking at 122.1. Hopefully, this is the only other case we have. What's 122, John? Do you remember?

MR. STIVER: Simonds Saw.

CHAIRMAN GRIFFON: Simonds Saw. So is the first one, 122.1. Says, NIOSH will follow up on the validity of this approach for the particular job in question. So, it seems another one of these job things, like, was the coworker model favorable for a furnace worker. Is that -- that's clear, Scott?

MR. SIEBERT: I'm reading and looking at --

CHAIRMAN GRIFFON: Yes, okay.

MR. SIEBERT: Once again, really that's more of a general philosophy question as opposed to specifically for this site or

anything else.

CHAIRMAN GRIFFON: Well, this one, though, is for this worker in question. Would the new protocol make a difference? I guess it's for a specific job.

MR. SIEBERT: Okay, I've got at least some inkling.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Mark, this is John. Unfortunately, I wasn't -- I probably would've done a little more homework on these cases. It sounds like you're dealing with a number of AWE cases here. You mentioned Aliquippa Forge before, now Simonds Saw.

I would like to say that, if I had reviewed these prior to this meeting -- now I got ready for the blinds, but I really didn't get ready for going back to where we left off last time. So, I sort of have to apologize to the Subcommittee that I would've done a little

homework so that I could get oriented on these issues, because I'm pretty sure I know I did Aliquippa, and I know I did Simonds Saw. Unfortunately, I'm really not prepared to discuss, let's say, NIOSH's response to some of our concerns.

CHAIRMAN GRIFFON: No, these are all your fault. That is correct.

DR. MAURO: I'll take full responsibility.

DR. ULSH: Now wait. The ones we've just been talking about, all of them for Simonds Saw; all of them are still NIOSH action items?

CHAIRMAN GRIFFON: Yes.

DR. ULSH: Okay, that's what I thought.

CHAIRMAN GRIFFON: Even though John wants to take blame.

DR. MAURO: Well, it sounds like

you're looking for some answers from me, and I don't have them, unfortunately.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: I think we need to look at 122.1.

CHAIRMAN GRIFFON: Yes. I mean, at least be prepared to discuss these next time, even though they're NIOSH actions. You guys --

MR. FARVER: Yes. Oh, I understand.

CHAIRMAN GRIFFON: Yes, yes.

MS. K. BEHLING: And John, you should have the matrix. I emailed that to you on the 12th.

DR. MAURO: I opened up -- I had one matrix that was sent to me, information that was sent by Doug, on the 12th. Let me open that up. Please continue. I'll go track that down.

MS. K. BEHLING: The 7th and 8th.

CHAIRMAN GRIFFON: I'm just sort of documenting that these things remain actions, but I'm onto 122 -- I mean it's basically 121 and 122, I believe. Finding 122.3 says the photon dose from uranium billet/rod exposure. Again, may not be bounding for this particular worker. That's another question, right?

MR. FARVER: The validity of the approach for this job in question.

MEMBER MUNN: I don't see anything going on there since last year.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: So -- at which time NIOSH had it in their lab.

DR. MAURO: Kathy, I got it. Yes, okay. And we're looking at the 7th right now?

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Okay.

DR. ULSH: Page 8 of 112, finding 122.3.

CHAIRMAN GRIFFON: 122.7 now, actually.

DR. MAURO: Okay, got it. I'm catching up to you folks.

CHAIRMAN GRIFFON: And 122.7 is the thorium inhalation.

MEMBER MUNN: I think that's the latest date that I see.

CHAIRMAN GRIFFON: Yes. I'm just scanning forward, are there any other cases that have outstanding? It's just those two John Mauro cases, isn't it?

DR. ULSH: It's his fault.

CHAIRMAN GRIFFON: Yes, that's what I thought. It's his fault.

DR. MAURO: I didn't think you guys would get this far today.

CHAIRMAN GRIFFON: You

underestimated us.

DR. MAURO: I did. I did.

CHAIRMAN GRIFFON: Yes. Okay, that's it for the 7th set, just those two remaining action items for NIOSH.

MR. FARVER: I do have a question about 127.2. No, 122.7.

MR. STIVER: Oh, this is a -- yes, there is one set of HASL air sample, DWE-type data, that were taken November 25th, 1952, and that was used to model intakes for a long period of time, and there was a question whether the assumptions used for calculating thorium inhalation --

MR. FARVER: Did we ever receive that data to look at?

MR. STIVER: That particular study?

MR. FARVER: Yes.

MR. STIVER: Yes, that's

available. I haven't looked at it.

MR. FARVER: Okay. Because I mean the action says, provide us the data. Provide the HASL DWE data. So, I thought that was done.

MR. STIVER: Yes, we have that data.

MR. FARVER: Okay, so it's our action.

CHAIRMAN GRIFFON: So, you think it's an SC&A action? Which one is this?

MR. STIVER: I can tell you for a fact that I got that data last year.

CHAIRMAN GRIFFON: Which item is it again?

MR. FARVER: 122.7.

MR. STIVER: It's about the thorium inhalation --

MR. FARVER: So that's ours.

CHAIRMAN GRIFFON: Oh, so NIOSH

provided the data. So, now SC&A needs to review it.

MR. STIVER: I don't know if it's in relation to this particular case, but we do have that data.

CHAIRMAN GRIFFON: Okay, all right.

MR. STIVER: It's an SC&A action. We have a Site Profile review underway, looking at those issues.

CHAIRMAN GRIFFON: Alright.

MR. FARVER: I think that's all for that set.

CHAIRMAN GRIFFON: Yes, that's it for 7th set.

MR. FARVER: So, call it a day.

CHAIRMAN GRIFFON: I will email a revised matrix just to keep us -- since we lose track of these things.

MR. KATZ: Just for that, we're

going to 6:30.

CHAIRMAN GRIFFON: I'm betting the 8th set. All right, moving on, anybody on the phone with us other than Scott?

DR. MAURO: John is still here.

CHAIRMAN GRIFFON: John's still here.

MS. K. BEHLING: I'm still here.

MEMBER MUNN: Kathy's still here.

MEMBER CLAWSON: I'm still here.

CHAIRMAN GRIFFON: Alright, alright. Good job. It's going to get more exciting now.

MEMBER CLAWSON: Okay, I'll hold my breath.

CHAIRMAN GRIFFON: Okay, 149.1.

MEMBER MUNN: Remains a NIOSH action.

DR. MAURO: What site is this?

CHAIRMAN GRIFFON: This is the 8th

set -- I'm not sure what site.

DR. MAURO: No, I've got that in front of me.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: It helps me to know Bridgeport Brass or whatever it is.

CHAIRMAN GRIFFON: Yes.

MR. STIVER: What is that site?

CHAIRMAN GRIFFON: I don't know, John.

DR. MAURO: I can go pull my book.

MR. SIEBERT: Bridgeport Brass.

DR. MAURO: It is Bridgeport.

CHAIRMAN GRIFFON: Bridgeport Brass, thank you.

DR. MAURO: Oh, I know what this is.

CHAIRMAN GRIFFON: This remains a NIOSH action item. So, SC&A provided some analysis apparently.

DR. MAURO: Yes.

MEMBER MUNN: And the review is due.

CHAIRMAN GRIFFON: And assuming the -- right, okay. Understand, I'm just doing this as bookkeeping. I'm not trying to -

DR. ULSH: I understand.

CHAIRMAN GRIFFON: All right, next. This is 149.2.

MR. SIEBERT: Yes, I had written down that we had closed it, but --

MR. FARVER: Well, you provided a response back in April, but the only question I have is, what's the final resolution of this. Because it was pretty much a statement, but it didn't say that there was any action coming out of it. That was all.

MEMBER MUNN: Right. There's no further action.

CHAIRMAN GRIFFON: Well, but it says they'll compare the Site Profile with TBD-6000 approach, and if necessary -- I mean was the Site Profile modified, or was there any action?

DR. ULSH: Bridgeport?

MR. HINNEFELD: What's the site? Anybody know?

CHAIRMAN GRIFFON: I think Bridgeport.

MR. SIEBERT: Bridgeport Brass.

MR. FARVER: Bridgeport Brass.

DR. MAURO: Yes, I remember this issue. This is the nurse where you assigned a fairly high dose to a nurse from your -- your --

CHAIRMAN GRIFFON: Site Profile.

DR. MAURO: The Bridgeport Brass Site Profile generic analysis. I mean we basically looked at it and said that with

respect to this person, you would not think a nurse would get doses that are the high end because she would not be on the operating floor. And so, we felt in this case we might have overestimated that. I think that was the extent of the comment.

MEMBER MUNN: I think so.

DR. ULSH: That looks about right.

MR. FARVER: Okay, so there was no action for that one. Okay.

CHAIRMAN GRIFFON: So, what's the bit about comparing the Site Profile with the TBD-6000 approach. I mean I think we agreed that there was no further action for this case, but there was some sort of -- I didn't want to -- I guess this is a question of tracking. You know, that we don't lose track of things like this that say NIOSH said they would check to make sure the Site Profile was consistent with TBD-6000 or whatever.

MR. STIVER: I think that was the whole idea of a tiered versus one-size-fits-all model. I think the personal model is applicable here.

CHAIRMAN GRIFFON: But I mean was this done? Was the Site Profile compared with TBD-6000 approach?

MR. FARVER: That I don't know.

MR. STIVER: I have no idea.

CHAIRMAN GRIFFON: Scott, do --

DR. MAURO: The only merit you might have is that if we -- here we have an AWE facility with some data. And of course, when you have such data, real data for real people, it's certainly useful to -- to reconstruct the doses with that.

But at the same time, if you didn't have data or data was severely limited, you would resort to TBD-6000, and you find yourself in a funny place. If TBD-6000 were

defaulted to, or by the way that TBD received very favorable review. It is a matrix, generic matrix, that might have resulted in assigning a person substantially higher dose than the dose you were assigning given the date and the limited data.

If you have lots of data for that real person, then of course you would use it. I think that goes to the -- we've seen this before, where -- where you really have a choice. If you have limited data -- and so, it's insightful to know whether or not, if you went the TBD-6000 approach, would you end up assigning a substantially higher dose to this worker? I think that's the --

CHAIRMAN GRIFFON: I think that's the crux of the question.

DR. MAURO: That's the crux of all of this, yes.

CHAIRMAN GRIFFON: Yes, yes. But

I think it's still applicable. I mean I think we still want to know that. Right, John?

DR. MAURO: Yes, yes.

MR. HINNEFELD: So, we're still on the issue of tiering this -- is that what we're talking about? Should this person really get this high a dose?

MR. STIVER: Well, this particular case there wasn't enough data to really do a tiering. So, they assigned the highest dose to everyone.

CHAIRMAN GRIFFON: Well, highest site-specific dose from the records they had.

MR. STIVER: I understand, TBD-6000.

CHAIRMAN GRIFFON: Right.

MR. STIVER: Comparison if that's what was left.

MR. HINNEFELD: So, compare the values that we got from using the site-

specific ones here to what we can get --

CHAIRMAN GRIFFON: Right. Where you have a limited number of site-specific data, and you end up using the high end, versus using the TBD-6000 approach. Which one ends up being more favorable, I guess is the -- or more realistic, right, in this case.

MR. HINNEFELD: Well, on the face of it, I don't know how I feel about that because we have data specific to this site.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: And if we said, we're going to reject that data and use this other broader industry data, because there's more of it, it seems like we opened a whole other set of criticisms if we do that.

DR. MAURO: Yes. Either way you can't win, right?

MR. HINNEFELD: Yes. And so my way of thinking, I think we would rather use

the data from the site. It may not be abundant, but we think that's probably better to use than --

CHAIRMAN GRIFFON: That's probably why you use the high end.

MR. HINNEFELD: Yes, because there wasn't a lot. Because it wasn't very robust, we used the high end, I think. I don't know that we'd ever do anything any differently.

MEMBER MUNN: So choose the single exposure model.

MR. HINNEFELD: And you choose the single exposure model because you -- in many of these claims, you don't have good information about the -- about the job title of the person or the job history of the person because you may get the last job they held. You almost always get the last job they held. So, job title in these things -- we are concerned about the ability to make good

decisions based on that.

We would rather have a conservative model and apply it to everyone than to make judgments that are almost certainly going to have some arbitrariness to them.

CHAIRMAN GRIFFON: Well, I think the thing that I don't know is how do these two compare? It would be interesting just to know that.

MR. HINNEFELD: To me, we can do it as an academic exercise, but I think we would --

CHAIRMAN GRIFFON: We would still stick to your policy.

MR. HINNEFELD: We would like to stay with the --

CHAIRMAN GRIFFON: Right. But if it's 20 results, then if you only have 20 -- 20 results or badge data, and you say we're

going to take the high end of this, where you have a more robust coworker in 6000 and it ends up being more -- you know, this case is the high because we're saying we might've been too high of a dose.

MR. KATZ: I think you have to -- I mean I think the right thing to do is to judge on its merits whether the data for the site is adequate. If you come to a conclusion that the data at the site is not adequate, then --

CHAIRMAN GRIFFON: That's what I don't know. I'm speaking a little without the facts.

MR. KATZ: I know, but otherwise it doesn't make sense.

DR. MAURO: Yes.

MR. STIVER: It's adequate to at least provide a bounding dose.

CHAIRMAN GRIFFON: How big a set

of data was this? Do we know?

MR. HINNEFELD: I don't recall.

CHAIRMAN GRIFFON: Do any of you remember the details of Bridgeport?

DR. MAURO: I'd have to pull it and look at it again. It's been a long time.

CHAIRMAN GRIFFON: See, I hate to close these kinds of things out because we all forgot. At the time when we said this, it made sense to at least compare.

MR. HINNEFELD: Well, I mean usually -- this is a uranium plant.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: And you can look at a series of dosimetry data and decide, does this look like a uranium plant or not. So, we will compare --

CHAIRMAN GRIFFON: Oh, I agree with you, Stu. I'm not -- I agree. You want to use site-specific if you got it, and I

think I wouldn't object to that as a policy move for sure.

MR. HINNEFELD: Okay. Because as an academic exercise, I think we can do that comparison because it's not -- TBD-6000 isn't that hard. I mean we can figure out if they applied the data for TBD-6000, what dose rates are we going to get, and then what did we apply here.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: I mean to me, I think we're probably in a position where we would rather stay with the site-specific data either way.

CHAIRMAN GRIFFON: That'll probably be where we end up. I just want to --

MR. HINNEFELD: Okay.

MEMBER MUNN: I think we had almost this identical discussion.

CHAIRMAN GRIFFON: I know, probably last time. Yes.

MEMBER MUNN: And came to pretty much the same conclusion, but that's when we decided that we weren't going to do anymore with it.

CHAIRMAN GRIFFON: Well, that brings it back to Ted's point, which is maybe a little more frequent meetings, and we can -- you know. It's a balance because if we have more frequent meetings, but people -- if we don't have any actions, then it's -- yes. So, all right, 149.3. Yes, we'll follow up as in 149.1. This is an SC&A action, isn't it?

DR. MAURO: I have the hard copy of the big -- the big, thick book with this case, and this finding. It has to do with we actually checked -- did our own calculation using the data that were available, and we derived our own 95th percentile from the data.

And we came in a factor of -- twice -- our dose about twice as high, and I guess we're not too sure what the reason for that is.

I'm looking at it right now. That was the essence of the comment. We couldn't match our number. We came in higher for the 95th percentile.

CHAIRMAN GRIFFON: That was for 149.3?

DR. MAURO: Yes, we're looking at 3, right? The upper --

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Yes, the derived -- yes, the words right here are -- come right out of the -- I'm looking at the hard copy, 149.3. Right, and the -- the -- and I'm looking at the text that stands behind it.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: And it's basically as simple as that. We actually collected the

data, looked at it.

MR. STIVER: John, I think the reasons that NIOSH's response -- or I think I see why. It was just the way the calculation was done. They used Monte Carlo methods to combine too many period distributions. You guys took the 95th percentile and multiplied that by the number of periods, and you ended up with a higher number by about a factor of two as a result of that.

DR. MAURO: I didn't follow conceptually the difference between the way you would derive the 95h percentile and the way we did it. Could you do that one more time?

MR. STIVER: This is John Stiver. I'm just kind of paraphrasing what was in the NIOSH response. I think I understand the difference is that what they did is they did Monte Carlo sampling of all the different

distributions created a new, combined distribution, as opposed to just picking a 95th percentile and multiplying it by the number of periods.

DR. MAURO: Oh, I see.

MR. STIVER: Yes.

DR. MAURO: Okay.

MR. STIVER: And that would result in a lower value.

DR. MAURO: I would say that's an interesting discussion. In other words, it's funny how one could say we did the 95th percentile, but one person or group would do it one way. Another one would do it in a different way. And this -- it sounds like the approach that was used sort of buffers it a bit, and brings it down.

And I'm not sure, quite frankly, of the merits of each -- either approach, which one is the one that's most appropriate

for the particular problem at hand. But clearly, you could see how here's an example of ambiguity. You know, two different people could come up with different numbers.

MR. STIVER: Equally, you could take a smaller number for one of the distributions, a higher for the next and overall, you're going to come up with something that's a little bit lower than this, the 95th, the type of number for the badging periods. It's the property of the technique, the emergent property.

MEMBER CLAWSON: Mark, this is Brad. John or whoever, why -- why would they do that? Is it just -- is that up to the dose reconstructor?

MR. HINNEFELD: Well, it wasn't up to the dose reconstructor because this was done in the Site Profile document.

MEMBER CLAWSON: Right.

MR. HINNEFELD: So, this was done, and then this instruction was given to all dose reconstructors.

DR. MAURO: Right. Exactly right.

MR. HINNEFELD: So, it's not up to the dose reconstructor, but it would -- see if I've got this conceptually, John or John or somebody or Mark can correct me if I'm wrong. But conceptually, it sounds like on our part, we took each -- we took the two weeks. We have two-week periods.

So, you've got a series of two-week periods where you've got essentially a dataset for each two-week period.

MR. STIVER: A distribution for each of those two-week periods.

MR. HINNEFELD: Yes, a distribution for each of those two-week periods, and we said we're going to make this one broad distribution average and do 95th

percentile of this whole distribution. Yesterday, we said we're going to take the -- well, I'm not quite sure what they did. Is it the 95th percentile?

MR. STIVER: The combined dataset, lump it all together.

MR. HINNEFELD: Lump it all together.

MR. STIVER: Take the 95th percentile.

CHAIRMAN GRIFFON: Instead of just sampling from all of them, right?

MR. STIVER: We're going to combine this -- multiplying the 95th percentile for the combined dataset by the applicable number in a two-week period. So, you sum all the data together to --

CHAIRMAN GRIFFON: All the data --

MR. STIVER: -- multiply it by the number of periods. What you guys did was you

took the Monte Carlo running with one number from each of those distributions, added them up. That's one data point in your output distribution. You went back to that 10,000 times or whatever. You generate your output distribution -- 95th percentile of that.

MR. HINNEFELD: Oh, well, I don't have a conception. I have a clue.

DR. MAURO: I think there's more to the story here. It has to do with correlated and uncorrelated data and how it is processed.

MR. STIVER: Yes, for this one I assume there's no correlation for the data.

DR. MAURO: Right. The statement in the Bridgeport Brass Site Profile was that you collected the data and came up with an uncorrelated 95th percentile, which means that you were assuming that each reading, two-week reading, is independent of each other reading.

And of course if you do it in an uncorrelated way, it's going to result in a higher estimate of the 95h percentile.

So, I remember Harry Chmelynski did it this way. He actually matched -- in fact, he actually ran your numbers correlated and uncorrelated. It's coming back. And he matched your numbers, if you assumed they were correlated.

But in your write-up, you claim that no, we didn't -- the claim that you did the analysis in uncorrelated, and as a result, we say, well, if you did it uncorrelated, we would come in with a factor of two higher.

CHAIRMAN GRIFFON: Right.

DR. MAURO: Yes, I recall this now.

MR. STIVER: John, we talked about this yesterday in the Procedures meeting. This is the exact same discussion we had.

DR. MAURO: Yes.

MR. STIVER: It all gets back to whether a person who has a high probability of getting a dose by virtue of the job they're in, and staying in that job when everybody moves around the plant.

Everybody is just kind of randomly moving around the plant, then the uncorrelated distribution would be applicable, but if you got people who are in particularly hot jobs continuously, then the correlation would apply. And that's really what it came down to: whether it was correlated or not.

So, I guess to really get back to it, Bridgeport Brass, was that a site where people changed jobs frequently, or was the situation where you had --

MR. HINNEFELD: Do we know?

MR. STIVER: Do we know? Because if you have skilled labor that stayed in type

of position --

MR. FARVER: This will come up again when we talk about Attachment 1 findings.

MR. HINNEFELD: Is this Bridgeport Brass Havens Laboratory, or Bridgeport Brass in Adrian, Michigan?

MR. FARVER: Bridgeport Brass Havens.

MR. HINNEFELD: Okay, laboratory. So, I don't know. If it's in Michigan, I think there was extrusion there.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: But I don't think Havens was.

CHAIRMAN GRIFFON: Well, at least that defines the issue a little better. I mean I understand.

MR. HINNEFELD: Yes, that one I understand the issue. I need somebody smarter

than me to help figure this out. I don't -- I know Dave Allen might know more about this.

CHAIRMAN GRIFFON: If you don't know work --

MR. HINNEFELD: If you don't really know --

CHAIRMAN GRIFFON: Still uncorrelated, right. Right, the higher end.

MR. HINNEFELD: I mean just speaking here, but there may be basis for what we --

CHAIRMAN GRIFFON: I'll say it remains a NIOSH action. Go ahead, Brant.

DR. ULSH: Yes, the status of 149.1 is we put out our analysis. SC&A did a different analysis.

CHAIRMAN GRIFFON: Right.

DR. ULSH: It's now back in our court to say there's quite a difference or it's not a problem.

MR. STIVER: Just one last thing. In our interviews at Simonds Saw last year, most of the workers indicated that they pretty much stuck with a job. They didn't move around. It took some skill to learn --

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: That's for Simonds?

MR. STIVER: Yes, at least for Simonds.

MEMBER MUNN: Some do, some don't.

CHAIRMAN GRIFFON: Yes, right.

MEMBER MUNN: Others they specifically say we moved around --

CHAIRMAN GRIFFON: Now, 149.4, I think I can take the highlighting off this. It says it's transferred to Wanda's Procedures.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Just as long as

it doesn't get lost.

MEMBER MUNN: We lose as many things as we can, of course.

CHAIRMAN GRIFFON: And I'll add in the words, Wanda's Procedures.

MEMBER MUNN: Make it very clear.

MR. KATZ: So, what number is that?

CHAIRMAN GRIFFON: Make blame clear.

MEMBER MUNN: Yes, please do.

CHAIRMAN GRIFFON: 149.4.

MR. KATZ: 149.4.

CHAIRMAN GRIFFON: And it's a global issue under TIB-17 it says.

DR. MAURO: Yes, yes.

MR. KATZ: So, do we already have that on our agenda, John or Wanda? If not, I'll put it there so that we don't lose it.

DR. MAURO: Let's make sure. Yes,

this is -- we discussed this many times, and I think we've agreed with -- I know Jim was at one meeting, where we talked about particles depositing, and that this is a recurring discussion, you know. And I think that in concept, I remember one meeting where we agreed in concept when this might be a problem.

But we're waiting -- we're really waiting on the global response. How are -- and what is NIOSH's position related to, when do you factor in the possibility that a person may have had a particulate deposition on the skin, face, whatever? And you should factor that into the skin dose. I think we're still uncertain on that.

MR. KATZ: Yes, I think you're waiting for Godot there, maybe.

MR. HINNEFELD: We'll see where we can go with it.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: This is -- I think it's a uranium plant, or a uranium laboratory. So, you're not dealing with any hot particles, but by and large uranium plants early on didn't have exit monitoring either. So, it was handled like a metal. And so, very many uranium plants had opportunity for essentially unidentified skin contaminations or exposures. That's how this one falls.

MEMBER MUNN: At this point, I can only say Procedures has had no communication from Godot.

(Laughter.)

CHAIRMAN GRIFFON: That's why we gave it to Procedures.

MEMBER MUNN: Thank you so much.

CHAIRMAN GRIFFON: It's in good hands.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: All right.

MR. KATZ: I'm going to follow up with Tim a little bit on this, though. See if -- what the path forward is.

CHAIRMAN GRIFFON: All right, 149.5. This is the tiered coworker model rather than the one-size-fits-all 95th.

DR. MAURO: Yes, I have this in front of me, the full write-up. This has to do with the fact that this person was the nurse, as I mentioned earlier. And so, we have like a mixed bag here. In some cases, we feel that it looks like the method overestimates the dose. In other places, we feel that it underestimates.

For example, the very fact that this claimant is a nurse, this is what this last comment has to do. We've just questioning whether it goes back to what we said before, whether you would use the upper-

bound 95th percentile for a person that was not on the operating floor.

So, we're a little bit schizophrenic here, but I think it's still legitimate to raise the question. You know, if you are going to use the 95th percentile, we have these questions regarding correlation and uncorrelated.

The question then next tier is, well, would you -- what do you do about a nurse who probably wasn't on the operating floor?

MR. HINNEFELD: I'd have the same comments I made earlier.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: I really, really hate to make too strong a judgement based upon job title because we rarely know specifically what a particular job involves, and in terms of where their presence is at the workplace.

DR. MAURO: Right.

MR. HINNEFELD: And it's not always that often that you have good information about jobs anyway.

DR. MAURO: Well, you could see the dilemma we ran into in the blind dose reconstruction. You recall on the first case where we were doing the -- I think it was Portsmouth, where we -- where, when we ran it, we followed -- we used the 50th percentile for the coworker model, and not -- as opposed to the 95th percentile.

And I used -- when I did my hand calc, I used 95th percentile. So, there seems to be a bit of ambiguity regarding -- I think you have a procedure that talks about when the -- for external now, when do you use the upper end, and when do you use the geometric mean, and when do you use ambient. There's a procedure out there that talks about that.

Here's a place where you could see different dose reconstructors may very well make different choices. In this case, the decision was made to go with the 95th percentile. I could very well see another person saying, you know, this person's job description is such that I would feel more comfortable going with either ambient or geometric mean.

So, here's a -- I think a perfect example of where you could run into a little bit of inconsistency on how things are being applied.

MR. SIEBERT: Well, John, this is Scott. I just want to point out this is a one-size-fits-all TBD, so the dose reconstructor would not be making that decision.

DR. MAURO: Oh, is that right? So, if we look at Bridgeport Brass -- I didn't

know that you picked -- that's across the board 95th percentile, as opposed to giving a choice. Because very often, you do provide a matrix where you leave a little bit of judgment whether you want to use the upper bound or the median.

You know, I actually have it here. Let me take a look at that.

MR. STIVER: I think it's TIB-14, just to give you some guidance to that.

DR. MAURO: Is that? Okay.

CHAIRMAN GRIFFON: Well, that was the initial question here, right? In that finding, NIOSH will further consider the applicability of a tiered versus coworker model versus one-size-fits-all 95th. You're of a position that you think it's applicable in this case that you should use the 95th percentile. Because you don't know the jobs enough.

MR. STIVER: We don't know the granularity to really look at people.

MR. HINNEFELD: I mean by and large, with AWE you have more or less specific information, and you do what the -- I think for -- for an AWE, since you tend to fall into this lack of information, or not -- less specific information, our tendency is to write one-size-fits-all models, and to make them conservative so that we won't underestimate anyone.

Of the selecting 95th, you know, the criteria for 95th, 50th, and ambient coworker description for -- we have a DOE site. You have a sufficient amount of overall data that you build coworker models to apply to people who you don't have monitor records for. In that case, there are a set of criteria, which may in fact introduce ambiguity, which is a completely different

discussion than where we are, about when do you pick 95 and when do you pick 50th.

Those are coworker instructions by and large. As a general rule, our AWE sites are one-size-fits-all. Let's just not underestimate anybody, and let's not make too fine a distinction on places where we don't have very good information.

CHAIRMAN GRIFFON: Yes. That last one that we were discussing where you had badges hanging, I forget what site it was. Aliquippa?

MR. KATZ: Yes.

CHAIRMAN GRIFFON: I mean I'm guessing that there wasn't a whole lot of monitoring data there. You had some hanging badge data.

MR. HINNEFELD: I think, yes, that was a one-size-fits-all model.

CHAIRMAN GRIFFON: No, no.

MR. HINNEFELD: Now, was it done correctly or not?

CHAIRMAN GRIFFON: In that case, you assigned 50th, though. That was the whole issue there.

MR. HINNEFELD: Yes. I think there's a legitimate question. Should we be using 50th or not in a situation where we have that amount of data? And in fact --

CHAIRMAN GRIFFON: If it was always the 95th, then --

MR. HINNEFELD: Yes, yes. And I have to go back and check because I'm not exactly sure which dose component we were talking about. I mean there was some discussion. We've had a fair amount of discussion about dose from deposition of suspended airborne, you know, uranium deposition.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And that's -- we've given you -- at least in one of these, we had a lot of discussion to that, which is a pretty small fraction of the dose someone is going to receive in a uranium plant because it's going to be direct radiation.

And so, I think we need to take a more careful look at what the actual findings were, and what component of dose is being described before we draw too many -- too many judgments here.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Just to confirm, I did check the Bridgeport Brass, and you're correct, Scott. It's a one-size-fits-all 95th percentile. And so, the option was not granted here for a judgment to be made.

MEMBER MUNN: Okay.

So, unless you're prepared to say yes, we're all in agreement, and let's close

it, you've just gotten a preview of our written response.

CHAIRMAN GRIFFON: Right. I think we leave it as a preview though, because I think you have -- I want you guys to reflect on the consistency of that one versus the previous one that we just discussed. Hopefully, if we reconvene soon enough, we'll all have these things fresh in our minds.

MR. KATZ: Can we take a comfort break?

CHAIRMAN GRIFFON: No, we're plunging right though. Yes, of course. All right, we're -- let's see. That does wrap up 149. So, does that wrap up 149?

MEMBER MUNN: On to 150.

CHAIRMAN GRIFFON: Yes. I just want to make sure. Yes, so, okay, let's take a ten-minute break, and we'll start back at 1:50 -- I mean with case 150.

(Whereupon, the above-entitled matter went off the record at 3:17 p.m. and resumed at 3:29 p.m.)

CHAIRMAN GRIFFON: We're on the home stretch, everyone on the phone. John, you there?

DR. MAURO: Yes, I am, and I had a chance to read the case. So, I can help out a little bit.

CHAIRMAN GRIFFON: Awesome. And Scott --

MEMBER CLAWSON: That'll help, John.

CHAIRMAN GRIFFON: I hear Brad. Is Scott on there too?

MR. SIEBERT: I'm here.

CHAIRMAN GRIFFON: Okay, great. We're on number 150.1, and this one is an SC&A action.

MR. FARVER: Yes, basically where

we left this is NIOSH will provide a response based on the review. They provided a response. It says, TBD is currently being revised to incorporate assessment documented in Special Exposure Cohort Evaluation Report. The revised methodology combines the intake estimate at the start of the residual period, based on the average of the general area air samples collected during the operational period.

And then they give the resulting intakes. So, basically, they're going to modify the TBD. Is that pretty accurate, to modify the TBD?

MR. HINNEFELD: For which one?

DR. MAURO: Simonds Saw.

CHAIRMAN GRIFFON: Simonds Saw.

MR. HINNEFELD: Yes, I mean there's -- we'll have to because there was an addition of a Class in February. And so,

there will have to be a modification for --

MR. FARVER: Okay.

MR. HINNEFELD: -- the Site Profile.

MR. FARVER: Reviewed it. Have no concerns with that response. So, we can close that one.

CHAIRMAN GRIFFON: Okay. I knew we'd close one. 151.1, this is another one of those effects of things done prior to TBD-6000.

DR. MAURO: Right. This is a case where OTIB-4 was used. If you remember a long time ago, that was a bounding approach, and to -- for AWE facilities, which were only used for the sake, purpose of denial, which in fact is what I believe has happened here. Yes.

So, the outcome here is that they used OTIB-4, and they denied. There really is no concern. And some of the comments in here

I'm looking at have long been resolved in other venues. So, I mean we can go over each one if you'd like, but --

CHAIRMAN GRIFFON: Well, John, from the last response though, what does that mean? NIOSH will look up -- look at the response in TBD-6000 Work Group, and determine the effect on this case and review potential effects on DRs done prior to TBD-6000 implementation. What does that mean? See the response in 11/8?

DR. MAURO: Yes. I am looking at the report, and just correlating the comments with the write-up.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Yes, this is OTIB-4. Give me one second. Oh, okay, all right. We're going back a ways here. There was a time during the residual period where we were concerned that, with two -- two issues. One,

that the way in which NIOSH modeled the buildup of radioactivity on surfaces. This is the operation and on surfaces was -- was fundamentally flawed.

We were wrong. It's good. This deposition velocity approach, where you assume that the airborne particulates, whatever those levels are, are settling at the -- at this settling velocity 0.00075. I think it's per day. I'm not sure of the -- per second, per second. And it accumulates for a year.

We were concerned that that approach doesn't work, but it turns out after reviewing the Adley Report, we agreed that that approach is okay.

So, this comment that we have, the first comment at 151.1, really goes toward, we were concerned at the time that that approach doesn't work well. We now believe it does. That is in estimating to build up on surfaces.

So, I mean --

CHAIRMAN GRIFFON: Well, in that first comment though, SC&A was suggesting that they use the Adley paper, right?

DR. MAURO: Right. And it was in fact the Adley paper that convinced us that approach works.

CHAIRMAN GRIFFON: Right.

DR. MAURO: In other words, I don't know when --

CHAIRMAN GRIFFON: I think the other question is asking, does TBD-6000 use the Adley -- I mean is that model --

DR. MAURO: That was how TBD-6000 was confirmed. In other words, when we reviewed TBD-6000, we expressed this concern about how you are predicting what might be on surfaces. And one of our suggestions at the time was why don't you look at the Adley paper, where they actually measured the

deposition accumulation rate at a Hanford metalworks facility, and to see if in fact the approach with -- where at this facility, Hanford facility, where they measured the airborne concentrations of dust, they measured the amount on surfaces. They measured the rate in which it accumulated.

David Allen wrote a White Paper, to say, listen, I think we're okay with the TBD-6000 approach. This is one of our criticisms of TBD-6000. And he came back and did these calculations, and wrote a White Paper, and it turns out in fact that's true. That is, the Adley paper in fact confirms this generic approach that NIOSH is using, which we found originally suspect: the deposition rate, for a variety of reasons. But the data from Adley show that no, that approach works.

CHAIRMAN GRIFFON: Yes, I understand all that. At least that is your

position on the --

DR. MAURO: Well, that was our position, yes.

CHAIRMAN GRIFFON: -- Adley model. But the part I don't understand is I thought we were asking here for NIOSH to consider cases done before TBD-6000, which would use the Adley approach. There was another method used. Now, am I misunderstanding that?

In other words, is the approach used prior to the incorporation of TBD-6000 and the Adley model, was that sufficient? Was that claimant-favorable enough for -- or isn't that what we're asking?

DR. MAURO: Yes, and this is -- and that's OTIB-4.

CHAIRMAN GRIFFON: Right.

DR. MAURO: Right, and --

CHAIRMAN GRIFFON: So, the case was done --

DR. MAURO: -- that was even more conservative.

CHAIRMAN GRIFFON: So, that was more conservative than TBD-6000?

DR. MAURO: Yes.

CHAIRMAN GRIFFON: So, you found that out. So, in that case, I think we can close this item.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Okay, okay. That's what I didn't understand. All right.

DR. ULSH: 151.1, is that --

CHAIRMAN GRIFFON: I mean that was a NIOSH action item, but it sounds like SC&A's done. John is satisfied with it.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Yes, okay.

DR. MAURO: Yes, OTIB-4 is bounding. The only time we had concern in the past with OTIB-4 was that it was used as a --

and they ended up compensating people. And as you recall, that was a concern.

CHAIRMAN GRIFFON: Yes, yes.

DR. MAURO: And that's the reason for TBD-6000, to deal with that problem. So, this actual case must go back a long way, the very fact that they used OTIB-4.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Very conservative. In effect, conceptually visualize that you have a site where you're working with uranium. They're assuming the default dust-loading throughout the facility is 100 MAC, which is up there. And the materials settling out, that would be the airborne inhalation exposure; right off the bat, that's certainly bounding.

I can't imagine many sites having higher than that chronically. Then the activity on surfaces -- I know you guys want

to go home, right? Then the activity on surfaces building up from the settling. Our concern originally was, well, that approach to modeling the buildup on surfaces is not -- even though you started with a very high concentration in the air, the way in which you predicted what fell out may not be bounding, but it was demonstrated. Yes, that approach does bound it.

So, in this instance, where they use OTIB-4, it certainly is a bounding approach, and still, they came up with Probability of Causation that I believe was 38 percent. Let me see what the number is. Yes, 38 percent.

So, yes, I can't see having a problem here.

CHAIRMAN GRIFFON: We close. And thank you for filling that radio silence, John. I was just typing up everything you

said. We weren't looking for more explanation. But thank you.

MEMBER CLAWSON: Mark?

CHAIRMAN GRIFFON: Yes?

MEMBER CLAWSON: Mark, this is Brad. So, I kind of got lost in this. Well, this has actually started out as OTIB-4?

CHAIRMAN GRIFFON: Right.

MEMBER CLAWSON: Before they came up with OTIB-6?

CHAIRMAN GRIFFON: TBD-6000.

DR. MAURO: TBD-6000.

MEMBER CLAWSON: TBD-6000. So, this one -- this one is NIOSH's -- or SC&A is saying that this -- this was done right?

CHAIRMAN GRIFFON: This earlier approach was more claimant-favorable.

MEMBER CLAWSON: Okay.

CHAIRMAN GRIFFON: And the only place they got into trouble with this was

where they actually compensated some claims using TIB-4.

DR. MAURO: Right.

CHAIRMAN GRIFFON: But for this purpose, it was higher numbers than TBD-6000 would've generated, and therefore, we have no further concern with this. So, I'm saying it can be closed.

MEMBER CLAWSON: Okay, I was -- I kind of got --

CHAIRMAN GRIFFON: I was a little lost, too, Brad.

MEMBER CLAWSON: Okay. I'll go back to quiet then.

(Laughter.)

CHAIRMAN GRIFFON: Okay, 151.2.

MEMBER MUNN: I was trying to make a great effort to get on my database to see where we were with TIB-9, and whether we had in fact received a White Paper. But I have

done something naughty, and security has told me that I can't get back on. So, again, until I've logged back off and logged back on again.

So, I'm not going to do that. I will just tell you that I can't respond to you with respect to the White Paper. Does NIOSH know if that White Paper has been provided? I don't even know.

MR. HINNEFELD: I don't recall, but let me see what I can find here.

CHAIRMAN GRIFFON: I am officially removing this from our list though, but I'd like Ted to capture it as a -- it says, Procedures Subcommittee.

MEMBER MUNN: Yes. This is in our ballpark.

CHAIRMAN GRIFFON: Let me just -- so Ted can capture it. 151.2, and it's about NIOSH developing a White Paper regarding the

approach for ingestion, TIB-9. This will be reviewed as part of TIB-9 review.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Procedures Subcommittee.

DR. MAURO: This has been resolved in principle at one of the meetings.

MEMBER MUNN: I thought that it had been, and I had the funny feeling that we might even have the White Paper, which is why I was trying to get back into our database.

DR. MAURO: I don't think -- in essence, it's quite simple. We were concerned that the ingestion pathway is effectively, when all is said and done, after all the numbers are crunched, the ingestion pathway presumes that the daily ingestion rate is 0.5 milligrams per day, on that order.

We felt, from looking at the literature, that 50 to 100 milligrams per day

is more appropriate. Jim and I had quite a discussion on this at the Procedures Subcommittee on TIB-9,and it was agreed that if the site was generally cleaned up and that you're not kicking around a lot of uranium on the ground, the 0.5 milligram approach per day is probably okay.

But if you're at one of these old facilities, where the -- the layers of uranium oxide dust on the surface is actually -- you could see it, then -- then the 50 or something substantially higher than 0.5 milligrams per day is probably appropriate.

So, that's how we converged on this. So, in this particular case, I believe the exposure was during the residual period, and the question that's before us is, where does this play, this facility and it's status, fall in that continuum?

Is it more like a site in the

residual period that has been cleaned up, and therefore there's not that much residual uranium? Then the OTIB-9 approach works. But if it's still a filthy place with lots of residual uranium on surfaces, then that 0.5 doesn't work anymore. It's no longer bounding. That's the point. Although keep in mind though that the ingestion dose never really contributes much to dose anyway. It's almost like a tempest in a teapot.

MEMBER MUNN: Yes. It was clearly a site-specific issue in this particular case, and I just simply can't remember whether we have a White Paper on it, or -- we did come to a meeting of the minds.

DR. MAURO: Yes, but I don't think there was any white -- a White Paper on this matter ever issued.

MEMBER MUNN: Oh, I'll have to verify that.

MR. HINNEFELD: Wanda, I found -- well, I found OTIB-9 estimation of ingestion intakes in the database, but there are no findings associated with them.

MR. STIVER: It sounds from John's discussion, it resolved in a Work Group in principle, but never made it to a White Paper.

MEMBER MUNN: Yes, I think so, and we may need to just put something in the database, Procedures database.

DR. MAURO: Stu, that's my recollection of the discussion, and how we sort of achieve closure in principle. But right now, TIB-9 just goes to the -- this multiplied 0.2 -- 0.2 times the air concentration gives you the daily ingestion rate, which effectively converts to a very low, 0.5, on that order, milligram per day.

I believe Jim agreed that if it was a really filthy place, that number is

probably too low. And I think that's how we left it, and we really haven't gone much further. As it applies to this case, it's really irrelevant.

MEMBER MUNN: Yes. I'm thinking, can be closed for this purpose.

CHAIRMAN GRIFFON: This purpose. It's being transferred to your group, yes. I'm taking the yellow off of it.

MEMBER MUNN: Thank you.

CHAIRMAN GRIFFON: I have 152.4. Looks like a fairly simple -- I was being very kind when I -- the way I wrote this, NIOSH will consider adding. I think this was the idea it wasn't clear to the reader that you had incorporated both photon and tritium dose when you reported it out in the DR report. Am I understanding that correctly?

MR. FARVER: Well, this is where they report their tritium doses with their

external doses.

CHAIRMAN GRIFFON: Right.

MR. FARVER: And there is a method that NIOSH uses to separate out the tritium doses from the -- from the photon doses. But that method really isn't documented anywhere. So, that kind of is the concern.

CHAIRMAN GRIFFON: So, it's further than just reporting it out in the DR report. He says, method is not documented. That's a different thing. I thought it just was that it wasn't clear in the DR report that --

MR. FARVER: Go back to the case.

DR. ULSH: Looks like Site Profile. Would we consider adding an explanation in the Site Profile document.

CHAIRMAN GRIFFON: Yes, Site Profile document. Yes, okay. I was -- summary finding says the DR report does not

account for all the -- okay. All right, so, you're probably right, Doug. It's not clearly explained in the Site Profile.

MR. SIEBERT: Actually, this is Scott, I do want to point out yes, we're considering that for putting in the Site Profile. However, the DR guidance document, which as you know we're putting into every claim file as we do it, there is a comment in there about tritium doses typically included in both the deep and shallow doses recorded.

So, there is information available for the dose reconstructors discussing this. It's just not in the TBD yet.

CHAIRMAN GRIFFON: And the --

DR. ULSH: Well, given that this is probably going to remain an open item until the TBD is changed, right, Scott, do you have an estimate on -- I mean is there an estimate on when it going to be incorporated into the

TBD?

MR. SIEBERT: That's -- I don't know off the top of my head what's going on with the SRS TBD.

MR. KATZ: Given what Scott just said, do you really need to keep it open?

CHAIRMAN GRIFFON: Well, I don't --

MR. HINNEFELD: If it's a dose reconstruction -- if the Savannah River dose reconstruction instructions or guidance for dose reconstruction for SRS, if that includes it and that's being placed in the files now going forward, I mean is it really needed? You can keep this open for the Site Profile.

CHAIRMAN GRIFFON: I don't think we need it. The question is making sure the comments don't get lost. It's easy when it's transferred to Procedures.

MR. FARVER: You're saying place

in the case files now. Is it going to be in the files that we get to review?

MR. HINNEFELD: Depends on how old the case is for review.

MR. FARVER: That's kind of what I mean, because we're going to come up with the same issue the next time, where we can't match the HPAREH dose with the tritium doses that are given in the DR.

MR. SIEBERT: Well, that won't --

MR. FARVER: Well, it comes down to whether --

MR. SIEBERT: If it's in this guidance document or whether it's in the TBD, that's not going to change.

MR. FARVER: No, no. I'm saying if these guidance documents aren't included in the files that we received to review, then we're not going to know that it's there. We're going to write it up again.

MR. SIEBERT: I agree, and we've run into that numerous times.

MR. FARVER: Okay.

MR. SIEBERT: And we just close it again.

DR. ULSH: Yes, that's a separate issue.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: Right. But how do we keep track of the -- it's an action item for the SRS Work Group, I guess. Ah, forget that one. Can't it go to Wanda's group somehow?

MR. FARVER: Is the guidance document that contains this discussion about how to separate out the tritium doses, is that available on the O: drive somewhere that we can see?

MR. SIEBERT: Sure. It's in the tools folder for Savannah River tools.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: But how to -- I mean you said the guidance document gives an explanation if the doses are together. It doesn't really explain how to separate them out, does it?

MR. SIEBERT: It doesn't specifically tell you step-by-step how to separate, no.

CHAIRMAN GRIFFON: Right. So, the method that Doug is talking about, the method is still not there, right?

MR. STIVER: Is the method in the tool that's on the O: drive, then?

CHAIRMAN GRIFFON: There's no method at all. Scott, that was to you.

MR. STIVER: Scott, is the method that you're referring to again in the tool that's on the O: drive?

MR. SIEBERT: Oh, no. It would

not be tied into a tool. It's something the dose reconstructor would have to do by comparison. I mean, the information that they have to look at is already in the guidance document. The specific line-by-line -- you know, it's basically just a step of, if there's tritium dose, you need to compare it to the -- compare it to the HPAREH dose and subtract it out. It's not much of a method, really.

MR. STIVER: Okay, okay. So, it's clear to the reconstructor what they have to do.

CHAIRMAN GRIFFON: All right, I mean I have no problem closing this out. I just don't want the comment to be lost from the Site Profile comment. You know, the fact that --

MR. HINNEFELD: I've got a question for Scott. Where would these --

where is this instruction found? I mean this is available to dose reconstructors. I understand that. But where do they look to find it?

MR. SIEBERT: The dose reconstructors, the guidance documents, are in the tools folders, along with the tools for a site. So, for Savannah River, the Savannah River DR guidance document is in the same folder as the Savannah River tools.

MR. HINNEFELD: Okay, so that folder is -- that's something the dose reconstructor looks at from your side?

MR. SIEBERT: Correct, and then a copy of the latest version of that is also submitted along with the claim for SC&A or -- or whoever is --

MR. HINNEFELD: Yes, there's a claim file now. I mean that was started a couple years ago.

MR. SIEBERT: Right.

MR. HINNEFELD: But I mean where -- I'm still trying to figure out where does your dose reconstructor look, physically? What file or what drive does he go to find that tools thing?

MR. SIEBERT: That's on our O: drive on our server, where we keep all the DR tools.

MR. HINNEFELD: That's on your server. So, that's not necessarily replicated over to our side, or do you know?

MR. SIEBERT: That I can't tell you. I don't know how they keep you guys up to date on our tools.

MR. HINNEFELD: Okay, I'm afraid I don't know either, but there's probably people who do know on our side. I'm just not one of them.

CHAIRMAN GRIFFON: Well, let's --

MR. HINNEFELD: Well, I think it means they're being provided now. So, anything we look at now that has been done in the last couple years, it'll be there in the folder.

MEMBER CLAWSON: Will it? This is Brad. Will it be in the folder then?

MR. HINNEFELD: Yes.

MEMBER CLAWSON: I guess we're coming back to the same thing we were talking about earlier in the morning, about being able to reconstruct these doses when the -- there's got to be a method that everybody is all on the same, and what I hear from Scott, and correct me if I'm wrong, is that it will now be in the folder, and it'll show how this has been done, or is this just something that the dose reconstructor does?

MR. SIEBERT: The DR directions are -- or guidance documents are put into the

folders. So, every file for the last couple years has had this included. I'm also looking through, and I don't have the page, but the present TBD -- and Mutty's helping me out with this. So, Mutty, correct me if I'm wrong. The correct version of the SRS TBD actually does have a discussion on the resolution of photon, neutron and tritium dose.

So, this actually may have already been put into the TBD to give it the information.

CHAIRMAN GRIFFON: Well, if that's the case, then that answers -- that resolves my issue.

MR. SIEBERT: Yes. Hard copy records do separate; recorded whole body dose; photon, neutron, tritium. It's section E.4.1.1. There is a discussion on the fact that the hard copy records do go into the separation, whereas HPAREH does not.

So, that's section E.4.1.1. It's called: “Resolution of Photon, Neutron and Tritium Dose.” And I think that actually, Doug, that would close this out because it's in there.

MEMBER CLAWSON: Okay, that helps me out. I was a little bit confused there. I kind of got the impression that they just -- they just knew to do it, but there was no real direction there, and I just wanted to make sure we had some clear direction that we were going.

MR. SIEBERT: Right. I can understand that. Let me see. I'm still getting more information. That's page 243 of the TBD, the present version of the TBD.

CHAIRMAN GRIFFON: You want to take a quick glance at that, and we'll move on if one of you guys wants to look at it. I think we can close it out.

MS. K. BEHLING: This is Kathy Behling.

CHAIRMAN GRIFFON: Kathy, go ahead.

MS. K. BEHLING: Yes, I was just hopefully going to answer Stu's question regarding the DR tools. I believe on the O-drive, under -- there is a claims folder. Under the claims folder, there is a DR folder, and then under that particular folder is the DR tools. Then it lists the general tools, and all the site-specific tools.

I'm just not sure how often that is updated, but the last time I checked, it seemed to be quite up-to-date. So, that's where the DR tools reside on the O: drive.

MR. SIEBERT: Yes, and we do update that as we find technical issues, or if we get something into the TBD, we'll usually pull it out of the guidance document so that

it's not replicated.

MR. STIVER: Looks like they were updated about two years ago, 2009, from what I'm seeing here.

CHAIRMAN GRIFFON: I'm going to close.

MR. SIEBERT: The one I'm looking at right now was updated earlier this year.

MR. STIVER: Okay, maybe. I'm looking at our side of it.

CHAIRMAN GRIFFON: To get back to 152.4, I've right now written it for 7/15/2011, "NIOSH included in Site Profile document section E.4.1.1, and no further action is required." So, if SC&A is okay with that, I think we should just do a quick check. We don't need to carry this over to another meeting, if you can just look at that paragraph.

MR. FARVER: Fine.

CHAIRMAN GRIFFON: Okay. And I'll move ahead, but we'll come back if you have heartburn with that. All right, 152.6?

MS. K. BEHLING: I believe maybe I can address this finding. This is that finding that we've identified over and over again, with regard to the way NIOSH approaches missed fission product doses, and they have what they call a radionuclide chooser program, that selects the radionuclides at the highest dose to the issue of concern.

And what we've always questioned is what about the -- the dose component from all of the other radionuclides? And what NIOSH has done, and they've provided us all of the back-up data for this, is they have taken the actual whole-body count results for this particular case it was a little bit of cesium in the whole-body count results. And they plugged that value into IMBA and calculated

internal -- or an intake, inhalation intake, and then they took that inhalation intake, and they went to their OTIB-54 workbook, and the OTIB-54 is fission and activation product assignment for internal dose related to gross beta and gross gamma analysis.

And they calculated the dose using this OTIB-54 methodology, and I did look at all of the data they provided. Clearly, it shows that by selecting the radionuclide chooser, that highest radionuclide alone, your dose is higher than when you go to this more refined approach in OTIB-54, and you select all the various radionuclides that you might expect to see in that environment.

And so, I do agree with -- with their approach of using these OTIB -- or the radionuclides chooser as a more conservative approach. And I might also add --

CHAIRMAN GRIFFON: Well, they

didn't -- let me just be clear, Kathy. They didn't really choose the chooser; that was just an approach that was used before they developed 54, correct?

MS. K. BEHLING: Correct, correct.

CHAIRMAN GRIFFON: So, now the new, more refined approach results in lower doses. Did you evaluate across the board, or was it just for this case?

MS. K. BEHLING: Yes, that's what I -- yes, I was about to say. At least in this particular set, there are two additional findings, two additional cases, case 153, our next case, and finding 153.8.

Same situation. They did the same type in their -- they used actually MDA for cesium-137 because there was no real values assigned in the whole body count, and still based on that approach, the dose was actually higher using the chooser.

The same thing with, let's see here, case 155, finding 155.7. Exactly the same type of approach used, and I verified the IMBA runs and all of the OTIB-54 runs, and I do agree with NIOSH on the --

CHAIRMAN GRIFFON: What was that last one? 153.8 I got.

MS. K. BEHLING: Yes, 153.8 and 155.7.

CHAIRMAN GRIFFON: Okay, then I'll go ahead and also close those out as no further action when we get there, if we get that far. Or even if we don't, I'll go ahead and clear those out. But let me just -- the only other question I have, this is a little bit of a theoretical question, but have we reviewed OTIB-54?

MEMBER MUNN: Oh, my yes.

MR. KATZ: Yes.

CHAIRMAN GRIFFON: But I mean have

we closed it out? I don't know where we stand.

MEMBER MUNN: Almost all of 54 is closed out.

CHAIRMAN GRIFFON: Because we're assuming that 54 is correct in this analysis. You know you're saying the chooser was always more favorable than OTIB-54, but in closing these out, we're saying -- we're acting as if OTIB-54 is the truth.

DR. MAURO: Mark, OTIB-54, is that the one dealing with beta-gamma emitters in urine associated with reactors?

MS. K. BEHLING: Yes.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Okay, we reviewed that. And where we came out was there was a set of four or five different conversions that if you know the gross beta-gamma in the urine, you can make certain assumption what the --

the question is what is the isotopic mix on those radionuclides? And they differ, if would differ, depending on the kind of reactor you use.

Joyce Lipsztein reviewed that. She found favorably on the mix associated with each of the different types of reactors. There was one issue, however, that remains I believe still unresolved. And when you don't have information on the type of reactor you're working with, or it's a -- it's not captured by the four categories.

There's a default mix that's recommended to be used that we had a problem with because we felt that mix that was selected was not bounding. So, we were almost home on OTIB-54, but not quite.

Now, within the context of this particular case, if they use OTIB-54, one of the mixes that we already reviewed and

approved, then I think this issue goes away. But if they use the generic mix, that's sort of like a default when you don't have information, we still have an issue with that.

DR. ULSH: And on that topic of the generic mix, I can tell you that I've been in discussions with ORAU just over the last week or so. We're preparing further analysis on that.

CHAIRMAN GRIFFON: Kathy, do you know if these three that you mentioned were generic, 152, 153 and 155? Would they --

MR. HINNEFELD: Well, they weren't done with OTIB-54. They were done with the chooser.

CHAIRMAN GRIFFON: Right, but were they a situation where you have one reactor though, or were they a situation where they would have -- you wouldn't know? What sites were they?

MR. HINNEFELD: Savannah River.

CHAIRMAN GRIFFON: All Savannah River? So, you could have --

MR. HINNEFELD: Well, other reactors were Savannah River were production reactor --

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: I think those were all pretty -

CHAIRMAN GRIFFON: Similar mixes.

MR. HINNEFELD: I forget what the mix -- I forget what the things were on the -- what the possibilities were.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Savannah River reactors, at least from my experience, were draining fuel with the uranium target.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And then you would have -- essentially, the target was one in the

same, and then there were a number of reactors that were bad reactors. I forget. I forget how the categories were in OTIB-54.

CHAIRMAN GRIFFON: I mean my sense is we're okay on all these three. I just want to be --

MR. HINNEFELD: Well, and realistically, I mean there's the OTIB-54 issues that are not resolved yet. I mean there will be a resolution process and then follow up from that resolution, which is sort of independent of these three specific findings. I mean this sort of kicks these three findings, any kind of consideration, into OTIB-54 procedures, in a Procedures Committee.

Then any remedy of any changes that happen from OTIB-54 from that process --

CHAIRMAN GRIFFON: Would go back.

MR. HINNEFELD: -- would catch

these cases as well.

MEMBER MUNN: Yes. They've been worked very heavily in the past few months.

CHAIRMAN GRIFFON: Yes, I think we're okay with closing them out for this -- purpose of our Subcommittee's work. So, I'm just moving ahead and getting those other ones that Kathy mentioned. Give me a minute.

Okay, and we're back to -- where are we now? That was 152. So, 153.1. Does that catch us up here? This says NIOSH and SC&A to both further review.

MR. FARVER: Okay.

DR. ULSH: Wait, Mark.

CHAIRMAN GRIFFON: Yes?

DR. ULSH: Before we move onto that one, I noticed the tab 152 observation. There's nothing in the response column. Is there anything that --

CHAIRMAN GRIFFON: I think we

decided that we weren't even going to --

DR. ULSH: Close it then?

CHAIRMAN GRIFFON: I mean that might be a symbol on the answer. Was it reevaluated for Super S, or?

MR. SIEBERT: Give me a second here.

CHAIRMAN GRIFFON: It says it was, yes. I filled that column in saying it was reevaluated, assuming Scott confirms that. Do you want to look ahead to 153 while he's looking that up?

MR. SIEBERT: That is correct. It has been reevaluated and still non comp.

CHAIRMAN GRIFFON: Okay, 153.1 then.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: Doug?

MR. FARVER: The finding was basically that the 1982 less than 30 keV

photon dose was omitted. So, we looked at it, and yes, it was omitted. It should've been a very small dose, and from the response, I gather that they're not sure why it was assigned all 30 to 250 keV, and why the small portion was not separated out for that year.

CHAIRMAN GRIFFON: Right. But they say that -- yes, that's all in the response. The part I didn't understand was NIOSH and SC&A will review further.

MR. FARVER: I only had a chance to look at this one.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: Now, I look at it, but still the question is why did it happen? Do you want me to cut and paste here, or something? Don't know. I mean I --

CHAIRMAN GRIFFON: That's okay. That may get in their aggregate analysis of like QAQC progress.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: So, there's no further action then, right, that you can see?

MR. FARVER: I don't know what else to do.

CHAIRMAN GRIFFON: Right. I mean NIOSH agreed -- agrees the error occurred, and I guess we could've --

MR. HINNEFELD: 153.1, is that the number?

CHAIRMAN GRIFFON: Yes. All right, no further action on that one.

MR. SIEBERT: Okay, so it is closed?

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: Well, then I'm not going to say a word.

CHAIRMAN GRIFFON: We should've asked you first.

MR. SIEBERT: I agree whole-

heartedly.

MR. FARVER: And similarly for 153.2.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: For some reason, that year it just all got assigned into 100 percent 30 to 250 keV.

CHAIRMAN GRIFFON: See that Brant? We're closing all kinds of things. Okay, let's continue while we're on a roll. About 15 more minutes for those on the phone. Then we're done. I think we all have late flights, but I think by this time of day, we've kind of had enough of this. All right, 153.6?

MR. FARVER: Okay.

CHAIRMAN GRIFFON: NIOSH will review SC&A response. SC&A will review NIOSH response. Well, they provided something on 415, and I don't think you had time.

MR. FARVER: Right. I did have a

chance to look at it. You know, I still stand by our original finding that if you look at the criteria of OTIB-7, that based on the work location, classification and the laborer, and the fact that he had measured photon dose, it does meet the criteria in OTIB-7, and he should have had neutron dose.

And the only other thing I can say is if there was an issue about where the employee worked and the CATI report provided coworker information, and it was even stated in there this CATI report was provided by the spouse. She heard from one of his coworkers, Mr. X, that her husband had worked a lot in radiation areas, and Mr. X may be able to expand on the work history.

So, I mean the information was in there. If there as any kind of question, you could've always called up the coworker.

CHAIRMAN GRIFFON: Mr. X, yes.

MR. FARVER: So, anyway, I still stand by that that they should have assigned neutron dose.

MR. SIEBERT: Well, this is Scott. From our write up, I mean we still stand that it meets the requirements. If it doesn't assign, we shouldn't assign neutrons. So, we're kind of at an impasse here.

CHAIRMAN GRIFFON: You judge meeting the requirements by work location that you had? I don't have your response in front of me. I apologize.

MR. SIEBERT: Based on the fact that there's nothing to suggest routine assignments to a B line facility, which is where neutrons we would assume would be occurring.

CHAIRMAN GRIFFON: I'm sorry. You're fading a little, Scott. I can't hear.

MR. SIEBERT: I'm sorry. OTIB-7,

the facility specific direction for separation facilities has the following criteria, "Routine, more frequent than annual plutonium, bioassay monitoring and relatively high shallow dose to deep dose greater than two, and relatively little enriched uranium bioassay indicate that work on the FB or HB line."

That's pulled directly out of TIB-7, and what we looked at is there is no routing plutonium bioassay. The shallow dose, the deep dose ratio is not high, and there's no enriched uranium bioassay. So, it does not meet the requirements in OTIB-7 of assuming neutrons for that separation facility.

MR. FARVER: But for the dose reconstruction for those years, you assume he's an FB line. For the time periods we're questioning, '78 to '82, you go back to the -- your original dose reconstruction, and for '78

to '82, he's in 212 FB line.

MR. HINNEFELD: And that's -- what part of the dose reconstruction says that?

MR. FARVER: Oh, that's in the table where you list the areas and the time periods.

MR. HINNEFELD: Okay, for purposes of the photon split?

MR. FARVER: Yes, that table where you split the photons and the neutrons.

MR. SIEBERT: Oh, I'm sorry. Yes, I agree with you whole-heartedly. The original assessment put him in FB line. However, if you read in our most recent response, it says clearly, "A more accurate assessment of work locations would not have resulted in assignment of the 221 FB line facility."

Based on what I just said, the fact that there's not routine plutonium, high

shallow to deep dose ratio, and relatively low enriched uranium.

MR. FARVER: So, you changed the work areas?

MR. SIEBERT: Correct.

CHAIRMAN GRIFFON: Was the initial reasoning because it was more claimant favorable, or why didn't you initially use FB line? Or is that not clear?

MR. SIEBERT: I mean I can't get into the dose reconstructor's head right now.

CHAIRMAN GRIFFON: Right.

MR. SIEBERT: Presumably because it was claimant favorable at that time.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: And more accurate.

CHAIRMAN GRIFFON: I mean I could certainly see how Doug got to where he got. You know? Yes.

DR. ULSH: If I understand the

language in the DR, where it says he worked in FB line, then you should assign neutrons.

CHAIRMAN GRIFFON: Right.

DR. ULSH: And so, it's understandable to make that comment. That's reasonable. Given that the comment was made, and we have gone into more detail and determined that, "Okay, we used this to make a favorable split on photon energy, but if we look more closely at it, here's the criteria for OTIB-7 or whatever it was. Then we don't think neutrons should've been assigned."

MR. FARVER: What bothers me about this is, and this is supposed to be a best estimate, and this goes back to the question I asked last time at ORAU offices; how do we really know it's a best estimate? Just because the report says doesn't mean it really is. Because in this case, it clearly wasn't the best estimate if your work location can

change if you want to add dose.

CHAIRMAN GRIFFON: Right.

MR. SIEBERT: Well, another thing to keep in mind is OTIB-7 did not exist at the time this dose reconstruction was done.

MR. FARVER: Okay, but even your DR says that you're assigning -- you're assuming he's in this work location for this time period.

CHAIRMAN GRIFFON: So, if you assume that, the best estimate should've said -- should've included neutrons. Yes.

MR. FARVER: Correct, if those are your assumptions that you're going by. Right?

CHAIRMAN GRIFFON: I mean I would say if they got into the time they should've included neutrons, then maybe you can argue, Scott, that further looking at it now, TIB-7 would've changed their -- you know, we wouldn't have done it that way. That's the

way I would kind of look at it.

MR. FARVER: This just seems to keep reoccurring.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: The work location changes. When we talk -- when we bring up issues here, we'll go back and look closer, and say, "Well, no, it really wasn't that work location. It's this work location."

CHAIRMAN GRIFFON: Right.

MR. FARVER: And I don't know.

MEMBER MUNN: Well, I read this as saying that his job classification, his job type, could result in intermittent exposure, but not a chronic exposure. That would have been assumed -- I'm just reading the response there.

CHAIRMAN GRIFFON: Well, that's SC&A's. The 80's work location was the FB line, and it had intermittent -- jobsite

could've had intermittent exposure.

MEMBER MUNN: But it's intermediate.

CHAIRMAN GRIFFON: Intermittent, yes.

MEMBER MUNN: Yes, I'm sorry. Intermittent. That in itself seems to affect -- should affect the way the DR was done, it would seem to me. But in either case, we've got to --

CHAIRMAN GRIFFON: Yes, I don't think that has as much bearing on the fact of location.

DR. ULSH: In light of the fact that OTIB-7 didn't exist at the time of the dose reconstructions, any discussion of what OTIB tells you to do -- or OTIB-7 tells you to do, is kind of irrelevant.

CHAIRMAN GRIFFON: After the fact.

DR. ULSH: Yes. The question is

at the time the dose reconstruction was done, did we do the dose reconstruction in accordance with the guidance in place at the time?

CHAIRMAN GRIFFON: Right.

DR. ULSH: That I think is maybe the remaining idea.

CHAIRMAN GRIFFON: Yes. Would you say a real borderline PoC case?

DR. ULSH: That's a best estimate.

CHAIRMAN GRIFFON: Yes, it's a best estimate, but I don't know. Forty-five --

MR. SIEBERT: Forty-five percent.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: And our response, Scott, references OTIB-7.

MR. SIEBERT: Yes, as does SC&A's response to our response.

DR. ULSH: Okay, well, maybe we

need to take another look at our response, not referring to OTIB-7, and determine whether or not the guidance in place --

MR. SIEBERT: Yes, guidance at the time. Yes, okay.

MR. FARVER: What we were looking at was section 3.1, non-routine workers.

CHAIRMAN GRIFFON: Yes, but that's OTIB-7.

MR. FARVER: Out of OTIB-7.

CHAIRMAN GRIFFON: Yes, but I think it's kind of irrelevant. This wasn't even in place.

MR. FARVER: I don't know. I'd have to look and see the earlier -- and I don't see --

MR. SIEBERT: Well, I'm going to tend to say that the guidance at the time was probably somewhat ambiguous, which is why OTIB-7 was written.

MR. FARVER: Okay. Well, that still brings us back to you're assuming the work location is one place, but you didn't assign a neutron dose from that work location.

CHAIRMAN GRIFFON: Right. I mean it does seem a little funny that you would come back in your review of an -- in this audit, and say that, "Well, we're changing the work location. That's how we're answering this question." I mean --

MR. HINNEFELD: This dose reconstruction is three iterations. It was determined Super S for --

CHAIRMAN GRIFFON: Super S.

MR. HINNEFELD: And it's coming back to at least one other.

CHAIRMAN GRIFFON: Right. This is a reoccurring issue with the neutron. The work location stuff with neutrons seems to come up fairly frequently, yes.

MR. SIEBERT: This is work location specific.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: Well, given where we are now, I would propose that maybe Scott and I will sit down and talk this one over soon, and get back to you with a response.

CHAIRMAN GRIFFON: Yes, yes.

DR. ULSH: May very well say, "We're going to stick with what we've said and here's why." But I don't think we should be referencing OTIB-7 if that didn't exist. Maybe that'll change our response. Maybe it won't. I don't know.

MR. FARVER: All right, I think in our initial write up, we even acknowledged that it didn't exist, but the logic should still somewhat apply because if it -- like Scott says, if it wasn't in a TBD how to do this, it may have been formulating in the

guidance document somewhere, where it was officially produced.

MR. STIVER: What do you say about going back and doing some research on what was available?

MR. FARVER: But the logic should still apply.

CHAIRMAN GRIFFON: Right, right.

MR. STIVER: If you knew there was a potential neutron exposure on that particular work location, then claimant favorable, the benefit of the doubt in favorable of the client.

CHAIRMAN GRIFFON: Right. That's fine. Yes, I think you might come back saying that it might -- I mean I'm not trying to put words in your mouth, but NIOSH may determine that yes, a mistake was made here, and since then we've developed TIB-7, which would've changed our decision on work location.

DR. ULSH: Possibly.

CHAIRMAN GRIFFON: Yes, something like that. All right, we'll --

MR. HINNEFELD: It sounds to me as if it would've. It sounds to me that it puts this guy away from HB line. It's in TIB-7. TIB-7 was not available at the time this dose reconstruction was done, so the person chose a conservative photon dose and put it in the dose reconstruction -- in the table, and said, "Well, we'll just say he worked there."

When it was reworked, guidance had come out that said -- OTIB-7 had come out that said, "If people fail to meet these criteria, they weren't in HB lines."

CHAIRMAN GRIFFON: No, I think I --

MR. HINNEFELD: "Well, I can't use HB line in that photon mix."

CHAIRMAN GRIFFON: Because it

makes for an inconsistent -- yes.

MR. HINNEFELD: It sounds to me like that's what happened. Because this first was done in 2005, and the first rework was done in 2009, so PER. I'm thinking since this was in the 8th set, this had to be the 2005 version that was reviewed. I don't know for sure.

CHAIRMAN GRIFFON: Not sure, yes.

MR. SIEBERT: That is correct.

MR. FARVER: During that time period.

CHAIRMAN GRIFFON: That is correct. Scott said yes.

MR. HINNEFELD: So, I mean you've got the description of what happened, and the fact is that what we know today about locations and putting people -- and what's in OTIB-7, that being a fact, this thing isn't going to change today. It's done today in

accordance of what we feel like we know today.

CHAIRMAN GRIFFON: Yes, but the point goes back to any claims prior to TIB-7 may have this kind of issue.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: And would they all be captured on PER reviews or whatever? I mean that's --

MR. HINNEFELD: Well, that's a good question.

CHAIRMAN GRIFFON: I mean I think that's why we're examining it. Under Super S. They probably wouldn't have caught this.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: We don't want to assume, for reasons we all know about. That's the point. I think Brant has the right approach. If you can go back and talk it through with Scott.

DR. ULSH: Yes. I don't know what

the outcome of that --

CHAIRMAN GRIFFON: Yes, yes. I'm not saying you're going to change your position.

MEMBER CLAWSON: So, Mark, this is Brad. I'm on the phone --

CHAIRMAN GRIFFON: Don't even ask, Brad.

MEMBER CLAWSON: -- and I've caught bits and pieces of it. So, what's our path forward? I heard a little bit of Brant and Scott's path forward on it.

CHAIRMAN GRIFFON: Yes. Brant is going to -- Brant is going to work with Scott and reassess with the protocols in place at the time for this case. At the time when we reviewed this case, I should say, because it's gone through changes since then.

MEMBER CLAWSON: Okay, so this item will still remain --

CHAIRMAN GRIFFON: This remains a NIOSH action, yes.

MEMBER CLAWSON: Okay.

CHAIRMAN GRIFFON: Hold on, I'm just documenting this. Let's skip through. We might be through with 153. 153.7, we still have something here. Okay, let's do that one, and then I think we're almost done here, and we can wrap up after this.

MR. FARVER: Same issue, neutron dose.

CHAIRMAN GRIFFON: Oh, it is? Okay.

MR. FARVER: Yes, same thing.

CHAIRMAN GRIFFON: Let me just document that.

DR. ULSH: Wait, is that one that Scott and I need to talk to in the same context?

MR. STIVER: It's the same issue.

DR. ULSH: Okay.

CHAIRMAN GRIFFON: Because this is the missed neutron versus the -- yes. 153.8 I closed out based on Kathy's earlier explanation. I think we should probably stand now at this point, 154. I did -- I did make a change on 155.7, if you're documenting stuff for the one that Kathy raised, the chooser versus TIB-54, and I closed that out. But we'll pick back up on -- I'll leave off at 154, since it's late in the day.

Before we close out the meeting though, let's -- maybe we can talk about schedule a little. Now, I don't know. I mean it's mid-July. It seems obvious that we're not going to get progress before the Board meeting in August. But perhaps --

MR. KATZ: We could pick a date.

CHAIRMAN GRIFFON: The end of September? The end of September?

MR. KATZ: Yes, I would go ahead and pick a date in part because --

CHAIRMAN GRIFFON: And I would ask that not only as far as these actions, I mean we talk about these actions, but still outstanding is matrix 9 and -- you know. I think 9 we've started deliberating on.

MR. KATZ: Started.

CHAIRMAN GRIFFON: But 10, I think 15 through 15 -- or 10 through 14, I don't know how far SC&A is. Are you through 14 yet?

MR. KATZ: They're finishing on 14.

MR. FARVER: About halfway through 14.

CHAIRMAN GRIFFON: Yes. So, 10 through 13 anyway we have no response.

MR. FARVER: We've finished up with conference calls.

CHAIRMAN GRIFFON: Okay, so 10

through 12 are sort of at NIOSH to work on initial response. Is that right?

DR. ULSH: But I kind of earlier got the sense of the committee, or at least my sense, that the highest priority items should be the old ones, 7th and 8th. Finish those off.

CHAIRMAN GRIFFON: Yes, we want to close these out now, but then we do want to get to these newer ones because they're more relevant to what's happening now. So, we want to kind of catch up, I think.

Yes, so just to -- all I wanted to say was that just because we only mentioned a few actions today for NIOSH, there's still that backlog of work for the other sets that you can certainly be continuing on.

DR. ULSH: Have we finished up 7th and 8th?

CHAIRMAN GRIFFON: There might

also be a lot of low hanging fruit on those other ones that you can move quicker on. I don't know.

MR. HINNEFELD: In fact, we should look at 10 through 12 for AWE claims on our side, for people on our side and get some responses back on that.

CHAIRMAN GRIFFON: So, there might be some way to at least keep those rolling a little bit. Let's look at a date in September. Anybody -- David Richardson is not on the phone anymore, is he?

MR. KATZ: No, David --

CHAIRMAN GRIFFON: And we don't have John, but we can at least get --

MR. KATZ: Let's go grab a date anyway, and then I'll send that out to everyone to confirm that they can make it.

CHAIRMAN GRIFFON: Sounds good.

MR. KATZ: We'll schedule

Procedures, but we're waiting on scheduling TBD-6000 to schedule that. So, if we look beyond the 21st, we're sort of out of the danger zone of --

CHAIRMAN GRIFFON: Beyond September 21st?

MR. KATZ: Well, yes. September, yes. We were saying late September anyway. So, like that last week of September, for example.

MR. STIVER: Is it the 27th?

MR. KATZ: Yes, 27th, 28th, 29th.

CHAIRMAN GRIFFON: Getting close.

MR. KATZ: It's close to the fiscal year, but as long as we do our travel now, we're fine.

CHAIRMAN GRIFFON: 29th or 30th I would prefer.

MEMBER CLAWSON: I can do it the 29th, but I can't 30th. This is Brad. I can

do it any time the 26th through the 29th.

CHAIRMAN GRIFFON: Let me just -- I am presenting at a conference in Washington. I think it's the week before, but I -- I don't have it on my calendar. So, I think the 29th works. Anyone else on the phone that --

MR. KATZ: Okay, so let's do --

CHAIRMAN GRIFFON: Wanda, the 29th?

MR. KATZ: Twenty-ninth is the first choice?

CHAIRMAN GRIFFON: Yes.

MR. KATZ: And the 28th, would that at all -- is that the wrong day of the week?

CHAIRMAN GRIFFON: Yes. It's kind of breaking up too much.

MR. KATZ: Okay, so let's shoot for the 29th. I'll send an email out to the other Members, and if that works, that'll be it.

CHAIRMAN GRIFFON: Okay.

Otherwise, we can go iteratively on the emails.

MEMBER MUNN: And so, if you can put Procedures on either side of that.

MR. KATZ: Well, okay. We were looking for the prior week on Procedures, though. But we could try to sister them up.

MEMBER MUNN: It'd be really nice.

MR. KATZ: Okay, so I will shoot for that then as well. I'll have to send an email on that one too, but I can do that now because it's not going to get -- that's not going to be any trouble with TBD-6000.

CHAIRMAN GRIFFON: Okay, then I think that's it for now. I will generate a memo on that first item we discussed on the ten-year review stuff, and circulate it to everyone. I mean when I send it to you guys, I'm sending it to you two.

MR. KATZ: Yes, copy me to --

CHAIRMAN GRIFFON: And Ted.

MR. KATZ: -- cover anyone that you might miss.

CHAIRMAN GRIFFON: And John. Yes, yes. So, I'll generate that in a couple weeks.

MR. KATZ: And send the revised matrices?

CHAIRMAN GRIFFON: I'm going to do that right now.

MR. KATZ: Send them to me, and I'll get them out to everybody again.

CHAIRMAN GRIFFON: Yes, because that works good for me. Then I don't forget about it.

MR. KATZ: And we are adjourned?

CHAIRMAN GRIFFON: Meeting adjourned.

(Whereupon, the above-entitled matter went off the record at 4:37 p.m.)