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

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

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SUBCOMMITTEE ON DOSE RECONSTRUCTION REVIEWS

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FRIDAY
JULY 23, 2010

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

PRESENT:

MARK GRIFFON, Chairman
MICHAEL H. GIBSON, Member
WANDA I. MUNN, Member
JOHN W. POSTON, SR., Member
ROBERT W. PRESLEY, Member

ALSO PRESENT:

TED KATZ, Designated Federal Official
JENNY LIN, HHS, Acting Designated Federal Official
KATHY BEHLING, SC&A*
DOUG FARVER, SC&A
STUART HINNEFELD, DCAS
EMILY HOWELL, HHS*
JOHN MAURO, SC&A*
SCOTT SIEBERT, ORAU Team*
BRANT ULSH, DCAS

*Participating via telephone

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

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

(8:38 a.m.)

MR. KATZ: Good morning, everyone in the room and on the line. This is Ted Katz. I'm the Designated Federal Official for the Advisory Board on Radiation and Worker Health, and we're getting started. This is the Dose Reconstruction Subcommittee, and we will begin with roll call with Board members in the room, beginning with the Chair.

CHAIRMAN GRIFFON: Mark Griffon, the Chair of the Subcommittee on Dose Reconstruction.

MEMBER MUNN: Wanda Munn, member of the Board and member of this Subcommittee.

MEMBER GIBSON: Mike Gibson, member of the Subcommittee.

MEMBER PRESLEY: Robert Presley, member of the Subcommittee.

MEMBER POSTON: John Poston, member of the Subcommittee.

MR. KATZ: And do we have any

Board members on the line? Okay, and then NIOSH, ORAU Team in the room?

MR. HINNEFELD: Stu Hinnefeld, Interim Director of DCAS.

DR. ULSH: Brant Ulsh, DCAS.

MR. KATZ: And on the line?

MR. SIEBERT: Scott Siebert, the ORAU Team.

MR. KATZ: Thank you, Scott. SC&A in the room?

MR. FARVER: Doug Farver, SC&A.

MR. KATZ: And on the line SC&A? Are you expecting John?

MR. FARVER: John, Kathy --

MR. KATZ: John, Kathy, do they know it's 8:30 instead of -- you may want to pop them an email. Okay, then let's go to HHS and other government officials or contractors to the government in the room.

MS. LIN: Jenny Lin, HHS

MR. KATZ: And on the line.

MS. HOWELL: Emily Howell, HHS.

MR. KATZ: Hi, Emily.

MS. HOWELL: Hi.

MR. KATZ: And do we have any members of the public on the line who would like to be identified? Okay, done with roll call; it's your agenda, Mark.

CHAIRMAN GRIFFON: All right, well, I think a lot of this depends on -- I'm not sure -- since I didn't have my government laptop operational the last couple days, I'm not sure if we -- the status on responses to the matrices, but just as an update, I think we completed the sixth set -- Doug, you reminded me that we did find -- there was one outstanding finding, but we closed it last meeting, I believe.

MR. HINNEFELD: Yes, I believe that's true. I think Scott Siebert did it.

CHAIRMAN GRIFFON: Yes. Anyway, the seventh set, though, I believe has like one or two remaining, as I'm pulling that up now. And then the eighth set, at the last

meeting we mainly worked on the -- what we're calling appendices. They're back to the last findings, which are -- also, we call them mini Site Profiles.

So I think that those are -- those are three items on the agenda. And then also I wanted to get at least an update on where things stand as far as the follow up on the first 100 cases.

We had asked for this review of the quality assurance-related findings, and the dig into some of those cases related to those findings. And then I guess Ted's right, I guess we should pick up the 13th set, and maybe have a look at that ourselves, and then we can be better prepared to describe it to the full Board meeting in Idaho.

So I guess I'll leave it -- the seventh set I guess I would turn to NIOSH and ask as far as actions what is --

DR. ULSH: We sent out a couple of responses on Monday. I don't know if you got

that, Mark.

CHAIRMAN GRIFFON: No, I didn't. But that doesn't -- you know. Just go ahead.

DR. ULSH: Yes, I sent out an email on Monday, July 19th. It kind of gives a mini update of what we have done. So I don't know if you'd want to walk through the matrix?

CHAIRMAN GRIFFON: Yes, I'll pull up the matrix while you -- I mean do you have them --

MEMBER MUNN: Is this the seventh one?

CHAIRMAN GRIFFON: The seventh set, yes. Give us a second to open up our files and matrices here. Oh, did you put your responses in the matrix?

DR. ULSH: Yes.

CHAIRMAN GRIFFON: Oh, you did? Okay.

DR. ULSH: Yes.

CHAIRMAN GRIFFON: Then I'll have

that. I'll look at Wanda's version.

MR. KATZ: Someone could email them to you.

CHAIRMAN GRIFFON: Yes. Can you email them to the GriffonM@Comcast?

MEMBER GIBSON: And to the MikeHGibson@gmail?

CHAIRMAN GRIFFON: Let's take a minute and do that.

DR. ULSH: Okay.

MR. KATZ: We're off the record.

(Whereupon, the above-entitled matter went off the record at 8:44 a.m. and resumed at 8:50 a.m.)

MR. KATZ: Okay, so we're back on the record.

CHAIRMAN GRIFFON: Back on the record. Sorry.

MR. KATZ: Thank you for bearing with us, everyone on the line.

CHAIRMAN GRIFFON: Okay, so we're back. We're starting on the seventh set, and

NIOSH had emailed some responses in a modified matrix, and now we all have it, I believe. So I'll turn it over to Brant to step us through which responses are in there.

DR. ULSH: All right, it might be easier for you all, who I just sent the message to, if you refer to the table that was in the email. I can kind of give you an overall quick status, and then we can drill down into the ones that we've actually provided substantive responses for.

We've got Scott Siebert on the line, too, who can respond to the detail kind of questions.

So the first item that we have on the table there on the matrix is finding number 125.9. That is an outstanding item that we have not yet responded to. So I don't know if you want to just -- we can go past that.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: All right, the first

one that we have provided a response to is the next one, and that's 127.11. The issue here, just summarized here on the matrix, is that the finding that SC&A provided was that NIOSH failed to address the breath sample monitoring reporting in the CATI.

I believe this is a Hanford claim, and we have provided a response here, and basically we have determined that there was no breath monitoring program in place at Hanford during the time frame that this dose reconstruction was provided.

We provided an email discussion that supported that. So I don't know. Do you want to --

MR. HINNEFELD: This was a CATI comment. It was a CATI comment that the claimant had checked under biological monitoring of urine, fecal, breath. And now we don't ever ask follow ups about when they check those things. I mean if they say yes, it's yes. So we don't know if the person is

maybe thinking of air monitoring, if air monitoring is done in the area where I was, or if they were maybe thinking of the spirometry test that you take when you get fit for a respirator, it looks like you're giving a breath sample.

So we don't know what the person was thinking when they checked that. Breath sampling, from a radiological standpoint, is really -- as far as I know is only done for radium.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And so it's for radium body burden. And so at Hanford -- that seems -- why we didn't monitor for radium at Hanford.

MR. FARVER: And I think that was what the question in the discussion led up to. That's why it's coming back and saying, well, we looked into it, and they didn't do breath monitoring for this one.

CHAIRMAN GRIFFON: Yes, and SC&A

doesn't have any information that they -- to the contrary. I mean you didn't find anything?

MR. FARVER: No, no. During the discussion it all came up to, well, could they have radium there, did they do breath monitoring.

CHAIRMAN GRIFFON: The only thing I would, I think, possibly correct for this matrix is for your green highlighted response, NIOSH's response says, finally, radon exposure would not contribute -- or would contribute almost no dose to the breast.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: That has no relevance here because it's radium here, right? So I think you should delete that.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: Or I'll delete it when I -- when I -- these are just your excerpted answers so I'll -- when I add it to the full matrix, I'll delete that part. All

right, so that's okay.

DR. ULSH: All right, so the status on 127.11 is closed?

CHAIRMAN GRIFFON: Closed.

DR. ULSH: Making progress already.

CHAIRMAN GRIFFON: I know. Look at that. Off and running.

MEMBER POSTON: Time for a break?

DR. ULSH: Next item is 131.4, and the finding was an improper method was used to calculate electron doses. We provided an initial response back in May of 2008. There are a number of -- well, we also provided an updated response here, and I'm going to rely on Scott to maybe walk you through that if you wanted.

But you can see our response there in the matrix, and that is that it's important enough that the results in the DR report are the result of Monte Carlo calculation process. There was a particular question about a

particular line, and we -- we provided an Excel file to give some more information on why we did what we did.

The open window and shallow quantities are both normal distributions, and the open window parameters for mean and standard deviation. We give the values there, 80 millirem, 38 and change millirem. So, basically, this response is here. We provided the back up information. I don't know if you guys want to spend some time with that or if you want to talk about that now.

MR. FARVER: I reviewed it, and a big question was we just couldn't determine how the doses were calculated. Because I believe at that time OTIB-17 was not in place, and best we could tell, you didn't follow OTIB-17, the method of use. And based on the spreadsheet, you said, no, it doesn't. It's a different type of calculation, which I've seen that type spreadsheet before in files.

So, no, that was fine. We just

wanted to see how you did that, and provided the calculations.

DR. ULSH: All right.

CHAIRMAN GRIFFON: Okay, so you were okay with -- you -- you reviewed the calculations?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Okay, anybody else on the Subcommittee have any questions on that?

MEMBER MUNN: No. Sounds reasonable to me.

DR. ULSH: So we'll call it closed?

CHAIRMAN GRIFFON: Yes, I think we're closed on that. I mean some of these we've been discussing for what, two years? It's been a while.

MEMBER MUNN: It's often just a question of checking on a --

CHAIRMAN GRIFFON: Right, right.

MR. HINNEFELD: They should've

been assigned to Brant this long ago. He's far more effective than I am.

CHAIRMAN GRIFFON: Is that a motion?

MR. HINNEFELD: It's done.

DR. ULSH: All right, the next item on the matrix, just for completeness sake, is 135.1, and on that one, that's an outstanding item. We don't have any new action to report on that. So we'll just go past unless you want to talk about it, Mark.

CHAIRMAN GRIFFON: No.

DR. ULSH: All right. The next item is 135.4, and we did provide a response on this one. Just to refresh your memory, this one dealt with tritium exposure reported by the claimant in the CATI and not considered in the DR.

So we provided a response in May of 2008. We have an additional response here. To summarize, basically there was a major tritium project that was supposed to happen in

the early `70s at Y-12, but it actually did not ever happen.

Tritium has always been at Y-12 since at least from 1957. This related to weapons. Therefore, if there is tritium bioassay, we can calculate an exposure based on the internal TBD. If there is not a tritium bioassay, then we have to assume that the employee did not work in proximity of tritium based on the monitoring period and based on the policies in place at the time.

So that was our response. I don't know, Doug. Maybe you had time to --

MR. FARVER: Yes. The only question I had was were there any tritium bioassays at Y-12?

MEMBER PRESLEY: Probably not because they didn't do any. They put a facility in and never opened it up. It's still sitting right there.

MR. FARVER: For the amounts that were there, because it says there's still some

tritium onsite, do you know of any tritium bioassay that was done?

MEMBER PRESLEY: We can call medical and see, but I don't -- I don't ever remember seeing any in any of the records that I've gone through.

MR. FARVER: Since it's classified, would you even see them?

MEMBER PRESLEY: I would, yes.

DR. ULSH: I don't think the bioassay results themselves would be classified.

MR. HINNEFELD: No, no. We have never run into -- at least so far, we've never run into classified bioassays. Was it -- now, was it classified information that tritium was at Y-12, I guess would be the pertinent question.

MEMBER PRESLEY: Now that was one of the --

MR. HINNEFELD: If it was classified information that there was tritium

at Y-12, then you could envision a way in which -- as those tritium samples were collected, they were not stored with a person's regular exposure records. I mean you can envision that. I don't know that that would happen.

MEMBER PRESLEY: I know.

MR. HINNEFELD: And we can't have much of a conversation and I have not heard any briefing on this that could have some special precaution for Brant and I to learn very much about this. So I don't know if you want to leave this on here and have us test that. See, the question is there was tritium there. Just because there was tritium on the site, was there exposure potential? It would depend upon how it was stored and what was done with it essentially. And so we don't know if there's an exposure potential. If there was an exposure potential, how did they monitor and control the exposure potential? And so if they in fact had tritium at the

site, and there was an exposure potential, and there's tritium monitoring done, you have to wonder about, it says an unmonitored exposure then we don't have anything to worry about.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So I think the question is, as much as I would like it to go away, I don't think in good conscience we should send it away just yet.

CHAIRMAN GRIFFON: Yes, I don't think -- I mean the middle part of the response concerns me because -- just because you don't have a bioassay doesn't necessarily mean that --

MR. HINNEFELD: As a general rule, we do not -- we do not decide finally that the lack of monitoring data equals the lack of exposure. That's as a general rule. We usually have to have some other information about monitoring programs that allows us to conclude that.

And so sitting here today, I don't

know that we have -- I don't know if Scott has anything that would provide it that he can talk about. So I'm sure if Scott knows about it, he can talk about it. Scott, you don't have a clearance do you?

MR. SIEBERT: No, and Y-12 isn't really my site. So I can't really speak to that.

MR. HINNEFELD: Okay. So I think we may have to go chase that down and provide a better explanation to the Subcommittee if we can, or have -- or to selected members of the Subcommittee with clearances if we need to do that.

CHAIRMAN GRIFFON: I agree.

MEMBER PRESLEY: That should be pretty easy to do.

DR. ULSH: All right. That's 135.4. I don't know if anybody else --

CHAIRMAN GRIFFON: 135.4?

DR. ULSH: Does anyone else have anything to add, or move on?

CHAIRMAN GRIFFON: I'm just updating the resolution column.

DR. ULSH: The next item on the matrix is 137.6. The finding was reviewer questions appropriateness of solubility assumption. We've provided a couple of previous responses, the first on May 30th, 2008, and the second one on April 15th of 2009.

We have provided an additional response here for this file -- or for this finding, rather. We sent out the IMBA file, demonstrating the comparisons that have been added to the claimant's file, and we talked a lot about, in our response here, OTIB-60 and the different solubility types. I don't know if you wanted to walk through that. Doug, do you?

MR. FARVER: No. I believe what it came down we didn't question the determination to solubility class. It was -- it wasn't contained in the files.

DR. ULSH: Right.

MR. FARVER: And I believe your last statement, NIOSH will consider adding text to the section stating runs will be added, will be kept in the file. That was the big thing. It seems that these things are in the claimant's file.

DR. ULSH: Okay.

MEMBER MUNN: That is a new word to me.

DR. ULSH: What's that?

MEMBER MUNN: Solubilization.

MR. HINNEFELD: Are you repudiating our terminology?

MEMBER MUNN: No, I am not. I'm simply saying that's a new word in my vocabulary. I'm not at all sure it would be added to my vocabulary.

DR. ULSH: So, anyway, the bottom line is we provided the IMBA files to -- to back up the -- we looked at the other solubility classes and demonstrate that. So I

don't know what status you want on it.

MR. FARVER: Other than you consider adding text, I guess it's in an OTIB somewhere. OTIB-60.

DR. ULSH: Scott, that last paragraph there, NIOSH will consider adding text to this section, does that refer to this particular dose reconstruction? Does that refer to OTIB-60?

MR. SIEBERT: That refers to OTIB-60. The two things we had outstanding were putting the actual file into the ER files, which was done.

CHAIRMAN GRIFFON: This is more of a policy discussion. Yes.

MR. SIEBERT: Yes. And then considering where to actually document that we should be keeping those runs because we all know it, but I don't believe it's documented specifically. We said 60 is probably the best place to put that.

DR. ULSH: So, do you want to

leave this open pending revision of OTIB-60, or do you want to close it? What do you want to do about it.

CHAIRMAN GRIFFON: I think I'm okay with closing it. The question I would have is more on the policy side, which is that Stu -- I mean I think we've -- you know, from a certain point going forward, NIOSH was sort of -- we had this discussion of keep all work --

MR. HINNEFELD: That direction went out, didn't it?

CHAIRMAN GRIFFON: Yes, I would hope that the -- these are older cases.

MR. SIEBERT: As I was saying, we do this, just documenting that we do it somewhere that seems like the best place to put it. We've been kind of waiting to update 60, and we're working on it.

MR. HINNEFELD: The next update it will be then.

CHAIRMAN GRIFFON: Do you have any

kind of -- because I'd like to document this in the matrix. Do you have any kind of date when that directive went out to save all work? Because I think that'd be important going forward, and as we review other cases.

MR. HINNEFELD: I believe I can reproduce it, but not in a short period of time.

CHAIRMAN GRIFFON: Okay, if you can give me that to include in the matrix? But I think it's closed. I just want to make sure we make a note in the matrix. Just because I know in the future, when we're looking at all the cases, should this have included all the data or shouldn't it have? So, unless Doug has anything else?

MR. FARVER: No.

CHAIRMAN GRIFFON: Okay, I think I'm comfortable with closing the item.

MEMBER MUNN: I would suggest that if we're going to leave that wording of the last paragraph in there, that we say that we

indicate we're talking about OTIB-60. Will consider adding text to OTIB-60 section, stating -- that sounds like there's no reason why we couldn't recommend for NIOSH to do that, correct?

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: So they're going to get you the date for your record when the work order went out.

CHAIRMAN GRIFFON: Or the record keeping is going to change, yes, yes.

MEMBER MUNN: Revise that wording here so that it says, the section of OTIB-60.

CHAIRMAN GRIFFON: Yes. This does say NIOSH will consider adding text to this section. I think --

MR. HINNEFELD: Why don't we just say we will.

CHAIRMAN GRIFFON: NIOSH -- yes, will.

MR. HINNEFELD: You got that, Brant? You got it?

DR. ULSH: Yes. I've got -- I've got that we're going to go ahead and close it, but there's two follow up items. You're going to send out the directive thing.

MR. HINNEFELD: Yes.

DR. ULSH: And we will revise OTIB-60. All right, the next item on the matrix is 137.7. We provided a response to this one. Oh, by the way, the original finding was that NIOSH failed to calculate internal doses from fission products.

Our initial response was May 30th of 2008. We provided an additional response in April of 2009, and then we have our latest response here.

Basically this dealt with a fission product bioassay. In our response, it says that, periodic urinalysis results greater than the MDA are fission products limited to those for tech-99, and are generally close to the MDA. And we do agree that these should be evaluated, included for dose reconstruction.

Tech-99 was originally included using a ratio to uranium based on recycled uranium mixture, but this doesn't eliminate the need to evaluate positive bioassay results for tech-99.

The last point that we would make is the reference that describes cesium-137 background effects for detecting uranium in the lung is reference ID 690 in vivo gamma counting as a measurement of uranium in human lung. And the description of the Y-12 mobile counter, we give a reference for that, and the design and development of mobile in vivo radiation monitoring laboratories.

Scott, do you want to provide some more follow up on that?

MR. SIEBERT: No.

DR. ULSH: Okay.

MR. SIEBERT: I mean I got that information. Once again, this isn't my site. It's a Y-12 mobile set up. So I'm not really conversant in the actual reference.

DR. ULSH: Okay, so we provided some references here. I don't know if -- Doug?

MR. FARVER: No. The question is how do I get those references?

MR. SIEBERT: That's in the SRDB.

DR. ULSH: Yes, we provided the reference ID right here.

MR. FARVER: What's the SRDB?

MR. KATZ: Site Research Database.

MR. FARVER: How do I get access to that?

CHAIRMAN GRIFFON: You have access to that.

MR. HINNEFELD: You come into our system, right?

MR. FARVER: Yes.

MR. HINNEFELD: Okay. We can show you. I can show you.

MR. FARVER: I'm not sure the dose reconstructors know about that -- or not the dose reconstructors, the reviewers.

MR. HINNEFELD: The reviewers might know. Some do.

MR. FARVER: Ron does, Ron Buchanan, I am sure.

MR. HINNEFELD: I don't know who does and who doesn't.

CHAIRMAN GRIFFON: I think definitely the --

MR. HINNEFELD: Site Profile reviewers.

CHAIRMAN GRIFFON: Right. Site Profile reviewers would definitely know about it. So this is in SC&A's. I still want you to have an opportunity to look at those documents.

MR. FARVER: Oh, I just want to be aware of what they look like.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: That was one of our concerns back there is it referenced it, but we -- we didn't -- weren't able to look at it or didn't know that I could look at it.

CHAIRMAN GRIFFON: Well, this -- this response says that these results should be evaluated and included in the dose reconstruction. Were they not included? Is that the issue? I'm trying to remember back to the original finding here.

DR. ULSH: Let's see.

CHAIRMAN GRIFFON: And if so, the question is -- I imagine it would be a small dose contributor, or -- you know, I don't think we need to -- I think we need to at least have that analysis on record that it should've been included, you know, given the potential for dose, it would likely not change the -- you know what I mean? Standard language in that; at least that you've assessed it and determined that it wouldn't have -- because I don't know if this is like a 49.99 case or something. You know, you've looked at that, and you might have the potential to add a little dose, but not significantly, and not certainly to overturn

the decision.

I think we need that on the record, anyway.

MEMBER MUNN: It kind of says other radionuclides are listed, but internal dose significance is considered inconsequential.

MR. HINNEFELD: Yes, the deal -- is this the one where the in vivo report shows cesium on one of the items?

DR. ULSH: Yes.

MR. HINNEFELD: Well, I'm sure the reference is described, but the mobile counter printed out several regions of interest, and some of those regions of interest, such as the cesium region of interest were used to calculate the expected value in the uranium region of interest, which is lower. It would back-scatter down. The cesium would, the potassium would. They would scatter down into the uranium region of interest.

And so the number of counts up

there in the higher energy regions influenced to the level of background counts you would see in the uranium reading. And so it was used to calculate the expected background. Those values are used in something called a prediction equation to calculate the expected values in the uranium region of interest. And so that's why those numbers were recorded essentially is because they were part of that background calculation.

MR. FARVER: Which I believe is why we wanted to look at the references.

MR. HINNEFELD: And the references -- the references should explain that.

MR. FARVER: Original findings.

MR. HINNEFELD: I'm old enough that I have experience. I didn't actually run the counter, but I saw the outputs of the actual in vivo counter when they in vivoed people at Fernald, this mobile counter, the Y-12 mobile counter, and that's how --

CHAIRMAN GRIFFON: That's

different to me than saying these results should be evaluated and included in the dose reconstruction.

MR. HINNEFELD: Well, that's for the technetium. There's technetium bioassays.

CHAIRMAN GRIFFON: Okay, okay. All right, so then the main impression would be for the technetium.

MR. HINNEFELD: Yes, that's the part where we need to make sure the dose isn't --

CHAIRMAN GRIFFON: Right, right, right.

MR. HINNEFELD: That's the part we should look at.

DR. ULSH: So it -- just to summarize, it sounds like there's a couple of action items. One is for SC&A to examine the references that we provided, and two is for us to provide an analysis of the technetium-99 issue.

MR. HINNEFELD: Yes, the dose and

the --

CHAIRMAN GRIFFON: Yes, right, right.

DR. ULSH: Anything else on that one, or do you want to move on?

CHAIRMAN GRIFFON: Move on.

DR. ULSH: The next item, the last item that we have here, is 137.8. The finding was that NIOSH failed to properly address potential radiological incidents.

Now we've not provided a new response to this. Our initial response was in May of 2008. We provided a rather lengthy response that I won't bother to read through, on April 15th, 2009.

It wasn't clear to us from the last meeting where we are on this particular finding, whether the April 15th response is satisfactory, or whether there's something else additional that you want.

CHAIRMAN GRIFFON: 137.8?

DR. ULSH: 137.8, yes.

MR. SIEBERT: This is tech-99 skin dose stuff.

CHAIRMAN GRIFFON: Okay, yes. I think we were kind of throwing up our hands as to how to proceed on this. Right, Stu?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Because it's a -- I mean there's a note here that this may be considered as an overarching issue.

MR. HINNEFELD: Well, I think it's where it belongs. Because it'll happen a number of places.

CHAIRMAN GRIFFON: Right.

DR. MAURO: This is John Mauro. This issue of skin contamination by the positive activity and using VARSKIN, that sort of thing.

MR. HINNEFELD: Yes?

DR. MAURO: I think that's an overarching issue that applies across the board, and it -- I know that Jim is aware of our concerns on this, and we talked about it

on a number of other venues. So I think this crosses into a broader category.

CHAIRMAN GRIFFON: I just want to make sure we have the right category to give it to. I mean do we say it's a Jim Neton White Paper issue?

MR. HINNEFELD: Well, it's an overarching issue.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: And most of those are in our court until -- until we provide something that says we're in the position that we can provide a viable position for -- for this issue. And then -- so this would be in our court.

CHAIRMAN GRIFFON: Okay.

DR. ULSH: So what status do you want to accord to this finding?

MR. HINNEFELD: Well, it's transferred to overarching issues essentially.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: In this case the

employee looks like he did roofing. He went down the roof of the building and ground them up, putting roofing on buildings. When he did this, his face and arms got burned because dust got into the pores of his skin. He reported releases when he was cutting out the welding in the transitions.

So there was some potential for this case that the -- the thing is how do you deal with wording like that?

MR. HINNEFELD: And how do you deal with the general issue of unidentified skin contamination?

CHAIRMAN GRIFFON: Right. It could've been radioactive material, right?

MR. HINNEFELD: It could've been an irritant from the -- roofing material.

MEMBER MUNN: More likely asbestos or things of that sort.

MR. HINNEFELD: But contamination on the roofs is not unheard of.

MR. KATZ: Does the DR

Subcommittee manage this as an overarching issue, or does it go to a procedure?

MR. HINNEFELD: I think that it goes to -- I think there almost needs to be some way to deal with it procedurally -- it could go to Procedures because it affects the procedures for how we're going to deal with dose reconstruction.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: You could go there. You could form a Work Group for dealing with overarching --

DR. MAURO: This is John. I think the procedure for non-penetrating radiation in OTIB-17 -- I think that might be it -- is silent regarding this issue. And that was one of our comments on that procedure. And so I think it might've --

MR. HINNEFELD: It's already there then?

DR. MAURO: Do I have the right number?

MR. HINNEFELD: Yes, that's the number. But you said if you wrote that finding on the procedure, then the issue is already there.

DR. MAURO: Well, it might be. I think it was -- I think it was raised in a number of venues. It may have first been raised when we were reviewing perhaps the Site Profile. I know on a number of occasions I raised that question. Wherever it first came up, I really don't know. Where it's best resolved is really a judgment whether it should be something best resolved as part of our issues of resolution on -- on OTIB-17 where it came up with a given Site Profile.

I know it was an issue. I think it first came up on -- I think it was like Paducah.

CHAIRMAN GRIFFON: Yes, that's where this DR is from. This is a Paducah case, yes.

DR. MAURO: Yes, that might be the

first time it came up. One of -- one of the enrichment facilities where the potential for airborne particles was prevalent, and the idea being when you have a circumstance where there's real potential for face, hands, skin becoming directly contaminated with particulates, that's the issue.

So, yes, this is really a call that you folks need to make on where should it be transferred to?

MR. KATZ: Wanda, does OTIB-17 still have open issues?

MEMBER MUNN: I was just going to try to --

MR. KATZ: If it does, then it makes sense to just make it clear that this is something that will get addressed as a finding.

MEMBER MUNN: We're not carrying it in our current open issues agenda list. But that doesn't mean it's not on the -- our database. And I'm just trying to get to the

database right now to --

MR. KATZ: Well, we don't -- I mean right now, we can just commit to putting this as a finding to be addressed under OTIB-17. Right?

CHAIRMAN GRIFFON: Yes.

DR. MAURO: It actually might be one of those overarching scientific issues that even transcend OTIB-17 like a number of other matters that we have brought up that go into that box where you have a special investigation on a scientific issue.

MEMBER MUNN: It would seem to be so to me.

CHAIRMAN GRIFFON: I guess the point Stu is making is that no -- none of us are really -- I mean we're sending them there, but nobody on the Board is really dealing with those.

MR. HINNEFELD: Yes.

MR. KATZ: If OTIB-17 is the procedure that would address this, then it

seems to make sense to put it on the Procedures Subcommittee, and --

MR. HINNEFELD: This one does.

MR. KATZ: Then have it under OTIB-17.

MR. HINNEFELD: It does seem to be the logical home.

MR. KATZ: Right. And then when Procedures gets to it, it will -- we'll know it gets addressed if we leave it in this other netherworld -- otherwise you have no way to really track this.

CHAIRMAN GRIFFON: I think this makes sense.

MEMBER MUNN: This is true. And we're just about to the point where we want to make a commitment about tracking overarching issues, which we have not done to this point.

MR. HINNEFELD: I mean it could be its own database.

MEMBER MUNN: Yes, it could be a specific database for overarching, which is

what I personally -- talking about overarching issues.

MR. KATZ: I would actually think all overarching issues would wind up with Procedures.

MR. HINNEFELD: They are almost all Procedures.

CHAIRMAN GRIFFON: Right, right.

MR. HINNEFELD: I mean if it's a procedure question or a policy question you're going to translate into a procedural implementation.

CHAIRMAN GRIFFON: Since Wanda is lobbying so heavily for her Committee.

MEMBER MUNN: No, I really had -- we originally were working under the concept of Jim pulling all these together and having a discrete list of what constituted overarching issues. And until that occurs, there really isn't something I think we can do. But logically in this case, tracking OTIB-17 is not a big deal. We can certainly do that and

see if this is still in our database. I believe that it is, and it's in abeyance, frankly.

MR. KATZ: John?

DR. MAURO: Yes?

MR. KATZ: If we can just follow up with Steve Marschke, since he sort of -- rides herd over Procedures.

DR. MAURO: Yes. We will be meeting on Monday.

MR. KATZ: Yes, Monday. Just to make sure if this is not clearly reflected under OTIB-17 that it be added there.

DR. MAURO: We will load it up, okay.

MEMBER MUNN: I will include this on my addition to our agenda.

CHAIRMAN GRIFFON: Okay, so that's transferred to Procedures, OTIB-17.

DR. ULSH: And that is the last item on the seventh set.

MR. SIEBERT: Does that close down

this list then?

DR. ULSH: Transferred.

CHAIRMAN GRIFFON: Yes, yes. Okay, we can move on to the eighth set.

DR. ULSH: The eighth set is going to go much faster because we haven't -- we haven't worked on these as much as the seventh set. There's only a couple of items that we can report progress on. The first finding that falls into that category is finding number 152.1.

That finding, the original finding, was that the DR Report does not properly account for all photon doses. You see our updated response here, and basically it says, the normal method for small discrepancies is use the higher of the two values. The two values being the cycle data versus HPAREH, unless it appears that the additional dose may be attributed to tritium, which was rolled into external dose at -- I believe this is Savannah River.

So in this case, the EE, the Energy employee, did not have tritium sampling in `55 or `56, and dose reconstruction should've used the larger of the two values to be claimant favorable, but it doesn't appear that they did.

So that response to the resolution in the matrix here that says, NIOSH will follow up on this case to determine if dose reconstruction used the greater values, and it appears that in this case we did not.

CHAIRMAN GRIFFON: Okay, and then always the ultimate question we ask is in this particular case, what was the PoC, and how -- you know.

DR. ULSH: I don't -- Scott, do you know the answer to that question?

MR. SIEBERT: The original PoC was about 45 percent, but we're talking for each of those years about I believe 65 millirem and 10 millirem. So it's not going to have an effect.

CHAIRMAN GRIFFON: Right. So then I think we're --

MR. FARVER: The big thing would be how do you correct it and keep it from happening again?

CHAIRMAN GRIFFON: Right.

MR. FARVER: I believe it says the normal method to do this is documented somewhere, saying, you will do this, or, you will go there and choose the higher value. We just don't want it to happen again.

CHAIRMAN GRIFFON: Right.

DR. ULSH: Scott, do you have an answer for that?

MR. SIEBERT: I do not.

DR. ULSH: Okay, well, then our response is like Doug just said. This is our normal practice, but we need to have that documented somewhere. Now it appears to me that this is a Savannah River-specific issue in this case in cycle versus HPAREH.

MR. FARVER: Yes.

DR. ULSH: So the appropriate place for that to be documented, it would seem to me, would be maybe in the Savannah River TBD? Scott, do you agree?

MR. SIEBERT: I would agree.

MR. FARVER: You could do that in OTIB, but I think it'd be easier to put it in TBD.

DR. ULSH: Okay, Wanda?

MEMBER MUNN: Isn't it routine for the larger to have been used, but in -- in this case it didn't do so. Then since it's routine for it to happen, and this is an anomaly, we -- we don't need to reinforce the routine, do we? It's already established practice now.

CHAIRMAN GRIFFON: Where is it documented, I guess, is the question, right?

DR. ULSH: Right. It could just be that this is a -- something that everybody does, but it's not written. We don't know that. We haven't checked.

CHAIRMAN GRIFFON: This goes back to those DR guides.

DR. ULSH: But at least the Savannah River TBD and any associated TIBs that deal with external doses never -- just to make sure that this is explicitly stated in those documents.

MEMBER MUNN: Well, yes, because these are really older cases. These ones that were done much earlier.

CHAIRMAN GRIFFON: Yes. I'm not sure exactly how old these cases are now.

MR. FARVER: When you start looking at the DOE files for Savannah River, you'll see several documents that look very similar. They listed those TLD results and tritium results, and so forth. And it's a matter of which value you pick and use. And if you're going to say, well, look at them all and choose the highest, that's fine. But I'd like to have them documented somewhere so everyone is doing the same thing.

DR. MAURO: Doug, this is John. What -- if it's not in the Site Profile or regs for Savannah River, what is the document that triggered the comment in the first place?

DR. ULSH: This dose reconstruction.

MR. FARVER: This dose reconstruction.

DR. MAURO: Yes. When we were --

CHAIRMAN GRIFFON: Reviewing the hard copy records versus the TIBs, right?

MR. FARVER: TIBs.

MR. SIEBERT: What happened in the background of this case is when information was added on the cards and then put into HPAREH, a mistake was made. So the HPAREH was incorrect and was not as high as the actual dosage for those two years that you find on the written card.

DR. MAURO: Oh, okay.

MR. SIEBERT: So the issue became -- and it's something that if you drill down

into it, the larger of the two doesn't necessarily match to this claim because you could figure out which is correct if you figure out that they made a mistake putting it into HPAREH.

DR. MAURO: So that would not be a problem necessarily unless you just want to alert the dose reconstructor in the Site Profile to watch out for that. I guess I'm not quite sure if there is a fix here that's needed with regard to the Site Profile, or just that we just had a breakdown in QA when the HPAREH was developed.

MEMBER MUNN: That was the point I was trying to make, John.

DR. MAURO: Yes.

MEMBER MUNN: It is not, I think, beneficial for us to go overboard in attempting to clarify what's technically correct to do, if that's already in place.

DR. MAURO: Yes.

MEMBER MUNN: But simply if we're

dealing with a clerical error or a transposition glitch here then that's just what it is.

DR. MAURO: And that being -- Wanda, that being the case, procedurally, now to -- it's my understanding -- let's say this turned out to be somewhat of a deficiency in the Site Profile that needs to be fixed. Of course, we all know that eventually you collect all of these kinds of things and revise your Site Profile, which may trigger a PER, which eventually will allow you to revisit this particular person's dose reconstruction.

I know just by eyeballing it, folks can probably pretty quickly judge whether it's a problem or not. Now when we have a circumstance like this where it may turn out that no, we're not going to revise the Site Profile, but there is -- there was an error made in -- in some regard that does have an effect on this particular -- so this is

unique to this case.

What's done to revisit the case if it's not going to be a PER?

DR. ULSH: Well, I think what would normally be done, John, is we would do some kind of evaluation to make sure that this wouldn't affect the PoC, as is the case here. And if not, then we won't reopen the case. But if the case is reopened for other reasons, then that would be corrected at that time.

DR. MAURO: Is there any way when these type of -- see, right now, all we have is -- on the record, we have identified a place where a person's dose reconstruction appears to have been -- have some error in it where it might go up a little bit, but is that all captured, in other words -- it's certainly captured on the record here. Now the next step in the process where you evaluate and determine, okay, if we fix this, the DR doesn't really go up very much -- I mean the PoC doesn't go up very much. Is that captured

anywhere in the records?

DR. ULSH: Scott, do you have a --

MR. SIEBERT: This is something we had discussed I know before -- having some kind of tracking method for ensuring that these are tracked and that we can -- the dose reconstructors can find out there's things like this. I don't believe anything specific has gone into place.

I mean I've sent out information to dose reconstructors with lists of claims where we have -- you know, which claims have been reviewed by the Subcommittee and if you have any questions, you know, contact me to see if there's any outstanding issues. But I don't believe we have a tracking mechanism in place.

I know we were talking to Stu about that a while ago, and I don't know if it ever got bumped. As far as I know, we haven't gotten anything specific in place.

DR. MAURO: What I find to be

important is when we have our dose -- I'm sorry, our procedure reviews, and when we have our Site Profile reviews, there is a vehicle clearly in place for capturing the agreements on what might need to be revised, and that of course eventually triggers a possible PER.

Here's a circumstance where there really isn't a formal process to capture unique problems to one particular case and whereby that's tracked. You know, I just want to -- and it sounds like right now it's pretty informal.

MEMBER MUNN: The simple direct approach to this would be for the instruction to NIOSH to be to check this -- this particular case, run the dose reconstruction with the appropriate larger of the two values, and report back that there is no -- that it does not change the final outcome and decision on the case. Why can't we track it here? Why isn't that --

DR. MAURO: That sounds great.

CHAIRMAN GRIFFON: That's what we've always done. I don't understand. We've always done that.

MR. KATZ: I think -- I mean I think they already -- Scott already reported, just eyeballing it, that it's clear it can't have an impact. But I thought the concern was just making a notation in the case file so that that if the dose reconstruction ever needs to be redone; that the fix is put -- is added to that dose reconstruction.

CHAIRMAN GRIFFON: That's a different question.

MR. KATZ: And that's just a -- put a notation in the case file. That's simple. It doesn't require any tracking, just add it there where the dose reconstructor would find it when they pick up that dose reconstruction again.

CHAIRMAN GRIFFON: But I mean the other side of it we have been trying. That's why I asked on that last -- the other case in

the seventh set. We've always closed them out that way by saying, an error was made, but it was likely a small dose, and NIOSH assessed this, and it wouldn't have changed the outcome of the PoC. You know, the outcome of the case.

So we've always done that. That's kind of --

DR. MAURO: So this record that we are establishing now is in fact the record that does that. And, okay, I --

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: -- guess I thought it was -- there was a little bit more. You have to go back and redo the run. What I heard is just eyeballing it, and Scott points out it's deficient.

CHAIRMAN GRIFFON: Well, I'm not saying necessarily -- I'm saying in the past, John, that we've always asked NIOSH to recalculate. Now this eyeballing, whether we accept this or not now, that's a different

issue. But we've always asked at least to do an assessment, and that's our notation in the resolution column is that NIOSH recalculated the dose, and then SC&A would have to agree with that. We all have to agree with that, and then we close it that way.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: Okay. So I mean if we all agree with the eyeball assessment here, then we move on. But if we want NIOSH to actually run the numbers, then that's fine as well.

MS. BEHLING: Excuse me, Mark. This is Kathy Behling. I apologize for calling in late here. But I do have to agree with Ted's comment. Let's assume that this case was opened later for some other PER issue.

CHAIRMAN GRIFFON: Right.

MS. BEHLING: Would this particular finding be part of that individual's record so that they would -- this

would be something that the dose reconstructor would look at? Because I think there should be -- there should be simply a one-page note or something in the case file.

CHAIRMAN GRIFFON: Yes, I agree. And I think Scott's saying that he does relay this information back to the dose reconstructors. I think that takes place. I don't know, is that correct, Scott?

MS. BEHLING: I think so.

MR. SIEBERT: But to really -- we probably need some sort of more specific information. Like in this case right here, if it was redone any time between the original assessment and now, we have never landed on a resolution on this specific finding.

So the dose reconstructor, if we haven't decided what's correct and what's not correct as of yet, anything to be done since that time would not -- you know, the dose reconstructor would not have an outcome for this resolution. So they would not have a

direction on this specific issue. Do you see what I'm saying?

CHAIRMAN GRIFFON: Right. But if we agreed today that -- that you should have – should have done the higher values, then in the future, there should be a notation. That's what we're saying.

MR. SIEBERT: I agree, and I think we need to -- we've been talking about finding a way to do that, and I just don't believe it's been implemented yet.

DR. ULSH: All right, let me perhaps get myself in trouble and take more authority than I have and commit to NIOSH, in situations like this, we will put a note in the case file so that if the case is reopened, this issue is taken care of.

CHAIRMAN GRIFFON: Seems like a simple enough thing.

DR. ULSH: With the caveat that I have to run it past Stu because he's the boss. So as soon as that's the case, unless I get

back to you and say no, I shouldn't have done it. Is that --

CHAIRMAN GRIFFON: That's fine. That's fine.

MEMBER MUNN: Let's keep it as simple and straightforward as we can.

CHAIRMAN GRIFFON: And let's -- I mean because we're not going to close the eighth set anyway. I would just say let's have NIOSH run the numbers just so we have a record to show that you did the actual calculation on this case.

DR. ULSH: Okay.

CHAIRMAN GRIFFON: So we have a record of that. I'm pretty sure Scott's assessment is right, but --

MR. SIEBERT: We had actually reassessed this claim in 2009, and I'm presently looking at the -- it was still non-comp. I'm presently looking at the tool that was used, and for 1955, 95 millirem was used, which is the cycle data, not the HPAREH.

So that one was correct, and it looks like the same thing for 1956. So when the reassessment was done, it was done correctly as far as cycle versus HPAREH.

CHAIRMAN GRIFFON: Well that's good to know. And it didn't affect the outcome?

MR. SIEBERT: Right. Still non-comp.

CHAIRMAN GRIFFON: Okay, so I think you've done it. I think it's satisfactory to me.

DR. ULSH: So then one follow -- well, the one action item that NIOSH has is to commit to putting a note in the case file in situations like this. Now I don't know if that would be the basis for keeping this open, or if you want to call it resolved or what.

MEMBER MUNN: And report it to the DR Subcommittee.

DR. ULSH: Yes.

MEMBER MUNN: Once that -- once

that's done -- you've already done it. So, really, the only outstanding issue is to report that it's been done in writing so that it goes on the -- the --

DR. ULSH: So what status do you want to accord to this particular finding?

MR. KATZ: It's closed.

CHAIRMAN GRIFFON: Yes, I would think it'd be closed. Yes, all right.

DR. ULSH: All right, the rest of this is going to go pretty quick. For the other numbered action -- or numbered findings in the eighth set, that would be 153.1 and .2, 157.1 and .2, we have not yet taken action on those findings.

The only remaining two that we do have something to report are the observations, 157 observations. And basically, these involved documenting that Super S was used in the rework. And in both of those cases, we did in fact assess Super S plutonium.

MEMBER POSTON: So was that

originally or --

MR. SIEBERT: No, the question was in the recent version because we went back to the fact that these had been reworked since the time of the assessment. The question was in the rework, were -- was Super S considered in both of these cases? And I've gone back in the rework, and yes, it was considered in both of these cases.

MEMBER MUNN: So they're closed?

MR. SIEBERT: I would tend to think so.

CHAIRMAN GRIFFON: And in both those cases, the rework is in the case file, obviously, right?

MR. SIEBERT: Correct. Yes, they were full-blown reworks. Actually, it was a Super S PER that made them -- did the rework.

CHAIRMAN GRIFFON: Right.

MR. SIEBERT: So pretty easy to determine that we did use Super S.

CHAIRMAN GRIFFON: I guess the

only question I have is, did SC&A get a chance to look at those reworks.

MS. BEHLING: No.

MR. FARVER: No.

CHAIRMAN GRIFFON: I would think maybe that's still in SC&A's court, then.

MR. SIEBERT: Well, wait a second. The observation was these should have been reevaluated using Super S and -- which it was. I mean I --

CHAIRMAN GRIFFON: Yes, I know what you're saying. I know what you're saying there.

MR. SIEBERT: -- have to verify that it's been done, that's okay.

MS. BEHLING: Mark, perhaps these are the types of cases that we -- that could be looked at under the PER review. In other words, we're going to be selecting I believe some -- you're going to be selecting some cases when we --

CHAIRMAN GRIFFON: Right.

MS. BEHLING: -- PER review. This type of case might be one that we would want to consider.

CHAIRMAN GRIFFON: Yes, I forget the selection process we set up for that.

MS. BEHLING: Yes, I'm not sure that we've -- any protocol for that yet, but --

CHAIRMAN GRIFFON: Right.

MS. BEHLING: -- it might be something we would want to consider for the PER review of the --

CHAIRMAN GRIFFON: Okay, and strictly speaking, Scott is correct. This is -- these are observations, really, that should've been included, and the fact that they included it answers the observation, I guess. So we can close them for this case, I believe. Everyone agree with that?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Along those lines,

Mark and Kathy, I was thinking about this business of selecting cases for these PER reviews, such as PER trials at 9 dealing with high fired and thoracic lymphoma. I know that when we were reviewing a number of cases under the 12th set, 11th set, that we very often come across cases where you have redone the case.

For example, I know we've done a number of reviews, and Kathy, you can confirm this, already related to PER 12 and the high fired plutonium. Would the very fact that we reviewed those and we -- let's say we found that yes, they, in fact, did implement the revised -- I guess it's OTIB-49, correctly. Because right now, where we are on our review, this sort of crosses Procedures and DRs. We've reviewed PER 12. We found that it needs -- it does everything it's supposed to do, but the only thing that's left to do is case selection to confirm that in fact the cases were in fact implemented in accordance with the new protocol.

If we've already reviewed a number of cases as part of the DR process, perhaps that will satisfy the -- that last step in the PER process, and sort of save everybody a little bit of money, a little bit of time.

CHAIRMAN GRIFFON: Yes, I don't see why, at least in part, you couldn't rely on cases that are already done.

DR. MAURO: Yes. And we could provide -- like right now, Kathy, my guess is you're probably in a position to list those -- those DRs that were reviewed where the new -- when the DR was done, using OTIB-49, and of course in accordance with the PER.

And if we could show that in three or four or five cases or whatever, that might be very helpful. I don't know if we've done very many with regard to the PER or not, thoracic lymphoma, but we may have.

CHAIRMAN GRIFFON: Right, right. But certainly the Super S we've done quite a few.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: John, that seems like a good starting point for the DR Subcommittee when it selects cases for the PER reviews, in every one of those PER reviews.

DR. MAURO: Yes.

MR. KATZ: Start with that, and then move forward -- other cases that need to be looked at, too.

CHAIRMAN GRIFFON: That seems to make sense. Yes, I don't have a problem with that. I'm not sure exactly where -- I mean I'm not sure I'm ready to discuss the protocol for selecting cases for the PER review. Where do we stand on that?

MR. KATZ: It's in your court, really. It's really in SC&A's court --

CHAIRMAN GRIFFON: -- to select the cases for which PERs?

MR. KATZ: -- for -- well, John -- I mean John could --

DR. MAURO: We can give you --

(Simultaneous speaking.)

DR. MAURO: Kathy, you may know them off the top of your head: which PERs are completed.

CHAIRMAN GRIFFON: Okay.

MS. BEHLING: PER 9, which is the lymphoma, and PER 12 which is the Super S issue, and also PER 20 is Blockson.

MEMBER MUNN: We have 9 and 12 on the agenda for Procedures -- we don't have 20.

DR. MAURO: I can tell you now, by the way, we will discuss the issues. But I think we are at a point on both of those where we understand the issues. I think you will see when we get there that there really isn't very much to do by way of action items.

We may actually close it, but this is a judgment, of course, that the Work Group will make, and the only thing that really needs to be done is the cases. And I think it's this Work Group -- I'm sorry,

Subcommittee, where those cases are done. Is that really the purview of this Subcommittee, or is this something special --

CHAIRMAN GRIFFON: I believe that's the way they set it up. I believe you're right.

MEMBER MUNN: Yes, that's the way we set it up.

CHAIRMAN GRIFFON: All right, and if we've -- I'm trying to remember the protocol for how many cases and that sort of thing. Did we decide on numbers of cases, John?

DR. MAURO: When we originally costed out the work, we were assuming three. However, there are some special circumstances, such as PER 9, where I believe Hans, if he's on the line, suggested something like nine or more so that we capture the full matrix of issues associated with that particular PER.

So it's really a case-by-case basis how many are needed.

MEMBER MUNN: We have a little project creep going on right now.

CHAIRMAN GRIFFON: Right, right. Yes, yes. Because what I was going to say is, if SC&A has looked at these, and I guess I would ask SC&A to come back to the Subcommittee with a preliminary listing of potential cases for review under each one of these PERs, and then the Subcommittee can select, right?

So if you can start off with a little -- go through and select a larger number of cases than you intend to review, and then we'll narrow it down on the Subcommittee.

DR. MAURO: And if it turns out we can save, and this one was already reviewed 4, 5, 6 --

CHAIRMAN GRIFFON: Right.

DR. MAURO: -- cases related to PER 12, we'll recommend that no further work is needed.

CHAIRMAN GRIFFON: Well I would

ask that you include that in your listing, John, that you say, you know, for PER 12, we're proposing to review eight cases. We've got four that we've already reviewed in the DR Subcommittee, and then we're going to select these other four out of a broad set of cases.

DR. MAURO: Got you.

MR. KATZ: Just to clarify, you mean case types, right, because they all --

CHAIRMAN GRIFFON: Case types. Case types, right.

MR. KATZ: So parameters for cases?

CHAIRMAN GRIFFON: And then NIOSH will have to find cases that --

DR. MAURO: Okay, so we don't actually identify particular cases. I see what you're saying.

MR. KATZ: Except for the ones you've done, right? Case types --

DR. MAURO: You know, the reality is I think our reports already do that. For

example, I know our PER 9 report identifies different categories of cases that we believe are needed, and we identify -- I believe it was nine. So I think you already have that, unless you'd like us to identify the cases of thoracic lymphoma that fall within those categories that we've already done.

CHAIRMAN GRIFFON: I think that's what I'm asking. Then NIOSH will have to, yes.

DR. MAURO: Yes, yes. But I don't think we can go beyond that, unless you'd like us to pick cases.

CHAIRMAN GRIFFON: All I would say is that I don't think this review should rely 100 percent on cases that we've already done.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: You can use it to supplement, but I think we should look at some other cases in addition to the ones we've already -- you know, so if it's -- if we're done for Super S, if you want to select eight

cases, maybe four or five of them can be ones that we've done already, and then get three more cases and have NIOSH select the particular -- you know, those particular cases. Does that make sense, John?

DR. MAURO: Yes. I just wanted to make sure we're clear. So we would recommend additional cases, but we wouldn't actually collect some candidate cases. That would be in the hands of NIOSH.

MS. BEHLING: John, I understand what Mark is saying here and I fully agree. I think there should be -- what he's asking for is for us to tell him how many different types of cases we should be looking at perhaps, and also to identify to him which cases we might want to select that we have already reviewed where this -- this was part of that issue with the lymphoma or the Super S. And then on top of that, saying we need additional cases that we haven't already looked at, and then we're going to have to ask NIOSH for their help to

select those cases for us.

CHAIRMAN GRIFFON: Because they'll have the case details.

MR. HINNEFELD: Yes. I figured we'd be playing here somehow. I'm just trying to make sure I understand what's going to happen. Now let me see. Anybody correct me at any time if I'm wrong. What I believe I heard John say was that each PER review that they did identifies categories of claims that they think warrant -- we should be reviewing claims in these categories to make sure this thing was done correctly.

DR. MAURO: That's certainly true for PER 9. Not sure if it's true for PER 12, whether or not -- for example, whether we say, well, we want to look at some bone, some lung and that sort of thing.

MR. HINNEFELD: Okay, so you've done that for PER 9. Okay, so then the next step then is for -- let's just talk about PER 9 then. Next step then is for SC&A to say,

okay, of these categories, and the DR reviews we've done, we have already looked at this category or these two categories.

So they're going to take care of that. And then they're going to tell us, we have not yet looked at anything in these other categories. Can you, NIOSH, find claims in those categories?

MR. KATZ: Exactly right.

MR. HINNEFELD: Okay, and you paid attention there, Brant, because you're going to be doing this. All right, now that I know what's going on, sure.

And then for the other PER, PER 12, the first thing SC&A is going to find out that they in fact identified categories, and if they didn't, then they're going to the identify categories and do their part. Okay, all right.

CHAIRMAN GRIFFON: Anyway, this might be a good time for -- are we done with the eighth set? We've gone over everything

NIOSH has for the eighth set. Does SC&A have any updates for any --

MR. FARVER: Yes, eighth set.

CHAIRMAN GRIFFON: For eighth set of seventh set?

MR. FARVER: Eighth. We didn't have any actions in the seventh set.

CHAIRMAN GRIFFON: Seventh set, okay. Why don't we just take a quick ten-minute break because we lost power on our end of the table, and come back in ten minutes and we'll pick up on SC&A's follow-up on the eighth set.

(Whereupon, the above-entitled matter went off the record at 9:53 a.m. and resumed at 10:06 a.m.)

MR. KATZ: Okay, so, we're restarting after a short break.

CHAIRMAN GRIFFON: Okay, we're back, going back to the eighth set of cases. And I think where we're going to pick up is Doug has some responses from SC&A, and

additionally, he has just reminded me that we left off on the matrix for the first time going through the matrix at item 160; right?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: That's where we finished.

CHAIRMAN GRIFFON: So, he's got some responses from previous actions. Plus we're going to pick up from 160 on through 178, and overall -- just the first cut through, kind of. So, everyone should've had a -- Doug sent out that section of the matrix this morning, as well. He's included your responses, as well.

MEMBER POSTON: So, this is the eighth set?

MR. FARVER: Eighth.

CHAIRMAN GRIFFON: Yes.

MEMBER POSTON: And Doug sent it?

MR. FARVER: Yes. It starts with finding 153.6, and it has to do with not

accounting for all the recorded or model neutron doses. In our view, we believe the employee meets the criteria from TIB-7, and the criteria basically is you should look at the work location, the job description and positive photon exposure.

And we believe that the employee meets all this criteria, and should be evaluated for neutron doses for each year from 1978 through 1982, instead of just in 1978 and 1981. He was just evaluated for two years, instead of the four-five years that should've been. That's in our opinion. Then we state the basis for that.

And then 153.7 is the same, deals with the same issue.

MR. KATZ: Did you say 78 through 92?

MR. FARVER: Eighty-two.

MR. KATZ: Eighty-two.

DR. MAURO: Doug, this is John. I'm looking at the matrix and I see that we

have the issue. Then we have a December 8, 2008 response by NIOSH, and then we have a SC&A response. Did they issue that response today? In other words, is this the new material that you are providing now to the Subcommittee in response to NIOSH's response?

CHAIRMAN GRIFFON: That's the way I'm taking it.

DR. MAURO: Is it a good idea to put the date on?

CHAIRMAN GRIFFON: I'm going to put the date on there when I move it to the full matrix.

DR. MAURO: Okay.

MR. FARVER: Right. I just wanted to have something so Mark could just paste it into the new matrix.

DR. MAURO: Okay, okay. And I would also suggest now, from what I read in the response, my understanding is that we -- we still feel that this is an open item, and that needs -- neutron doses should be -- and

when you read it, if that's not the end, then we believe it's still an open item that needs to be dealt with.

CHAIRMAN GRIFFON: Right. Now, some of these responses I don't think SC&A -- I mean I don't think NIOSH has had a lot of time to look at.

MR. FARVER: No, we haven't.

CHAIRMAN GRIFFON: You just got it this morning. So, even if you start --

MR. FARVER: No, no, no.

CHAIRMAN GRIFFON: Unless there's clarification, if Scott is on the phone or others here need clarification on SC&A's response, I think this is a good time to discuss that. But otherwise, I think you're going to take the action after they're done.

MR. FARVER: Right.

MEMBER POSTON: I'm trying to understand the SC&A -- wait. No, no. I'm trying to understand. There's just a presumption that this person was exposed to

neutrons other years. Is there evidence to back that up or what?

MR. FARVER: It's based on the work location, and there's just certain criteria in TIB-7 for non-routine workers, and it's based on where they worked, what their job description was and if they had any positive photon exposure.

MEMBER POSTON: This person was a laborer, right?

MR. FARVER: Right. And I'll give you some more background on that.

MEMBER POSTON: Those folks usually aren't --

MR. FARVER: Primarily 200F.

MEMBER POSTON: -- assigned to the FB line.

MR. FARVER: 200F and 221FB line.

MEMBER POSTON: Okay, but that's just a work location, right? That's not really his job.

MR. FARVER: Well, that's his work

location and he's a laborer.

MEMBER POSTON: Yes.

MR. FARVER: He did have --

MEMBER POSTON: Laborers do a lot of stuff and they usually are off and outside of the building. They could be janitors. They could be a little bit of everything, as opposed to working on the line.

MR. FARVER: I understand that. And all I was going by was what the guidance was in TIB-7.

MEMBER POSTON: Okay. So, the -- the comment is based on TIB-7?

MR. FARVER: Yes.

MEMBER POSTON: And not on any evidence that he was exposed?

MR. FARVER: Correct, other than the work location, the job description. He does have some -- I believe he has a neutron exposure for two years.

DR. ULSH: Seventy-eight and 81.

MR. FARVER: For two years. So,

he did have a potential at least for two years.

MEMBER POSTON: Yes.

MR. FARVER: So, we're saying that they should've accounted for a -- I guess it's called unmonitored or missed dose, missed neutron dose.

CHAIRMAN GRIFFON: And he had the same job title for those other two years when he had the --

MR. FARVER: As far as we can tell.

CHAIRMAN GRIFFON: So, I think it's a NIOSH follow-up. I understand John's point, but I think, especially since you have recorded dose on there under that same job before, it's at least worth looking into.

MR. FARVER: Yes. I guess our point is --

CHAIRMAN GRIFFON: It's monitoring for a good reason.

MR. FARVER: Since we feel he

meets the criteria in TIB-7, then he should be evaluated.

DR. ULSH: So, our response will be either, yes, okay, we agree with you or we continue to disagree and here's why, with some more information.

MR. FARVER: Yes.

DR. MAURO: Let me ask a question. This goes to the heart of the discussion. This is John. If basically OTIB-7 gives you a path that needs to be followed, and we follow that path, there's one of two things here. Either you feel that OTIB-7 does not say you should do the doses and which -- which means that we just have the different interpretation of the guidance in OTIB-7. That's important.

If there is, or if you say, no. Well, there's really more to the story. That means that there -- maybe there's more guidance that's needed. In other words, all I'm saying is that we're marching through the steps that are given to us.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And we walk away saying, I think you should've added some neutron doses here. And you feel that, based on other information, perhaps outside of the purview of OTIB-7 that says you are deviating from OTIB-7 because of certain reasons. So, that's why, too -- that's what needs to be disclosed.

CHAIRMAN GRIFFON: Yes, yes. So, yes, I understand what you're saying, John. And then it may be a Procedures issue where you say that the procedure --

DR. MAURO: Exactly. We can do a procedure issue. Exactly.

CHAIRMAN GRIFFON: Right.

DR. MAURO: Exactly.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: What's the title on the TIB we're talking about?

MR. SIEBERT: From a procedure point of view, just to point out, OCAS TIB-7

was not in existence until October of 2007. His claim was done in 2004.

MR. HINNEFELD: Okay, so that guidance wasn't available to the dose reconstructor.

MR. SIEBERT: Correct.

MR. HINNEFELD: So -- but the question remains is, is it the correct guidance, whether the guidance had been written in 2004. It speaks to the issue of compliance, procedural compliance, and not to the --

DR. MAURO: In a way, one could argue that the issue that you just described is really not a QA issue, because you did not have this procedure in front of you, and there's not a breakdown in QA, you know, if you didn't do the doses when you should have. Then it becomes a matter of, when you did do it, you made certain judgments that were made, and maybe found judgments not to assign the neutron doses for those years. And -- and if

that judgment was made and is justified, we're fine.

So, it speaks to the point to make sure we're not talking about a QA issue, where if OTIB-10 wasn't in place, we would be arguing that you didn't follow your procedures.

CHAIRMAN GRIFFON: Yes. And let me -- let me just clarify one thing, too. Scott, I don't dispute what you said, but a -- if that's true, then you have to look at your response, NIOSH's response, on December 8th, 2008. It says, using the guidance of OCAS TIB-7, and then it goes on to say the history was evaluated. So maybe you shouldn't include -- you should at least clarify that even though this was prior to --

MR. HINNEFELD: Well, it wasn't -- yes, well, we couldn't say, even though OTIB-10 wasn't done, we went back and looked at the guidance now. That's all that it's saying.

CHAIRMAN GRIFFON: All right. I

guess that's what threw me a little. When I saw that, I assumed that TIB-7 was in place.

MR. HINNEFELD: That's one of our TIBs, and it's not --

MR. SIEBERT: Correct.

MR. HINNEFELD: This is a Savannah River case, and it's that TIB that we wrote on Savannah River neutron dose.

MR. SIEBERT: Yes, it is.

MR. HINNEFELD: It's Taulbee's fault.

CHAIRMAN GRIFFON: All right.

MR. FARVER: Are we ready?

MR. HINNEFELD: We'll just have to familiarize ourselves.

DR. ULSH: Okay. We've got the same initial response and same SC&A response to 153.6 and 153.7. It's the difference between --

MR. HINNEFELD: Well, one is missed and one is recorded.

CHAIRMAN GRIFFON: Yes, yes.

They're basically the same follow-up. All right.

MR. FARVER: 156.1 is another -- looks like another neutron question. NIOSH failed to properly address all work locations documented in the DOE records. And you go through the NIOSH response. Then the one thing that popped out of the NIOSH response is -- well, this is going to go with 156.5, the next finding, which talks about neutron doses.

It comes down to, they didn't assess the neutron doses, and NIOSH contends that there were -- it was all in one dosimeter. What we contend is that there's two -- there's two separate dosimeters listed in the dosimetry records.

So, according to Table 5.3.2-1, there were separate TLDs for your beta-gamma, and separate neutron dosimeters during that time period, which is consistent to what we see in the employee's records, which means the employee was monitored for neutrons, and we

contend that they need to be assessed for missed neutron dose.

MEMBER POSTON: I am trying to understand the succinctness of the responses. When you say, used a neutron facility, what are -- does that mean you're using surrogate data?

MR. FARVER: No. It has --

MEMBER POSTON: If you've got the data -- if you got the data listed in his record, why in the heck do you need a neutron facility?

MR. FARVER: I think at two facilities were -- well, actually several facilities: 773A, 200F, and then 221FB line, and probably other facilities beyond that. He was a laborer.

CHAIRMAN GRIFFON: Well, the point --

MEMBER POSTON: In the response it says, and I don't know who -- this is SC&A. Separate neutron dosimeter numbers are listed

in the DOE record. So, I'm trying to understand why you don't use those instead of picking a neutron facility to use in the model. I don't understand what's going on here.

CHAIRMAN GRIFFON: Or is it we're missing periods? I'm not following it either.

MR. FARVER: Well, you look through the NIOSH response, and they -- they say that he was in 735 during 1998. So, that's the same time period that he had a neutron dosimeter listed.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: And let's see.

CHAIRMAN GRIFFON: All right, John is saying, I think, if he was monitored, why do we need to know location. I mean why is location -- if you've got neutron dosimeter data, why are you focusing in on --

MR. HINNEFELD: I'm trying to find the real finding. The only thing that strikes my mind is that the energy distribution -- the

energy distribution is quite often facility-dependent.

MEMBER POSTON: Oh, sure. No question about it.

MR. HINNEFELD: And so, the translation of the neutron badge into the energy ranges that IMBA accommodates -- now, I'm talking about energy ranges. IMBA puts neutrons into the whole string of energy bins, and in order to take the neutron dose that's measured on the badge and distribute it among the various energies of the neutrons. That is dependent upon what facility they were exposed in. That's the only thing I can think of. Is that not it?

MR. FARVER: It's even simpler than that.

MEMBER POSTON: That is not the way the dosimeters work.

MR. FARVER: The employee was monitored for two exchange periods in 1998, and six exchange periods in 1999. All the

results were zero. NIOSH failed to calculate missed neutron doses for these two years of employment. So, they didn't calculate missed dose.

CHAIRMAN GRIFFON: All right, it's missed dose.

MR. HINNEFELD: Oh, it's missed. Okay, all right.

CHAIRMAN GRIFFON: That's a separate issue.

MR. HINNEFELD: So, then the question is the potential for neutron exposure.

MR. FARVER: No, that's --

MR. HINNEFELD: The argument from our side is --

MR. FARVER: There was no potential.

MR. HINNEFELD: -- there was no potential. That would be the argument from our side.

MR. FARVER: Even though there

were dosimeter results that were zeros, you didn't assess the missed dose because you assumed there was no potential.

MR. HINNEFELD: That is our position.

DR. ULSH: Because what it says in our response, I believe, is that the TLD dosimeters that were used for those years automatically contained neutron --

CHAIRMAN GRIFFON: And they would only read them for potentially exposed workers. Yes, that's what you're saying.

MR. FARVER: I believe that's what your response says. But then that's not consistent with the page 92 table, where they were also neutron dosimeters.

DR. MAURO: Separate.

MR. FARVER: Separate.

CHAIRMAN GRIFFON: Okay, okay.

MR. FARVER: And if it's a separate neutron dosimeter, then there should be a missed dose.

CHAIRMAN GRIFFON: I was a little fuzzy. I'll clarify it a little more. I was just reading through the matrix here to understand that.

DR. ULSH: I understand your response. I can't comment on it now.

MR. HINNEFELD: We understand where we're at.

CHAIRMAN GRIFFON: At least we know where -- okay, so, NIOSH has to follow up on this.

MR. FARVER: By looking at the records, there are separate dosimeter numbers for neutron, and separate dosimeter numbers for your beta-gamma dosimeters.

MEMBER POSTON: Well, then to me, I guess where I'm confused, starting where I'm confused, is that the finding failed to address properly -- properly address all work locations. I mean that's not --

MR. FARVER: Let me go back to that one.

MEMBER POSTON: I mean we're talking about neutron dose.

DR. ULSH: This column that you just read from is a summary of the finding. And perhaps the summary didn't capture --

CHAIRMAN GRIFFON: Yes, it's not a great summary.

MR. FARVER: It's tough unless you go back to the original finding sometimes.

CHAIRMAN GRIFFON: This is probably an oversight with these matrices.

MR. FARVER: Okay. Apparently, the reason that NIOSH did not assess neutron doses was that for years 1998 and 99, they placed him in the 200F facility. Therefore, there would not be a neutron dose, and that's where that, failed to properly address all work locations, comes in.

We believe that for those two years, he was -- he should've been considered in FB line and had a neutron dose.

CHAIRMAN GRIFFON: Okay, all

right.

MR. FARVER: But that's really probably the reason you didn't consider a neutron dose is because you considered it a 200F facility.

DR. ULSH: And we also apparently considered the fact that he had a neutron dosimeter wasn't indicative in and of itself of neutron exposure. But I understand you're saying they were separate, so it would --

MR. FARVER: If they're separate, then we believe they should be assessed a missed dose.

DR. ULSH: I understand.

MR. FARVER: And I don't know how you tell the difference.

DR. ULSH: We'll try.

CHAIRMAN GRIFFON: All right. So, at least you've got clarity on the issue now. That was --

MR. FARVER: A lot of times it's difficult unless you go back to the original

report.

CHAIRMAN GRIFFON: Right. I agree. All right, I think that covers 156.5, too, right?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Can we move ahead to 161?

MR. FARVER: Then we are back to where we left off in March.

CHAIRMAN GRIFFON: So, these are all new ones now that we haven't discussed before?

MR. FARVER: All right. So, I don't know how you want to do this. If you just want to start off and --

CHAIRMAN GRIFFON: Yes, just start off. If you can, describe the finding, I think it's important.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: Especially since -- you know, it's been a long time since we looked at these.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Go ahead and start reading the 161.

MR. FARVER: 161.1.

CHAIRMAN GRIFFON: Was there a 160, or we did that already?

MR. FARVER: Well, I believe that's -- we ended up finishing with 160.

CHAIRMAN GRIFFON: Okay, so 161.1.

MR. FARVER: The DR report did not properly account for all missed neutron doses.

NIOSH agrees that there is no missed dose assigned, but this would not affect compensability decision. And then the remark there just as a QA concern because it should've been done, but it wasn't done. We believe it should've been caught somewhere along the lines, and it should've been done.

CHAIRMAN GRIFFON: So, okay, is a QA --

MR. FARVER: In other words, we accept their response, but it's something that

we don't think should have got by.

MR. HINNEFELD: I'll have to -- you know.

MR. FARVER: Yes, you'll have to look at these.

CHAIRMAN GRIFFON: Well, I don't know. Is there anything to look at? I mean --

MR. HINNEFELD: Well, only our comment that the information regarding the PFP was not available at dose reconstruction, initial dose reconstruction.

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: I'm looking at that, and I don't necessarily agree with that response. I believe that information was there, and I agree with them that we missed it. And it has been reassessed since, and PFP was used for 2000. So, we have rectified the situation.

CHAIRMAN GRIFFON: And the comment stands that it didn't affect compensability

decision, right?

MR. SIEBERT: Correct.

CHAIRMAN GRIFFON: Okay, that's -- that's -- all right. So, I think we're okay. I think we can close it. SC&A agrees, and there's no affect on compensability.

MEMBER MUNN: Yes. We know that there was an error. It was recalculated and nothing happened.

MR. FARVER: I just wanted to mark that with the QA issue so that two years from now when you ask me to compile all the findings --

DR. ULSH: And it sounds like if Scott does not agree with our response as it is currently recorded in the matrix, we should fix that.

MR. SIEBERT: I agree that we should probably get rid of that.

CHAIRMAN GRIFFON: All right, you want me to -- which -- which --

DR. ULSH: The last sentence in

our response.

MR. HINNEFELD: The part that says, the information regarding PFP was not available.

CHAIRMAN GRIFFON: All right. I'll just delete that.

MR. HINNEFELD: Delete it.

CHAIRMAN GRIFFON: Okay.

MEMBER POSTON: Is this a QA concern? And if so, don't we have responsibility to ensure that it doesn't happen again?

CHAIRMAN GRIFFON: Yes. That's a --

MEMBER POSTON: There's another one directly above it. I mean, when you spend so much time in the NRC world, you not only have to identify it, you have to make sure that you put mechanisms in place to avoid --

MR. HINNEFELD: Well, we'll be talking briefly about that here in a couple minutes.

CHAIRMAN GRIFFON: This is the thing we have for the first 100 cases, right?

MR. HINNEFELD: Right. The general summary of QA issues and the ten-year review. I've known for a while -- I might as well give this report now.

We've known for a while that the ten-year program review was going to take up that same topic in quality of dose reconstruction reviews. So, we haven't really acted on the Board's recommendation until we saw what else was going to come in your program review. We have that now.

So, we're going to be working on our plan, how to respond to that, and put something in place. Kind of the things you expect QA issues and QA programs to deal with these things. We'll be starting to work on that.

MEMBER POSTON: Is this something that you share with the Board, or you share with --

MR. HINNEFELD: Oh, yes.

MEMBER POSTON: -- the Director or whatever?

MR. HINNEFELD: Well, both. I mean everything. Yes, both. We would be providing essentially back to this Committee -- you know, the finding from the Committee came from this Committee. And in truth, the ten-year program review relied on the work of this Subcommittee.

And so, I guess we could -- we didn't really need to wait, but we did. So, it relies on the work of the Subcommittee. And so, the response is, should the response be the same to both the Subcommittee and to the Director.

CHAIRMAN GRIFFON: Okay.

DR. ULSH: I'm seeing a drop off of that last sentence in the response, and then this is closed?

CHAIRMAN GRIFFON: Yes. All right, so 161.2?

MR. FARVER: 161.2. Reviewer questions the use of OTIB-2 for deriving internal dose. It talks about it being a maximizing assumption. I'm trying to find the original finding because that'll explain it.

CHAIRMAN GRIFFON: OTIB-2?

MR. SIEBERT: The original finding is it's stating that it's a best estimate case, and why was OTIB-2 used as an overestimation in the best estimate case?

MR. FARVER: Okay, thank you.

DR. MAURO: And this was denied. In other words, you used OTIB-2, which is of course a maximizing. Was this particular one corrected or denied?

MR. SIEBERT: It's non-comp.

DR. MAURO: Okay, a non-comp. That's what I mean by that. Okay, good, because when you run into OTIB-2, you usually assume it's non-comp. Okay.

MR. SIEBERT: Our basic response was it's not a full best estimate. The

external side was done with best estimate. Internal was overestimated using OTIB-2, and mixing the two, as long as we don't have to truly do a best estimate, there's nothing inappropriate with that.

MR. HINNEFELD: I think that's --

CHAIRMAN GRIFFON: We've actually seen a lot of that, right?

MR. HINNEFELD: Yes, sure.

CHAIRMAN GRIFFON: I guess the bigger question for me is SC&A's response that -- it's hard to believe that 200 millirems --

MR. HINNEFELD: What was the target organ? What was the cancer?

MR. SIEBERT: Thyroid.

CHAIRMAN GRIFFON: Are those calculations in the case file? I mean --

MR. SIEBERT: We don't have to do a demonstration that OTIB-2 was an overestimate.

CHAIRMAN GRIFFON: Oh, yes, yes.

MR. HINNEFELD: Yes, you don't

have to demonstrate that. It's our presumption when preparing OTIB-2. What was the site, Scott?

MR. SIEBERT: Hanford.

MR. HINNEFELD: All right, and the years?

DR. ULSH: SC&A response lists --

MR. HINNEFELD: Employment, I mean. What were the years of employment?

MR. FARVER: Eighty-three to present.

MR. SIEBERT: Yes, that sounds right.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And you got 202 millirem using the maximizing approach over a 22-year period? That does sound kind of hard to believe.

CHAIRMAN GRIFFON: That's what's questioned here.

MR. FARVER: Yes, that's -- yes.

CHAIRMAN GRIFFON: I think NIOSH

needs to follow up on that.

MR. HINNEFELD: Okay. We'll check on it.

DR. ULSH: Well, I mean the way that you're going to get an internal dose from -- to the thyroid would be if there was iodine involved. But if there's not iodine involved, 202 wouldn't surprise me.

CHAIRMAN GRIFFON: In that time period.

MEMBER MUNN: Highly unlikely.

MR. SIEBERT: That doesn't seem out of line to me.

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: Actually, I believe when we did this review, we were able to reproduce the dose. The one thing that we used for these is the OTIB-2; they assumed a non-uranium site and a reactor site. So -- but -- but we were actually able to reproduce that using those assumptions in that parameter.

DR. MAURO: Kathy, this is John. So, we -- using OTIB-2, which I believe has a mix of certain radionuclides that are -- I don't remember the details on it. And it was such a nature that obviously there wasn't very much iodine in the mix when they -- when you use OTIB-2. Is that why the doses are coming in so low?

MS. BEHLING: I assume so, yes. The initial -- indicated on our initial findings was really questioning. This was up front identified as a best estimate case, and we obviously know that if OTIB-2 was used and he was compensated using OTIB-2, that would not be appropriate. That's not typically what is done.

So, I have to assume that if this case would've been compensable with OTIB-2, they would've gone back and reassessed it using some other methodology for the internal. Is that correct?

MR. HINNEFELD: That's correct.

MR. SIEBERT: Correct.

DR. MAURO: Okay.

MR. HINNEFELD: We can -- we can go check. If you want us to check the millirem, we can check the validity of OTIB-2. The kind of circumstance --

CHAIRMAN GRIFFON: Yes, I guess that would be my question.

MR. HINNEFELD: I don't think that making it a uranium fission reactor facility is going to change your thyroid dose.

CHAIRMAN GRIFFON: The question is, is this maximum for Hanford for that time period for iodine?

MR. HINNEFELD: It also might be period-specific.

MEMBER MUNN: Nothing was operating --

CHAIRMAN GRIFFON: It was 83 or whatever. Well, prior to when the person filed the claim.

DR. ULSH: So, is there an action

item that NIOSH will check the applicability of OTIB-2 during this time frame when Hanford --

MR. HINNEFELD: Yes, yes.

CHAIRMAN GRIFFON: For -- for the nuclide of interest. Okay.

MR. FARVER: Next?

CHAIRMAN GRIFFON: Yes.

MR. FARVER: 161.3. NIOSH failed to properly evaluate all information submitted in the CATI. Basically, there were three incidents that the employee mentioned in the CATI report, and the DR report states that no radiological incidents that may have impacted this dose reconstruction were reported, either by the DOE who mentioned in the computer assisted telephone interview.

MR. HINNEFELD: When was the -- anybody got the date on the dose reconstruction? When was the dose reconstruction done?

MR. FARVER: I'm sure it's an

early one.

MR. HINNEFELD: Well, remember that our direction to ORAU to always address the findings in a CATI came from our response to findings in this Committee.

MR. SIEBERT: Early 2007.

MR. HINNEFELD: And so, it's quite possible that this dose reconstruction was -- this finding actually addresses something that has subsequently been fixed.

MR. FARVER: I agree.

MR. HINNEFELD: And so, I suppose if we're going to keep these on the QA list, then we will have a certain category of things in the QA list that have been fixed, but we're not going to worry about anymore.

MR. FARVER: Well, what one should look at is when this would come up again, you'd say, it's already been fixed.

MR. HINNEFELD: Yes.

MR. FARVER: Now, I just marked it that way because as we did with the first

eight sets, we had to come up -- I had to come up with a list of items I thought were related to quality.

MR. HINNEFELD: Yes.

MR. FARVER: And so I figure if I just start marking them now, it's a little easier to --

MR. HINNEFELD: Easier to find them later. You bet. I understand that.

DR. ULSH: This is 161.3, okay. So, it looks like our response, though, is that these two incidents were not explicitly -- they were mentioned in the CATI, but they were not explicitly discussed in the draft, but our response says that the dosimetry records would've covered any dose --

MR. FARVER: That's not the issue.

MR. HINNEFELD: The finding is that these people owe a response to the incidents that they identified.

MR. FARVER: So, when the employee --

MR. HINNEFELD: That is the finding.

MR. FARVER: When the claimant gets the report, they see information in there that they mentioned, and it's not saying that nothing was mentioned in the CATI interview.

DR. ULSH: Okay, so the information that's here we should've said in the DR, we considered your incidents and they don't have an affect, or whatever. Okay, I understand.

DR. MAURO: Now, let me understand. That protocol to do -- you know, mention the CATI in the DR, that didn't come into play though until after this DR was done?

MR. HINNEFELD: I am hoping that to be true, John. I'd have to -- again, you're talking about reconstructing an instruction I sent to ORAU. So, it's going to take me a while to figure that date out if you want me to do that. It's my belief that it predates that.

CHAIRMAN GRIFFON: I think we should. I mean we --

DR. MAURO: That's important because then it's not a QA problem. If the dose reconstruction is not correct, and at the time it was done there really was no provision to explicitly require DR to mention in the DR, the dose reconstruction, the integration of the CATI, I would say it's not necessarily a QA problem.

MR. FARVER: Well, no, I differ on that because --

DR. MAURO: Okay.

MR. FARVER: -- the DR report specifically states, no radiological incidents that may have impacted this dose reconstruction were reported by either the DOE, or mentioned in the CATI.

DR. MAURO: Oh, okay.

MR. HINNEFELD: Now, let's think about this, if we really want to talk about this, what the sentence is that there were no

incidents that affected the dose reconstruction report. That is what the statement says. And so, if -- so the person writing that statement said, I have all the information elsewhere. I'm using this. What he told me does not affect what I did in the dose reconstruction in terms of the calculation of it.

Now, a claimant reading that will say, it's an insensitivity issue. It's not a QA issue; it's an insensitivity issue.

MR. FARVER: Well, if the statement would've been that incidents that were affirmed or considered within the dosimetry data or that usual statement that's been used in that, that's different because that would've been a true statement.

MR. HINNEFELD: Well, what is there is a true statement to the -- to the person who wrote it. It's probably not a true statement to the person who is reading it.

MR. FARVER: Correct.

MR. HINNEFELD: The claimant says, I gave -- I told them that, and they say there weren't any. It's a matter of sensitivity. It's not QA. I don't want to get excited about this. I don't think it deserves the time because on the QA list, we're just going to say, we fixed this already.

MR. FARVER: Correct.

CHAIRMAN GRIFFON: Yes, right.

MR. HINNEFELD: It's not a big deal, and we shouldn't spend any more time on it.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: I'm just trying to defend this guy. I don't think he intentionally lied to the claimant.

MR. FARVER: No, no. This was one of our ongoing issues that we've had before, and probably -- I think has been corrected.

DR. ULSH: But are we going to classify it as a QA concern?

MR. HINNEFELD: That doesn't

matter. If it's on the list --

MR. FARVER: It's going to go away.

CHAIRMAN GRIFFON: Yes, yes. It's all the same for us. It doesn't matter.

DR. ULSH: So, is there -- is this closed then, or is it follow-up action, or what?

CHAIRMAN GRIFFON: The only problem I have is that is -- if Stu, you can find that date --

MR. HINNEFELD: You guys are putting a lot of faith -- or one of us is putting a lot of faith in my email filing, let me tell you.

MR. FARVER: All right, 162.1. This is where we were unable to reproduce the NIOSH-assigned photon doses. And the NIOSH response goes through and explains about the DCF. It was done with a Crystal Ball calculation, Monte Carlo calculation.

The only question we have that

comes out is there's a discrepancy in the dose, whether you do a Monte Carlo calculation or you just do a straightforward manual calculation, we'll call it, of seven rem to 10.5 rem. Is that an acceptable difference? It's only -- and at what level is it unacceptable, I guess, is the question.

This is going to come up in another finding, where it's only about 32 percent of the manual calculated value. By manual, I mean where you use the -- the DCF value out of -- is it IG-01?

MS. BEHLING: Does it mean DCF value out of IG-01? Yes.

MR. FARVER: Yes.

MS. BEHLING: Deterministic.

MR. FARVER: Instead of using the Monte Carlo calculation, is there a level that's too far off, or not? It's more of an observation than it is a rebuttal or anything.

DR. ULSH: It doesn't -- not knowing the specifics of all of this, it

doesn't seem to me that you want to set up a condition that this percentage is acceptable and this percentage is not. What you're really concerned about is, does this have an affect on the PoC that could affect compensability. That would be the real question, right?

MR. HINNEFELD: Well, I don't know. You're saying that -- you're saying that the differences between using the most likely value for DCF and IG-01, versus the range of values of DCF. Is that what we're talking about?

MR. FARVER: Yes. The -- it's where your Crystal Ball uses the range of DCF in a triangular -- is that what it is, triangular distribution?

MR. HINNEFELD: Well, to my way of thinking, the distribution of -- if you have a distribution of values, and you're going to hang your hat on this as your distribution of values, then using the distribution of Monte

Carlo is always preferable to whatever you would select from that distribution, unless you're intentionally trying to overestimate or underestimate. Is that not right?

DR. ULSH: I mean, when you do the distribution, usually you're trying to be more accurate than overestimate yourself.

MR. HINNEFELD: And you throw in -- you know, it includes and drags along the uncertainty of the distribution into the uncertainty of the dose result, which IREP then accommodates uncertainties in the dose calculations. So, I -- to me, it would always be more appropriate --

MR. FARVER: It would always be more appropriate to use --

MR. HINNEFELD: It's always more appropriate to use the distribution than some selected value, whether it be the maximum likelihood value of the distribution, or some other value of distribution.

DR. MAURO: So, what's interesting

is, usually when you use the full distribution as opposed to the median, you end up coming up with a higher dose, I believe. However, I guess when you have this triangular distribution where the mode is in the triangle could very much have an effect on where it would come out. And in this case, by using the mode, you actually come up with a dose that sounds like a little bit higher as opposed to the deterministic approach.

That would be like one quick response to this. The other one is that I do notice that in some cases, you used up distribution. In other cases, you use just mode from Appendix B here for the dose conversion factor. It's a consistency issue, especially if it turns out some cases using the full distribution you come up with a lower dose.

MR. HINNEFELD: You actually use the mode of a distribution rather than, say, the max?

DR. MAURO: You always use the -- no. You always use the mode. I have seen the max, too. In other words, I've seen -- I've seen them all in cases that I've reviewed.

MR. HINNEFELD: You've seen the mode?

DR. MAURO: I've seen you use the mode to the point of the triangle, the full distribution, and I've also seen using the max, but that's rare, though.

MS. BEHLING: Generally, when you're doing a best estimate case, they do use the -- run the Monte Carlo.

DR. MAURO: Oh, okay. So, this might simply be one was a best estimate; one was a maximum -- well, if it was maximized, I would've assumed they would've used the max. But I have to say I've seen the mode most of the time. I know, Kathy, you've seen the same thing.

MS. BEHLING: Well, again, it depends on the cases -- the workbook didn't

have the Monte Carlo techniques put into that workbook for the dose reconstruction on it. They also have the OTIB-12 that they can rely on. So, most of the cases that we're seeing now, they do run the Monte Carlo.

DR. MAURO: Okay. In my experience of primarily reviewing the course of the AWEs, and maybe that's why it's a little bit different world.

DR. ULSH: Should we just take this back and respond to it?

MR. FARVER: Well, no. I mean it's -- it's -- if your belief isn't it's always better to use Crystal Ball or the Monte Carlo.

DR. ULSH: It's not necessarily always better. It's more accurate.

MR. FARVER: Okay.

DR. ULSH: I mean if it's an overestimated case, then using a max value or whatever is --

MR. FARVER: The reason I raise

this question is if you go down to 162.8, when we're looking at the neutron doses, the value of the Monte Carlo is only 32 percent of the deterministic value.

DR. ULSH: Okay.

MR. FARVER: Which is quite a difference.

MS. BEHLING: I guess the only other thing that we need to look into -- I mean I would think that you need to look into for -- this is a Rocky Flats case. And I know under the Savannah River earlier workbook that was for Savannah River, the range of the DCF values, they used a range of all of the exposure geometry rather than just the AP geometry in the workbook.

Now, that might have a tendency for certainly -- to maybe have a lower dose than using the mean value. So, I think one of the things we should look at is that I know that has been changed in Savannah River workbooks, and now looking at the range only

for the AP geometry, I'm not sure if that might've impacted this particular case or not, because I'm not familiar with the Rocky Flats.

MR. FARVER: Well, I bring this up because when we do these reviews, one of the things we do is we try to reproduce the doses in using deterministic methods, not Monte Carlo calculations. So, when we do our calculations, and they don't match the Monte Carlo, or aren't even close, we tend to question them more.

DR. ULSH: The ones that you calculate are higher than what we calculated with?

MR. FARVER: In some cases.

DR. ULSH: If the deterministic value is a maximizing assumption, I wouldn't be surprised by that.

MR. FARVER: In some cases --

MR. HINNEFELD: If you're even trying to -- if you use the mode as a deterministic value in trying to distribution

weight -- the way those triangular distributions are shaped, the mode -- the mode as a deterministic is going to have a higher result than the probabilistic. That's almost a given just because of the shape of those triangular --

MR. FARVER: And usually if it's a difference of 10, 20 percent, we just -- we just do the Monte Carlo calculation.

MR. HINNEFELD: If you used a deterministic calculation, what kind of distribution -- what kind of uncertainty would you have on your dose result? You say, if you -- you did your dose reconstruction, and you did it deterministically?

MR. FARVER: Basically, it would be the TLD result times your organ dose conversion factor.

MR. HINNEFELD: So, then you used --

MR. FARVER: Plus if there's any kind of --

MR. HINNEFELD: Then it'd be a normal distribution from the TLD reading?

MR. FARVER: Yes.

MR. HINNEFELD: So, you would then have a normal distribution on your result -- normal kind of constant --

MR. FARVER: Yes, plus any uncertainty in the dosimetry results from the TBD.

MR. HINNEFELD: Okay, so you'd have some sort of uncertainty from your TLD reading, then?

I mean really the relevant question is actually more complicated than this, since the -- since the dose -- since the compensation decision is made in the 99th percentile of the resulting final IREP uncertainty, what's -- what's -- what has more relevance here to the -- to the outcome of the case is that the value in Column 1 of IREP, or is it the -- some measure of the distribution of the tail of that value?

And to be honest with you, it's hard to say because IREP is actually -- the result from IREP is actually the combination of uncertainties from each freaking year and -- plus uncertainties in cancer models. So, it's almost too complicated to even discern which would be --

DR. MAURO: And what we'd do with that is we come up with a higher dose. You actually come up with a higher PoC when using the full distribution.

MR. HINNEFELD: I figure the only way to know is to run it both ways all the way through IREP.

CHAIRMAN GRIFFON: Right.

MR. FARVER: I'm just wondering what to do when this happens the next time, where we come up with this big difference between what we calculate and what the Monte Carlo dose is. Do we write it up as a finding? Should we question it? Should we let it go? And then I don't know how to

handle that.

MR. HINNEFELD: Well, to me, like I said, I don't know of a reason why any particular value off of the distribution -- unless you want to take issue with the distribution.

CHAIRMAN GRIFFON: Distribution itself, yes. Right, right.

MR. HINNEFELD: Unless you want to take issue with the distributions themselves, I don't understand any particular situation where picking a point from the distribution and using it deterministically is preferable to using the probabilistic full distribution.

CHAIRMAN GRIFFON: I don't know if distributions are defined in --

MR. HINNEFELD: IG-01. And in fact, IG-01 may have a finding about these distributions. I'm not sure it doesn't.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: I'm not sure that that's been resolved yet.

DR. MAURO: I don't think we have any -- I have to say it to Kathy. I know Hans did the review of OCAS IG-01. I know we had some problems with the other -- not the AP, but the others. I don't know if we ever looked at the actual distribution that were used and the basis for them.

MR. HINNEFELD: I think Bob Anigstein, at some point in this process, did come up with some issue about that.

DR. MAURO: Okay.

MR. HINNEFELD: I think there's one there. So, I'd say if it comes up again, just be quiet about it, and just figure it's going to get taken care of. I mean, if we can verify that; if we can verify that on the IG-01 there is this finding about distributions Bob Anigstein has either identified during the ongoing process and has contributed to, and --

CHAIRMAN GRIFFON: Wanda is going to look that up.

MR. HINNEFELD: -- it should go

there. I really think that -- I think there's something there.

CHAIRMAN GRIFFON: Yes. I remember a discussion about it. I'm not sure where it was left.

MR. HINNEFELD: I don't know where it is now.

MR. FARVER: I mean, I understand why it's different because one is a Monte Carlo calculation. The other one is --

CHAIRMAN GRIFFON: I'm not sure it's a case finding, unless it's more of a -- if we have issue with the general use of the --

MR. HINNEFELD: I mean --

CHAIRMAN GRIFFON: No, no.

MR. HINNEFELD: -- probabilistic using full determination. Probabilistic using a full distribution would seem to me to be the preferred way to do it.

CHAIRMAN GRIFFON: Right.

DR. MAURO: For a realistic case.

CHAIRMAN GRIFFON: I mean, other than maximizing.

MR. HINNEFELD: It is the preferred and anything other than that is some sort of shortcut. Sometimes a shortcut is -- is better because it gets the case out quicker.

MR. KATZ: I'm just finding this confusing. So, why would SC&A be running it deterministically instead of using the Monte Carlo like you do?

MR. HINNEFELD: Well, I think when they -- probably when they reviewed this the first time, they may not have had --

MR. KATZ: Well, it's just use of the data of the case.

MR. HINNEFELD: I would guess.

MR. KATZ: So, then it shouldn't arise --

MR. FARVER: I'm not sure we do indicate to use a Monte Carlo.

MR. HINNEFELD: Really?

CHAIRMAN GRIFFON: Kathy, you don't have Crystal Ball? I don't think you use --

MR. HINNEFELD: I think there was a computer security issue. If it's the ball we're using --

CHAIRMAN GRIFFON: Right, which threw me off because I have Crystal Ball.

MS. BEHLING: This is Kathy. We don't have Crystal Ball. The only way we would run it is through the workbooks that are provided.

CHAIRMAN GRIFFON: Yes, yes.

MR. FARVER: But if they're old workbooks, they may not work.

CHAIRMAN GRIFFON: Yes. Well, if it was used in this case, and the workbook was with this case, it should work. Right?

MR. FARVER: Well, all you see is what was run.

CHAIRMAN GRIFFON: Yes, yes.

MR. FARVER: I'm not sure if you

could run it again.

CHAIRMAN GRIFFON: Just to verify?

MR. FARVER: Right.

CHAIRMAN GRIFFON: I see what you're saying.

MR. HINNEFELD: Well, I guess we should be able to provide the workbooks for the reviewers.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: I mean, I agree. I accept their response. That's fine. I'm just kind of wondering how we're going to handle this in the future with large differences. We may have to bring it up again.

MR. HINNEFELD: Well, I would think the way to handle it is for us to provide the workbook, or the capability to run probabilistic conversion to the reviewer. I think that'd be the way to handle it.

CHAIRMAN GRIFFON: Yes, yes.

MR. HINNEFELD: Now, if you say, hey, I can't run --

MR. FARVER: Now, sometimes you can take the values out of OTIB-12.

MR. HINNEFELD: Which one is that?

MR. FARVER: That's the Monte Carlo -- it gives you values in there that approximate a Monte Carlo calculation.

MR. HINNEFELD: Okay.

MR. FARVER: Now, sometimes you can do that. I don't believe it covers all the neutron energy ranges for -- something is missing out of it. Or maybe it is flow energy protons.

MR. HINNEFELD: I think the way to handle it in the future is that the reviewer runs into a case where they can't reproduce -- it was done probabilistically, and they can't reproduce, to let us know, and we'll -- we should be able to provide the capability --

MR. FARVER: Okay.

MR. HINNEFELD: -- to run it probabilistically. That'd be the way to solve it in the future.

CHAIRMAN GRIFFON: Yes, yes.

MR. HINNEFELD: I mean you guys are in our system.

CHAIRMAN GRIFFON: Right, right, yes.

MR. FARVER: And if it's 10 or 20 percent difference, we probably aren't going to think anything of it. It's when we get things that are much more different.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: So, where do we stand on this one?

MR. FARVER: You can close, I guess, 162.1 and 162.8.

CHAIRMAN GRIFFON: Eight, all right. Okay.

MR. FARVER: Okay, 162.2: this is recorded doses. Less than LOD were used to assign photon doses. This was an old issue. It's been corrected in the -- gosh, I believe it's been corrected in the workbook. Yes. So, it's an okay response.

CHAIRMAN GRIFFON: Okay, 162.2. SC&A is in agreement?

MR. FARVER: Yes.

DR. ULSH: So, can we close it?

CHAIRMAN GRIFFON: Yes.

DR. ULSH: Okay.

CHAIRMAN GRIFFON: If everyone is in agreement.

MS. BEHLING: Can I assume that this type of error is -- again, I'll go back to the Savannah River workbook. Is an error along with the range of the DCF values. They were corrected in the workbook. Is there any reason for us to go back and look at cases that were done prior to the correction of that workbook?

I'm just wondering in some cases, maybe not this particular issue. The LOD over two issue, or less than LOD over two? But I'm wondering with regards to DCF ranges when they use the min and the max that incorporated PA geometry and all of the different geometries,

I'm just thinking that there could be certain types of instances where you might want to revisit those, and I wasn't sure if NIOSH had any intention of looking at that, or in the PER associated with that.

CHAIRMAN GRIFFON: Yes, that's the question: is it a PER issue?

MR. SIEBERT: Actually, I believe it was run in the PER. I'm looking through the PER to see which one it is.

CHAIRMAN GRIFFON: Okay.

MS. BEHLING: I didn't see it among the PERs that were currently issued.

MR. SIEBERT: I know we've done that review at work. I just don't know as an actual PER or not.

MR. HINNEFELD: I was thinking we didn't do a PER on this. I mean you're talking about the external ranges on DCF values. And to me, this is not a -- you can have a fairly minor adjustment, I think.

MS. BEHLING: I think so too,

generally on this less than LOD over two. It's just that sometimes when people worked in the early years, and they exchanged badges on a weekly basis, maybe they didn't have --

MR. HINNEFELD: Yes. Well, I know a huge number of the Savannah River cases, not almost every one, but most of them were relooked at as the -- with the Super S plutonium. And so, the new workbook worksheet would've been done when they were working on that for Super S. Certainly, a huge number of Savannah Rivers were redone.

CHAIRMAN GRIFFON: On the Super S. So, they would've been caught for these new procedures anyway. Yes, yes. All right, good point. I'm not sure where we can go from there.

MR. HINNEFELD: I don't -- I don't know how to go about that. We could do some preliminary checking about the population of Savannah River claims that were --

CHAIRMAN GRIFFON: Rerun for Super

S.

MR. HINNEFELD: -- rerun for Super S. How many were, and how many were not.

CHAIRMAN GRIFFON: Right, right, were not.

MR. HINNEFELD: Get that number.

CHAIRMAN GRIFFON: And was the percentage near 50?

MR. HINNEFELD: And what are the distribution of PoCs? Because they'd have to be pretty close to 50 for that to happen.

CHAIRMAN GRIFFON: Exactly, yes. That may make the issue go away if we can do that.

MS. BEHLING: All the various different types of cancer.

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: Make sure we look at all the varieties of cancer, breast cancer, that type of thing. That's what's going to be the most impacted.

MR. HINNEFELD: Is that right? Is

breast the one that has the biggest impact?

MS. BEHLING: Yes.

CHAIRMAN GRIFFON: Okay. Thank you, Kathy. Good point. So, Brant is capturing that action, right?

DR. ULSH: Trying to. Check the SRS claims that were not rerun for Super S, and of that group, ones that were close to 50 percent.

MR. HINNEFELD: Well, why don't you hang on and put them into some sort of histogram or something by -- by probably foundation value and then another histogram by cancer type, cancer model.

DR. ULSH: But we're still interested in focusing on the ones that were not rerun for Super S?

MR. HINNEFELD: Yes, only those. Because the ones that were re-run for Super S were done with the new worksheet, the new workbook.

CHAIRMAN GRIFFON: And the ones

that pre-date the new workbooks, right? That's the ones you're interested in.

MR. HINNEFELD: Yes, maybe that would be done before the new workbook.

MR. SIEBERT: Just to let you know on our side, I'm checking with Keith McCartney on when we did the update to the ECDW tool, and I swear we did a review on this and I just can't track it in the PER. So, I'll let you know what I find.

CHAIRMAN GRIFFON: Yes, if you have documentation on that, that will --

MR. HINNEFELD: So, Brant give it to Scott before you do anything on it.

DR. ULSH: All right.

CHAIRMAN GRIFFON: Okay, Doug, go ahead on then.

MR. FARVER: 162.3. Failure to account for gaps in recorded photon dose. Reviewing the dosimeter history found 78 -- we found 78 times during the period of 77 to 94 when there were breaks in the badging cycle.

And the Technical Basis Document says that when there are gaps in the employees records, the claimant-favorable assumption is that the dosimeter was lost and dose should be assigned for that period using dosimetry data preceding and following that period, and that was not done.

So, that's the basis for the finding. Basically, NIOSH agrees that that was not done. It wasn't done, so --

DR. ULSH: And it has been reevaluated and corrected.

MR. FARVER: Reevaluated and corrected.

CHAIRMAN GRIFFON: So, that was 162.3, right?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: So, that closes that out, right?

MR. FARVER: Yes, unless you want to talk about, is there anything that you can do to prevent it from happening again.

MR. HINNEFELD: Yes, if you want to capture it as QA or not.

MR. FARVER: I chose not to put that there.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: And 162.4. Incorrect value used for missed photon dose, and this goes back to 162.1. It was done with a Monte Carlo calculation. So, it was the same issues. So, I would just close this one also, 162.4.

And 162.5 has to do with missing entries in workbook for doses. Apparently, there were two years that were missing, or two lines for 1970. So, this is just another concern that, how could you have missing years or missing entries that did not get caught.

CHAIRMAN GRIFFON: So, NIOSH agrees with this, but it's not going to affect the overall decision. That's the kind of conclusion, right? And you agree with that?

MR. FARVER: I agree it's not

going to -- it's not going to change.

CHAIRMAN GRIFFON: So, it is a QA thing, but it's not -- right, okay. So, we captured it as a QA.

DR. ULSH: So, it's closed?

CHAIRMAN GRIFFON: Yes.

MR. FARVER: And then 162.6 is the less than LOD over 2 concern that we talked about previously. We can close that issue.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: And 162.7 talks about the gaps in the record for the photon doses. It is concerning neutron dose. So, we can close this issue.

And 162.8, this is what we talked about earlier: the difference between a deterministic and Monte Carlo calculation.

CHAIRMAN GRIFFON: We've got this one.

MR. FARVER: This is for missed neutron dose. So, this can be closed. And 162.9, SC&A could not duplicate NIOSH's

americium-241 dose entries. Really, I believe this is a case where the DR file did not contain an IMBA run for Type F americium fitted dose.

It contained an IMBA run for Type F americium missed dose, I believe. And it --

MR. SIEBERT: I'm thrown off because we never used Type F americium, period.

MR. FARVER: I --

MEMBER MUNN: That would make a difference.

MR. FARVER: I believe, in this case, you used Type F americium for the fitted dose. If you go back and check the -- there's an Excel file that talks about the internal dose, and they calculated the missed dose with M. They calculated the fitted dose with F, and they chose the highest dose of the year and used that value.

MR. SIEBERT: If you're relying on Excel, it may be just a misprint in the Excel

because, I mean, I'll have to look at the actual case, but I have a hard time believing we would ever use Type F for americium for anything.

MR. FARVER: I believe the values that were used for the fitted dose were Type F.

CHAIRMAN GRIFFON: Okay, so we need to follow up on that.

MR. HINNEFELD: We'll check that out. We need to follow up on that.

CHAIRMAN GRIFFON: Yes. We're not going to solve it here. So, yes.

MR. FARVER: I'm not even saying it was appropriate or not appropriate. I'm saying that's what was used.

CHAIRMAN GRIFFON: All right. We've had an observation on 162 --

MR. FARVER: That was the Super S. Should be evaluated for Super S.

CHAIRMAN GRIFFON: So, there's no -- I mean --

MEMBER MUNN: It was a reevaluation.

MR. HINNEFELD: Oh, it was?

CHAIRMAN GRIFFON: It was a reevaluation. So, it's closed. I mean it's an observation. Yes, it's closed. Okay, I think we can get through one more, and then --

MR. SIEBERT: Can I go back on that for a second? Doug, can you give me the actual file name where you see that so I can track that down a little easier, please? Or, if you could, just email it to me.

CHAIRMAN GRIFFON: Can you send him the email?

MR. FARVER: I will do that.

MR. SIEBERT: Huge help.

CHAIRMAN GRIFFON: Okay, 163.1.

MR. FARVER: Inappropriate procedure slash method used for assigning recorded dose. The dose listed for 1980 for the kidney cancer is wrong. There were no changes in the PoCs expected.

CHAIRMAN GRIFFON: I'm assuming SC&A agrees with the no change in the PoCs?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: So, this is no further action, right?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Same on the next one?

MR. FARVER: Same on the next one.

CHAIRMAN GRIFFON: 163.3?

MR. FARVER: 163.3. Reviewer concludes that you should have been assigned missed neutron dose. Okay, looks like this is -- this is Y-12. This is where we contend that you should've had a neutron dose assigned at least for 54 through 74, and we're basing that on -- it looks like a statement in the CATI report, where the individual worked in different areas, who was a machinist involving parts and weapons production, weapons instructor.

MS. BEHLING: I also believe that

the dosimetry records actually show zero under the neutron dose column between 1954 and 1974. And then, starting with the records in 1975, there's a blank there. So, it's -- there's a difference between the zero --

MR. FARVER: Yes.

MS. BEHLING: -- and the blank.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: And my understanding is when NIOSH is relying on -- wasn't there a report written that says basically if there wasn't any dose preferred certain date -- oh, it's the one neutron report paper.

MR. HINNEFELD: Well, we wrote the neutron report. I don't know when --

MR. FARVER: There's a statement in there that says if there's no doses by a certain date, then there's -- there should be no more low doses. You know, I think this is one of these cases where it comes down to a judgment call. The employee does have neutron information in the history reported as zeros.

DR. ULSH: But we provided an explanation. I don't know whether you accept the explanation. That's another thing.

MR. FARVER: Yes. And I'm not sure you can -- you can say there's no potential, because based on what he said he did, and at least some of the places he worked there's a potential, and there are zeros.

MR. HINNEFELD: I don't think a machinist would have the source -- the source for the neutrons is uranium fluoride.

CHAIRMAN GRIFFON: But I thought he worked in -- in -- I thought he worked in other areas.

MR. HINNEFELD: Well, his title is machinist.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: He worked in many areas. His job title -- at least at one point, the job title -- you don't know if that's his job title throughout his career. But as a machinist, I don't believe that

there's neutron potential because a machinist would not be necessarily -- there's no reason for a machinist to be around uranium fluoride.

CHAIRMAN GRIFFON: But I mean here I see this weapons inspector. Oh, at the end of his career.

MR. HINNEFELD: For me, it's a matter of, do you believe the fact -- do you believe our comment that the practice was to write down those years even though they didn't read the TLD badge because there was no need to read the TLD badge because he wasn't exposed? Well, I'm sorry, not TLD, the neutron badge.

Our explanation is they wrote down the zero even though they didn't read the badge, and they didn't need to read the badge because there was no reason for him to be exposed. That's our -- that's our argument.

Nothing here really changes that argument, but -- but while, yes, there were neutrons in some places, this guy worked in a

lot of places. The fact is that the site paid attention to where people went, and if they had a potential for neutron exposure, they wore a badge. That's -- that's our point, and that's the argument we made. And I guess you're right. It's a judgment call.

CHAIRMAN GRIFFON: So, in this one-time dose, the 58 criticality, this person was in proximity to --

MR. HINNEFELD: I'd have to go check. I'm not sure what the actual outcome was on what we did on neutrons from that. I know there was -- I know some of what we did, but I don't know what we did for everybody. I'm not real sure what you get neutron-wise, if you get very far.

MR. FARVER: Here's the document I was talking about. Historical evaluation of film badge dosimetry program at the Y-12 facility, part 2: neutron radiation.

MR. HINNEFELD: Yes, yes.

MR. FARVER: And this is where

there's a statement in there to the effect that no positive -- because workers that had no positive neutron doses prior to 62 were unlikely to have received any neutron exposures.

MR. HINNEFELD: Yes.

MR. FARVER: That's why -- that was the basis.

CHAIRMAN GRIFFON: Read that again, please.

MR. FARVER: Workers that had no positive neutron doses prior to 62 were unlikely to have received any neutron exposures. So, unless you had a neutron exposure before 1962, they were not going to assign you a neutron dose.

CHAIRMAN GRIFFON: Well, they certainly had this 1958 incident, I guess. It's a unique circumstance.

MR. HINNEFELD: That might be it; a unique circumstance. I don't think that necessarily means --

MR. FARVER: I know that is one of the statements that is relied upon that, if you didn't have an exposure before 1962, they typically are not going to assign you a neutron dose. Banking on that statement and that document -- John, do you have any concern with that document?

DR. MAURO: No. I can't speak to it.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: It just makes me wonder about this guys work experience, if he was in the proximity of this 58 criticality.

MR. FARVER: Well, I thought we had some issues with that document.

CHAIRMAN GRIFFON: Another run-of-the-mill machinist.

MEMBER POSTON: These could be chemical operators.

CHAIRMAN GRIFFON: Yes, it is.

MEMBER POSTON: And criticality at

Y-12 was a liquid --

CHAIRMAN GRIFFON: Yes. So, what was he doing in the area?

MR. HINNEFELD: He was in the building. I mean they were -- they did machining --

MEMBER PRESLEY: Well, they did the machining, but we also had machinists back there that cut up the pieces that went into the casting furnaces and stuff like that. There were a lot of jobs at one time right there at the -- on the other side of the room. We had machines where the machinist actually worked in the same room with the casting furnaces and the cut up area, everything.

CHAIRMAN GRIFFON: So, there were a lot of people in that proximity that could've received that kind of dose.

MEMBER PRESLEY: No, no, no, no, not that criticality.

MEMBER POSTON: That criticality was well documented.

CHAIRMAN GRIFFON: Right, right.

MEMBER POSTON: There was only about four people in that room.

MEMBER PRESLEY: Yes, four or five. That was it.

MR. HINNEFELD: Yes, and in fact their report -- you can read the report.

CHAIRMAN GRIFFON: Yes, I know. I've seen the report.

MR. HINNEFELD: John, you may be able to help out.

CHAIRMAN GRIFFON: This guy was assigned 20 rem from this event, right?

MR. HINNEFELD: What?

CHAIRMAN GRIFFON: That's what it says.

MR. HINNEFELD: No, that was in the first DR that we ran. We did a miss -- with all those misses the first time. Even going in it, a 20 rem missed dose to the kidney wasn't --

CHAIRMAN GRIFFON: Oh, I'm sorry.

All right, all right.

MR. HINNEFELD: It's one of those deals with cancers you don't want to overestimate that far.

CHAIRMAN GRIFFON: That's what threw me off. I thought I saw the criticality incident --

DR. ULSH: I was wondering where you're going.

CHAIRMAN GRIFFON: All right. I was off-base. Sorry.

MR. HINNEFELD: The people who were close to the criticality event that had their dose reconstructed at the time are -- we know by name. We have the report. We know them by name.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: There were other people in Y-12 at the time who evacuated, right, John?

MEMBER POSTON: That's correct.

MR. HINNEFELD: Now, the neutron

dose, once you get very far, I think John we had an opinion on this. I suspect even by inverse square, once you get very far, this is going to be disappearingly small. So, to me, there may be something. You may be dealing with something other than fear, but --

CHAIRMAN GRIFFON: No, it's the last thing that I read, and I -- I was skimming this and thought that 20 rem was associated with the -- but the last line says, SC&A believes that NIOSH should've, in addition to the one-time neutron doses assigned for the 58 criticality incident. That to me said that they assigned something for the criticality incident. I thought it was the 20 rem. I misread that.

MR. HINNEFELD: Okay.

DR. ULSH: So, where are we?

CHAIRMAN GRIFFON: But what was assigned for the criticality accident in this case?

MR. FARVER: I don't think they

were assigned anything.

CHAIRMAN GRIFFON: Weren't assigned anything, okay.

MR. HINNEFELD: I don't know.

CHAIRMAN GRIFFON: So, where are we on this one?

MEMBER MUNN: He wasn't there. If he wasn't listed on the incident report, then he wasn't there.

MR. HINNEFELD: Well, see, I don't know what we did about other people in the building. I don't know what we did.

CHAIRMAN GRIFFON: I know I saw criticality assignment numbers somewhere in this thing.

MEMBER MUNN: They would've been listed on the incident report.

MR. HINNEFELD: No. I don't know. I don't think the incident report has everybody who was like at 9212. I don't think so.

MEMBER POSTON: It's not a small

building.

MR. HINNEFELD: No.

MEMBER POSTON: It's the largest building at Y-12. A typical criticality accident is about ten to the 17^{th} fissions. You can figure it out. You can r-square it.

MR. HINNEFELD: Yes, you can do the r-squared.

MR. SIEBERT: Looking at the original assessment under the radiological section, it is discussed that we assigned criticality, 1958 criticality. Assigned 1.135 and 1.36.

MR. HINNEFELD: So, you assigned them about a rem for the criticality.

MEMBER MUNN: If he's not one of the people who is listed, that seems very --

MR. HINNEFELD: Yes, yes.

MEMBER POSTON: That's a huge estimate because --

MEMBER MUNN: Yes.

MEMBER POSTON: -- it takes -- to

get a rem you need ten to the ninth neutrons. And if you only had ten to the 17^{th}, that means you had to be pretty close.

CHAIRMAN GRIFFON: Well, that's --

MEMBER POSTON: That's very conservative.

CHAIRMAN GRIFFON: I guess you could turn it around, and say, does NIOSH know something that I don't know. Is it closer to this? You know.

MR. HINNEFELD: I don't know. Sitting here today, I can't --

CHAIRMAN GRIFFON: Right. I think it was part of just a conservative estimate. Where do we go from here with this one? That's the question.

MR. FARVER: Well, I believe they assigned a -- you assigned a photon dose for the criticality?

MR. HINNEFELD: I don't know.

MR. FARVER: And not a neutron dose. Is that the -- that might be the basis

for that statement: that you applied one but not the other, and I don't -- I don't know offhand. I know the concern over the other neutron doses, really, has to go back to that -- that program document, ORAU TR Report 0033, where the statement is in there that unless you have neutron doses prior to 62, it's unlikely you ever received any neutron exposure. Therefore, even though you got zeros in your dosimetry record, we're not going to assess any kind of missed dose.

MR. SIEBERT: Photons and neutrons were assigned to the criticality.

MR. FARVER: Okay.

MR. SIEBERT: Looking at the IREP sheet, yes.

MR. FARVER: They do assign a one-time neutron dose. Then it just goes back to should the zeros be assessed or not?

CHAIRMAN GRIFFON: Then that goes back to, do you believe that that was the practice or not. What does that verify?

DR. ULSH: So, it looks like the DR was done in accordance with that report that you're citing.

MR. FARVER: It was done in accordance with that report. It's --

DR. ULSH: The question is do you believe the report?

MR. FARVER: I know some of our folks have some concerns about the -- that report.

DR. ULSH: Should it not be a Procedures issue?

CHAIRMAN GRIFFON: Or Site Profile.

MR. FARVER: I don't know if that report has been reviewed by SC&A.

CHAIRMAN GRIFFON: Right, right.

MR. FARVER: Officially.

CHAIRMAN GRIFFON: I think this came up in Site Profile review for Y-12.

MR. FARVER: Probably.

CHAIRMAN GRIFFON: But we kind of

dropped it once the SEC issue was --

MR. HINNEFELD: It's still on our to-do list.

CHAIRMAN GRIFFON: It is, yes.

MR. FARVER: Okay. If that's the basis for it, then --

CHAIRMAN GRIFFON: It might be -- it might make sense to send it to the Y-12 -- I mean so we don't go through this same process again with this Committee, it might make sense to go to the Y-12 Site Profile Review Committee. It seems like they followed the procedure. The question is, do you believe the Technical Basis for it, and that goes back to the Site Profile.

DR. ULSH: Does that transfer to Y-12?

CHAIRMAN GRIFFON: That's what I would say if people agree with that. The question is reinstituting that Work Group, too.

MR. HINNEFELD: We'll need to move

pretty quickly. We want to make sure we're on the same page in terms of the remaining lines and minuses you find.

CHAIRMAN GRIFFON: Okay, so it's going to be closed for this case, but transferred to the Site Profile Group, which doesn't exist.

MR. KATZ: Are there other reasons to reconstitute that Work Group?

CHAIRMAN GRIFFON: There are remaining -- yes. There were remaining ones.

MR. HINNEFELD: There were remaining non-SEC findings that --

CHAIRMAN GRIFFON: Non-SEC findings that we just never got back to.

MR. KATZ: Are those pressing that that's a Work Group that we need to reconstitute in the near future, or --

MR. HINNEFELD: Well, I mean it should be reconstituted. It's set in priorities in terms of what the Board wants to accomplish. I mean, these issues now that

we're dealing with that are -- you know, we're not stopping dose reconstructions.

MR. KATZ: I know.

MR. HINNEFELD: So, we don't have really a horse in the race in terms of how these various open issues are resolved. And we want to work in a fashion that best suits the Board's purposes.

MR. FARVER: 163.4 concerns the medical dose, X-ray dose conversion to organ dose. And as you see in our response, we still believe that the dose reconstruction did use the male lung.

I mean I understand what you're saying about the -- you talk about the female lung, but that's not what the concern is. Should've used the liver instead of the male lung, which would've resulted in a slightly larger dose.

We don't have any difference of 147 millirem, but it's just a matter that it was not the correct organ that was chosen.

DR. ULSH: Our response, at least, says that the organ dose listed for the male lung from ICRP would also apply to the liver. And then what you're saying is we should've used the liver instead of the male lung. So, I see a disconnect somewhere here.

MR. FARVER: Yes. I think it all hinges on -- oh, and I didn't quote the table in there. But if you go to that table in the technical -- in the Site Profile about the X-rays, the medical, the -- there is one value that is slightly larger than the other, and --

DR. ULSH: And that's not the female. It's the male.

MR. FARVER: Yes.

MEMBER MUNN: Has any revision been made --

MR. FARVER: I'll have to look it up real quick.

MEMBER MUNN: Has any revision been made to the medical TBD?

MR. HINNEFELD: Was it the -- was

this the -- I don't know.

DR. ULSH: Our response says -- I don't know.

MR. FARVER: I'll get you the table number real quick.

CHAIRMAN GRIFFON: When you say the medical TBD, what's -- what's --

MR. HINNEFELD: The medical dose chapter. Site Profiles have six chapters in health TBDs.

CHAIRMAN GRIFFON: Oh, the section --

MR. HINNEFELD: But this is a Site Profile.

CHAIRMAN GRIFFON: It would be a section of the Site Profile.

MR. HINNEFELD: Section of the Site Profile.

MR. FARVER: I think this is a Y-12 case.

MS. BEHLING: Yes, Y-12.

MR. FARVER: Okay. So, if you go

to tables at the back, table for -- let's see which year. 1994. So, they're looking for Table A5.

DR. ULSH: A5, okay.

MR. FARVER: The male lung value is slightly smaller than the female lung value, which the female lung value is also the one that's used for the liver and bone surface and remainder: things like that.

So, the female lung value is larger than the male.

DR. ULSH: Okay.

MR. FARVER: And the male value is the one that was used.

DR. ULSH: Well, I'm going to ask an obvious question. Was this a male or female?

MR. HINNEFELD: Well, that's not the issue.

MR. FARVER: That's not it. The issue is it should've been the liver they used.

MR. HINNEFELD: Right.

MR. FARVER: The liver has the same value as the female lung.

DR. ULSH: Oh, I got it.

MR. FARVER: But they used the male one. They picked the wrong value out of the table.

DR. ULSH: I think we're going to have to check that one.

CHAIRMAN GRIFFON: It seems unlikely -- it's a small dose. It seems unlikely it would've reflected this case, but you should check it.

MR. FARVER: Because the way that table is written now, it's the female lung that also applies to the liver, stomach, esophagus.

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: I believe Elyse picked that due to the fact that using a surrogate has a little bit of uncertainty, and she just picked the larger of the male and

female lung values when we used it as a surrogate. Elyse isn't on the call to defend herself, but I'm believing that's the case.

MR. FARVER: Our only point was the lower value was the one that was selected and used instead of the -- actually the one for liver right from the table should've been used.

DR. ULSH: We'll check.

CHAIRMAN GRIFFON: Okay, we've got one more. While I try to close this out, we have --

MR. FARVER: Okay.

MR. SIEBERT: Can I ask what the action item is on that one?

DR. ULSH: For us to go into review SC&A's response, and provide our own response for that.

MR. SIEBERT: Okay, that's easy. Thanks, Brant.

MR. FARVER: 163.5, incorrect intake rates used to assign dose for 1975 to

1979. Co-worker doses.

CHAIRMAN GRIFFON: And you have agreement here, right?

MR. FARVER: Yes.

DR. ULSH: Yes.

MEMBER MUNN: No further action. Should be closed, right?

CHAIRMAN GRIFFON: Yes.

MR. FARVER: I don't know. We could go through and then say that that should've been caught, but --

CHAIRMAN GRIFFON: Did you -- did you look to determine if -- I mean it didn't make a difference to the claimant. Did you check that?

MR. FARVER: It does not make a difference to the claim.

MR. HINNEFELD: If you wanted to tag that as a QA issue, I wouldn't argue.

MR. FARVER: That's the only thing. It probably is just because it's a wrong value chosen.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: So, close?

MR. KATZ: Closed to QA.

CHAIRMAN GRIFFON: And this is an observation?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Question. How was it reached?

MEMBER MUNN: Sounds like a logical answer to me.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: So, the question is asked and answered?

CHAIRMAN GRIFFON: Yes, I mean what -- radiation therapy on the second cancer.

MR. HINNEFELD: Well, there are a couple ways to make the argument. One is I got my first cancer because I worked there. Because I got my first cancer, I had radiation therapy.

CHAIRMAN GRIFFON: Yes. But as a

--

MR. HINNEFELD: Therefore, it's a result of my working there. It's predicated on the argument that the first cancer was due to working there.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Which usually is not established, or you wouldn't -- if it were a compensable claim for the first cancer --

CHAIRMAN GRIFFON: It wouldn't be an issue.

MR. HINNEFELD: -- it wouldn't be an issue. So, essentially the determination would've been for it to be an issue, the determination would've had to have been made that it wasn't Probability of Causation for the first one. Therefore, you can't necessarily tie the therapy to that, to the -- to the work.

MR. FARVER: I just wrote it up as an observation because we didn't know the answer.

CHAIRMAN GRIFFON: Right, right. And that's a policy answer. That's --

MR. HINNEFELD: That's a policy, yes.

CHAIRMAN GRIFFON: Okay, I guess it's a good time for a lunch break. We'll pick it up at 164. We've got 164 through 178.

MR. HINNEFELD: We can go through the selection first. We can do the selection on 13. Everybody should have that.

CHAIRMAN GRIFFON: Right after lunch, you mean?

MR. HINNEFELD: Yes. Because if you want to get through that, that's something you want to get through. This --

CHAIRMAN GRIFFON: Yes, this can go on. It's going to go on anyway. So, why don't we do that, the selected cases, right after lunch?

MR. HINNEFELD: Everybody should've got my email.

CHAIRMAN GRIFFON: And I would say

-- I mean everybody's got to use their own judgment, but if you have a possibility of getting an earlier flight, look into it now.

MEMBER PRESLEY: I have a 1:30. I got to get out of here at 1:30.

CHAIRMAN GRIFFON: 1:30? I mean you might miss a few cases, but a lot of it is -- you know, you're not going to miss -- we'll go over these again.

MEMBER PRESLEY: Yes.

MEMBER POSTON: I'm not going to miss a chance with --

CHAIRMAN GRIFFON: No, no.

MEMBER MUNN: That saves you all kinds of grief.

MR. KATZ: What time are we going to reconvene?

CHAIRMAN GRIFFON: 12:30. Is that all right?

MR. KATZ: Okay.

MR. HINNEFELD: What do you say, 12:40?

CHAIRMAN GRIFFON: 12:35.

MR. HINNEFELD: Thirty-five?

CHAIRMAN GRIFFON: Yes, an hour.

MR. KATZ: Okay, folks on the phone, 12:35 or so, we're starting back up.

(Whereupon, the above-entitled matter went off the record at 11:37 a.m. and resumed at 12:41 p.m.)

A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

(12:41 p.m.)

MR. KATZ: So, this is the Dose Reconstruction Subcommittee Advisory Board on Radiation Worker Health. We're reconvening after a lunch break, and we're beginning to deal with the 13th set dose reconstruction selection.

CHAIRMAN GRIFFON: Good afternoon, everyone. I'm not sure how many everyones are on the line but, Kathy Behling, are you out there?

MS. BEHLING: Yes, I'm here.

CHAIRMAN GRIFFON: All right, because I have a few things that may potentially involve you. Okay so, going through the 13th matrix, the selection, I guess we can just -- there's roughly 48 or 49 in the list. And -- and really, the Board is going to make the final call on these because the full Board hasn't deferred that responsibility to us, but we can do the

initial sort of triage work for them.

So, we can go through this fairly quickly, I think. But I guess just going down the list from the top makes the most sense in this case. And for the first one, I'll just refer to the last three numbers in case we'd only get into identifier situations, or anything like that.

MR. HINNEFELD: Yes, the selection might be the last three digits of the selection ID.

CHAIRMAN GRIFFON: Right, yes. So, 680 on the selection, I think we should include that one.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Here's my first question for the next two, 438 and 541. We have an SEC class. It was just established. I think we talked a little about this on the phone call when I was trying to dial into the Board phone meeting.

MEMBER MUNN: Yes, we did.

CHAIRMAN GRIFFON: Now, where -- I mean I guess I could see the value of doing one of these or the other. Are these -- these are not all listed cancers, are they? I mean do these fall into a list of SEC cancers?

MR. HINNEFELD: You're talking about 438 and 541?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Yes. It's accounted -- DOL interprets that as rectum, and colon is on the list.

CHAIRMAN GRIFFON: Okay.

MEMBER MUNN: But as I recall the discussion that we had before, our discussion was what's the purpose of this review that we're doing now, if the purpose is to determine whether or not those individuals should have been compensated and were not. Then there's no point in doing it because they obviously now would be compensated. But if our -- if our purpose was to identify whether

these were correctly done, as far as internal and external, then they still have value.

CHAIRMAN GRIFFON: Yes. I'm just afraid that we'd get it -- I think Stu made the comment on the Board call that we as a Board have determined that you can't reconstruct dose. And how are we going to do a review here to say whether it's a scientifically value dose reconstruction?

MR. HINNEFELD: Yes. I mean, if you want to make it -- you can check did we follow the guidelines.

CHAIRMAN GRIFFON: Follow the protocol.

MR. HINNEFELD: Yes. You can do that.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Dose reconstruction is typically more than that. Not only did you do what you said you were going to do, but did what you say you were going to --

CHAIRMAN GRIFFON: Exactly.

MR. HINNEFELD: I mean whatever you guys want to do.

MR. KATZ: The point I made during that Board teleconference was that it depends on why the class was added, too. Because you may have a dose reconstruction for which the procedures weren't called into question for the reason that the class was added.

MR. HINNEFELD: Yes. And in fact, that -- that is a pretty good point.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: The closure that added the class would really almost be irrelevant to these cancers.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: I mean then the --

CHAIRMAN GRIFFON: I would -- I would rather do a case with a non-listed cancer if we find one. If we find one that is, let's say, not listed, then I think it would just be cleaner, and we can still -- I

would opt to drop these for now.

MR. HINNEFELD: It doesn't matter to me.

CHAIRMAN GRIFFON: But not to exclude that set forever. I think we should do non-listed ones.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: We'll pass them for now anyway. If we absolutely need some --

MEMBER MUNN: There are no others on this list.

CHAIRMAN GRIFFON: Right, not on this list. But they might come up, and I'm sure they will come up in the future. We'll pass them for now. If we end up very low, which I can't imagine we're going to end up very low on numbers, we can go back.

All right, the next one is 742. I voted to include this just for the sheer reason that the Production Pilot Plant, we haven't looked at before. There is a later case at the same site.

MEMBER MUNN: 742?

CHAIRMAN GRIFFON: 742.

MEMBER MUNN: That's not the next one on my list. I must be looking at the wrong list, because the next one on my list is --

CHAIRMAN GRIFFON: I have a hard copy coming out.

MEMBER POSTON: Mine says 742.

MEMBER MUNN: Then I am clearly -- no. Okay, okay. I was on 541. Sorry.

CHAIRMAN GRIFFON: That's okay. So, I would vote for that one, but later on, three pages later, we have another one from that same facility. I don't think we need to do two from the same site. So, if people feel stronger about the other case, you know, I think we pick one or the other. So, check that one for now if people agree with me.

It's a little over 50 percent. For me, that's sort of irrelevant. It's the new site that's the most important thing.

MR. HINNEFELD: You know, that is Huntington. Production Pilot Plant is Huntington. It's part of Huntington. We had done some dose reconstructions.

CHAIRMAN GRIFFON: We've done Huntington? Is it a model? Is this a separate part of Huntington?

MR. HINNEFELD: No. The plant at Huntington that was covered was the production pilot. It's one place, the Huntington Pilot Plant. I don't know, I guess --

CHAIRMAN GRIFFON: I've never seen it called that before.

MR. HINNEFELD: I'm not sure. I guess, maybe -- did we change what we call this plant or something?

CHAIRMAN GRIFFON: Oh, that is different. So, we reviewed Huntington.

MR. HINNEFELD: I believe this is Huntington Pilot Plant.

DR. ULSH: Yes, I think it is.

MR. HINNEFELD: Yes, or in the

internal dose method. It's the Huntington Pilot Plant.

CHAIRMAN GRIFFON: I'm going to the later pages. I'm sorry.

DR. ULSH: So, are we keeping that one or not?

CHAIRMAN GRIFFON: Well, I would say if it's Huntington, it's one model, right? One model fits all.

MR. HINNEFELD: There were never findings on the model, and we revised that. So, I mean, I believe -- well, it depends on when this was done. I don't know when this was done. It should be on here. Date approved. Yes, see, it was done back in 2006. I thought it was done unrevised --

DR. ULSH: So, keep it then?

CHAIRMAN GRIFFON: I would say skip it. Thanks for the clarification. The printout version I have extends onto later pages.

MEMBER MUNN: I got the same

thing.

CHAIRMAN GRIFFON: So, I'm going to skip that one then. Thank you for that clarification. So, then the next one, 117, I have already voted yes mainly for how close it was to 50th percentile. We've done some other lung cases for this site, but this is a -- I think this is using personal data. It's not a model.

MR. HINNEFELD: With those dates and that control issue, that's --

DR. ULSH: It does say, full internal, right?

CHAIRMAN GRIFFON: Yes. So, that gives -- that's two on that first page. Anyway, moving on to 711. We've done one on this site. This is where I was asking for Kathy's and others' input. That site for 711 --

MEMBER MUNN: I don't think I've ever seen that site before.

MR. HINNEFELD: I think this might

be a TIB-2 case -- it would be a TIB-4 case.

CHAIRMAN GRIFFON: TIB-4? That's not a best estimate?

MR. HINNEFELD: TIB-4 is the overestimate AWE uranium.

MS. BEHLING: Mark, excuse me. Can someone email me the list that you're working from?

MR. HINNEFELD: Sorry, Kathy. I should've done that.

MS. BEHLING: Okay. That's all right. Thank you.

CHAIRMAN GRIFFON: It's on its way. Well, I say that, but it might take a long route through the CDC.

MR. HINNEFELD: It's got to go to Atlanta first.

MR. KATZ: Kathy, this is the same list though that was distributed --

MR. HINNEFELD: It was in advance of the tele-Board conference. I don't know if I sent it to her then.

MR. FARVER: We didn't get it either.

MR. KATZ: Well, it went to SC&A. I don't know whether it went to you specifically.

DR. ULSH: So, what's the decision on 711?

CHAIRMAN GRIFFON: Pass.

DR. ULSH: Pass.

MR. HINNEFELD: Okay, it's in the ether somewhere.

CHAIRMAN GRIFFON: 138. I thought to accept this one.

MEMBER MUNN: Are we still questioning 711?

CHAIRMAN GRIFFON: I said no on 711 because it was not a real best estimate. It was an overestimate.

MR. HINNEFELD: And it's not site-specific. I mean it's not specific. It's TIB-2 --

CHAIRMAN GRIFFON: So, this is a

best estimate. At least part of it is best estimate for LANL, for the next one, 138. So, I vote yes on that one. Anybody objects, just let us know.

MEMBER MUNN: No, I thought these were all good when you picked them last time.

CHAIRMAN GRIFFON: I did too. That's why I say we should still have plenty of cases. 525, again, it looks like at least part of this is a best estimate case. Mallinckrodt, but it's not only Mallinckrodt, it's all three facilities. Right?

MR. HINNEFELD: Well, Mallinckrodt is one facility -- this looks like it could be Weldon Spring.

CHAIRMAN GRIFFON: Yes, and Weldon Spring.

MR. HINNEFELD: Because the class at Mallinckrodt went all the way to the end.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So, they must have less than a year at Mallinckrodt unless we got

this for medical benefits. If they had been paid through the SEC and the dose reconstruction -- that's not possible because the bladder is the --

CHAIRMAN GRIFFON: Right. I still think I vote for that one.

MEMBER POSTON: That's 525?

CHAIRMAN GRIFFON: Yes. 657.

MEMBER MUNN: Yes, best estimate?

CHAIRMAN GRIFFON: I agree with that. Yes. 137, very close to 50 percent.

MEMBER MUNN: Best estimate?

CHAIRMAN GRIFFON: On both sites.

MEMBER MUNN: No.

CHAIRMAN GRIFFON: Rare, yes?

DR. ULSH: That's a keeper.

CHAIRMAN GRIFFON: 137?

DR. ULSH: You want to do that one?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: 753 I also thought seemed good to do. Refresh my memory

on TIB-12. It keeps showing up here, TIB-12. What is TIB-12?

MR. HINNEFELD: John, are you on the phone?

DR. MAURO: What's that?

MR. HINNEFELD: What is TIB-12?

MS. BEHLING: Monte Carlo.

MR. HINNEFELD: Oh, it's Monte Carlo technique?

MS. BEHLING: Yes, so that's best estimate.

MR. HINNEFELD: Okay.

DR. MAURO: Yes.

MR. HINNEFELD: Thanks, John.

DR. MAURO: No problem.

CHAIRMAN GRIFFON: That was just a stall so I could grab a bite of food. All right, so, I vote for 753.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Anybody disagree? All right. Next one is 620. I didn't know if Bridgeport Brass Adrian

facility -- I always get confused which one we did and did not look at. There's two Bridgeport Brass facilities, right?

MR. HINNEFELD: This one is the one in Michigan. That one is the Haven plant.

CHAIRMAN GRIFFON: Kathy, do you know if --

MS. BEHLING: Yes, we do. We looked at both, but we only looked at one at the Adrian plant. In fact, that one was full internal and external but it was compensated. And we looked at four --

CHAIRMAN GRIFFON: And it was a model, right? A one-size fits all model?

MS. BEHLING: Yes.

CHAIRMAN GRIFFON: So, I mean it doesn't really matter if it's compensated or not.

MS. BEHLING: That's true. And in fact, we've reviewed the Bridgeport Brass matrix as part of the eighth set also.

CHAIRMAN GRIFFON: That's right,

and it was Bridgeport Brass Adrian that you reviewed in the matrix?

MS. BEHLING: That's a good question.

CHAIRMAN GRIFFON: I mean that's my question. There's two.

MS. BEHLING: Okay, let me look.

CHAIRMAN GRIFFON: Okay.

MS. BEHLING: I'll get back to you.

CHAIRMAN GRIFFON: We'll come back to that one. We'll put that one on hold for now.

DR. ULSH: This one also has RMI. I don't know if that's different.

MR. HINNEFELD: Extrusion plant. It's two. It's the plant, and then the extrusion plant online, which is in Ashtabula.

CHAIRMAN GRIFFON: That might make a difference because I don't think we've done that one. I don't recall.

MR. HINNEFELD: We wouldn't have

done anything online.

CHAIRMAN GRIFFON: All right, let's check it given that, and then we'll still wait for Kathy's response.

MS. BEHLING: Mark, we looked at those, the Adrian and the Havens Plant. It was for Bridgeport Brass.

CHAIRMAN GRIFFON: Okay, but we haven't looked at RMI, have we? Or Reactive Metals Incorporated? I don't think we --

MS. BEHLING: No.

CHAIRMAN GRIFFON: No? Okay. So, this one has that part of it in too. So, it says, Exposure matrix for Bridgeport Brass Havens Lab and Adrian Plant, summary of extrusion plant site information dose reconstruction.

MR. HINNEFELD: It doesn't say --

CHAIRMAN GRIFFON: I'm not sure exactly.

MR. HINNEFELD: It doesn't say, Haven Online.

CHAIRMAN GRIFFON: Yes, it doesn't exactly say. But I'd think we can explore that anyway. So, I vote for that one. Others agree?

MEMBER MUNN: Sure.

CHAIRMAN GRIFFON: Next one is 564. This will be useful for the upcoming Idaho meeting, Kathy. So, I'm going to ask you now. You know how we've done a summary of the cases up to date by our parameters? Because I would be curious how many Savannah River cases we've projected to review versus how many we've reviewed at this point.

MS. BEHLING: I can put that together.

CHAIRMAN GRIFFON: Yes, for that meeting. I don't expect you to have it off the top of your head now, but it might be helpful. This is another Savannah River case. It looks interesting. It looks like a best estimate. However, I want to make sure because in the overall scheme of things, we

sort of projected more the kind of percentage we want to look at by site, by the different categories.

MS. BEHLING: Yes.

CHAIRMAN GRIFFON: And I offered to do a review of the selection criteria at the next meeting. Good way to kind of summarize it, and look at other criteria and see if we're meeting what we intended.

MR. HINNEFELD: Do you want to have an expectation number for each site as well?

CHAIRMAN GRIFFON: I think so, yes. And it should be based on the number of cases we have now as opposed to the original. I think we were --

MR. HINNEFELD: We were going to do the expectation at 2.5 percent.

CHAIRMAN GRIFFON: Yes, yes.

MR. HINNEFELD: So, it would be easier for us to run that than for SC&A.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: It'd probably be easy for SC&A to run the ones actually gone. I would like them to do that. But we can run the 2.5 percent.

CHAIRMAN GRIFFON: All right.

MR. HINNEFELD: We won't carry that for all 300 sites, but we'll do the major DOE sites, and a couple of --

MS. BEHLING: Great. And if you can forward that to me, too, I can incorporate that into the --

DR. ULSH: And Brant can probably forward it to you.

MS. BEHLING: Okay, thank you.

CHAIRMAN GRIFFON: Yes, because we're interested in those two. So, I would vote for that case right now. So, 564, going back to that: I think we should keep that in the back of our mind. We can address that at the full Board meeting. If we have a lot of cases for Savannah River, as a full Board, we may decide to drop a few of these out.

MEMBER MUNN: I don't think we have any more proportionately than other sites.

CHAIRMAN GRIFFON: Right, yes.

MEMBER MUNN: We'll find out when we crank the numbers.

CHAIRMAN GRIFFON: All right, 587 is the NUMEC Parks Township. Now, I know we've done NUMEC. I'm pretty sure we've done NUMEC, but have we done Parks Township?

MR. HINNEFELD: Yes. Those are the two -- I don't recall.

CHAIRMAN GRIFFON: This is an overestimate, but Site Profile says measured americium, plutonium, uranium. So, it's kind of a -- when it says, measured, I'm assuming that's a best estimate, right?

MR. HINNEFELD: Well, you can -- you can do some overestimating when you have measurements. Going back to NIOSH exchanges and things like that, you can --

CHAIRMAN GRIFFON: But it was,

like, based on personal data, is what I'm saying, right?

MR. HINNEFELD: It looks like we have some personal data. Generally, we can get personal data from the site. I don't know about everybody, but we can get it from the site.

CHAIRMAN GRIFFON: I think that one is --

MR. HINNEFELD: Looks like we have measured americium and plutonium. I mean it looks like we got a bioassay record on them.

MEMBER MUNN: Let's do it.

CHAIRMAN GRIFFON: So, I would include that.

MS. BEHLING: The previous NUMECs that we did were done under OTIB-4.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: Okay, so this is another reason to do it. All right, 572, again Savannah River. Two cancers, 40 percent. It's another lung case using a best

estimate. I mean that's --

MR. HINNEFELD: It doesn't really say for sure. I bet it's not far off. You got measured for this thing. Usually there's a record for the finding.

CHAIRMAN GRIFFON: Yes, there's usually a record. Okay, American Bearing Corp. I think the reason we picked this one was we hadn't done any from this site.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Is this like a TBD-6000, or what is it?

MR. HINNEFELD: Looks like a TIB-4 to me --

CHAIRMAN GRIFFON: Oh, TIB-4?

MR. HINNEFELD: -- from reading the internal and external, it's TIB-4.

CHAIRMAN GRIFFON: Maximum -- well, okay, it wasn't really best estimate.

MR. HINNEFELD: No.

CHAIRMAN GRIFFON: And it's not a Site Profile kind of thing. So, I think we

can probably skip it -- I'll pass on it, yes. And the next one is Huntington. I know that.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Rocky Flats, this falls outside the SEC.

MR. HINNEFELD: Well, we don't have the years of employment on here because we restrict the information on here.

CHAIRMAN GRIFFON: But it says 1950.

MR. HINNEFELD: It started in the fourth decade.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Okay, I don't know.

MEMBER MUNN: Is it best estimate?

DR. ULSH: The area would be in the SEC. The work area, I mean.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: But I don't know.

MR. HINNEFELD: We may have gotten it from -- no, we wouldn't have get it from --

CHAIRMAN GRIFFON: Well, if it's an SEC cancer, you can find that out before the next meeting.

MR. HINNEFELD: Yes.

MEMBER MUNN: So, you do want it? If it's SEC you don't want it?

CHAIRMAN GRIFFON: Well, if it's not, I want to know why.

DR. ULSH: It could be 250 days.

CHAIRMAN GRIFFON: Oh, yes, that's true.

DR. ULSH: I don't know.

CHAIRMAN GRIFFON: No, it says 32 years, though.

MR. HINNEFELD: Don't know. We'll find out.

CHAIRMAN GRIFFON: All right. I'm just going to put a NIOSH check on that one.

MR. HINNEFELD: I'm not sure what all organs track into the other respiratory model, either.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: I don't know if there's any non-listed cancers that would check into that model.

CHAIRMAN GRIFFON: Could be.

MR. HINNEFELD: Can't think of any.

CHAIRMAN GRIFFON: Yes. That's why I'm asking.

MR. HINNEFELD: All right.

CHAIRMAN GRIFFON: DuPont Deepwater Works. Have we done --

MS. BEHLING: We've done one of those.

CHAIRMAN GRIFFON: Oh, we have done one of them. And was it a site model? Was it a TBD-6000?

MS. BEHLING: It was a TBD-6000.

MR. HINNEFELD: 6001, I think.

MS. BEHLING: 6001, yes.

CHAIRMAN GRIFFON: That's right. I do remember now. So, I don't know that we need to do another case because it's the same

model, right, Stu? I mean it would be the same approach.

MR. HINNEFELD: With DuPont? We've done DuPont before?

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: A TBD-6000 one?

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Yes, it would do the same thing. Different sites that use 6001 won't necessarily do the same thing, but a given site I think would.

CHAIRMAN GRIFFON: So, I would say pass for that. How about the next one, Heppenstall. I don't think we've done that.

MS. BEHLING: We have done one, but I'm not sure what we've used there. It's a maximized --

CHAIRMAN GRIFFON: So, this is a --

MR. HINNEFELD: 6001 as well.

CHAIRMAN GRIFFON: Yes. Let's check it, and if it ends up -- I think the

other one was maybe a maximizing approach, right? An older TIB-4?

MR. HINNEFELD: I don't think we would call a 6001 maximized, probably. I don't know.

CHAIRMAN GRIFFON: But I mean the other one that Kathy is referring to.

MR. HINNEFELD: Yes, the other one that was done was -- it did -- I don't think it would be done 6001 and be referred to that way. It was probably a TIB-4 if they call it maximized.

CHAIRMAN GRIFFON: We can check that out.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: But I would say, let's -- let's check it for now. Let's include it.

MEMBER MUNN: That's very low.

CHAIRMAN GRIFFON: It's very low, yes. It is very low.

MEMBER POSTON: Have you included

it at this time?

CHAIRMAN GRIFFON: Yes. I mean at least that's my feeling. It's not so much because men who work here as an experience, but it's really that we're reviewing the Heppenstall model, the 6001 model. Okay, 604, Nevada Test Site.

MEMBER MUNN: What's this one?

CHAIRMAN GRIFFON: That's what I was going to ask. Thyroid non-listed cancer.

MR. HINNEFELD: I think it is. I can find out.

CHAIRMAN GRIFFON: Send the question to NIOSH.

MR. HINNEFELD: I don't want to leave the spreadsheet here. After we're done, I can check.

MS. BEHLING: Back to the Heppenstall, that was OTIB-4.

CHAIRMAN GRIFFON: Right. Okay, so we're going to include this new Heppenstall one. And then the Nevada Test Site we're

going to have NIOSH check out whether it's a listed SEC cancer. If it's not, I would say we should take that. Clarksville facility, 728, page number 728. Have we done anything at that facility?

MEMBER MUNN: Not that I know of.

MS. BEHLING: We've done one.

CHAIRMAN GRIFFON: And was it a -- well, I don't know at this point.

MS. BEHLING: I'm not sure because individual --

CHAIRMAN GRIFFON: This is a TIB-2 here, right? Oh, unmonitored Pantex TBD. So, you're using the unique approach on this. I mean it references the Pantex TBD.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: What was the other one, Kathy? Are you looking that up?

MS. BEHLING: I'm also seeing Pantex on that one.

CHAIRMAN GRIFFON: Okay. Did we get to that one, yet, or is in a -- I don't

recall.

MS. BEHLING: No, we haven't gotten to that one yet.

CHAIRMAN GRIFFON: Okay, okay. But you guys have done it, yes. Well, I would say pass on this one. It seems like a similar approach was used as on the last one. So, I would say pass because Kathy is describing what seems to be a similar approach.

MR. HINNEFELD: I'm betting it was.

CHAIRMAN GRIFFON: Yes. So, let's -- I would say pass on this one.

MEMBER MUNN: So, you're passing on 728 as well as 604, right?

DR. ULSH: 604 we're checking.

CHAIRMAN GRIFFON: 604 NIOSH is going to check first.

MEMBER MUNN: Oh, so that gives them two to check?

CHAIRMAN GRIFFON: Yes. 446: International Minerals and Chemical Corp.

That one I don't recall. Kathy, we didn't do that one, did we?

MS. BEHLING: Yes, we have one. We haven't reviewed that one yet, and it looks like it was compensated, but I don't know. I have to go look.

DR. MAURO: It's John. This is part of the 12th set that we're just finishing up. I remember doing that one.

CHAIRMAN GRIFFON: This says, estimated photon dose based on Blockson site.

DR. MAURO: Yes, that's right. That was one of the problems with it.

MR. HINNEFELD: It's a radon. It's a prostate.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: So, it's relying on the radon model in Blockson, which is certainly going to bring us some issues.

DR. MAURO: Yes, that's correct.

CHAIRMAN GRIFFON: Okay, but you'll have that case.

DR. MAURO: The hard thing about it is I think it's a Florida facility. So, you may not have to use the radon models. You might be able to use the phosphate --

Yes, you got it.

CHAIRMAN GRIFFON: All right.

DR. ULSH: Are we including that?

CHAIRMAN GRIFFON: We have one just like it. So I would say skip this. Skip this one.

MR. HINNEFELD: Thyroid is a listed cancer.

CHAIRMAN GRIFFON: It is?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: All right. It should be in the SEC also. I'm not going to check it for now. I mean that should fall within the -- the -- it was all employees, right? It wasn't -- yes.

MEMBER MUNN: So, 604 is in?

CHAIRMAN GRIFFON: 604 is out. It should be an SEC.

DR. ULSH: So, 604, 728 and 446 are all out?

CHAIRMAN GRIFFON: Right. 364. Okay, Kathy, have we done this one?

MS. BEHLING: No.

CHAIRMAN GRIFFON: That's all I'm going to say.

MS. BEHLING: No, we have not.

CHAIRMAN GRIFFON: All right, all right. So, I think we want to pick that for that reason. And 690, Westinghouse Nuclear Fuel Division?

MS. BEHLING: No.

CHAIRMAN GRIFFON: Any objections to including that? All right, 169. I'm pretty sure we did General Steel.

DR. MAURO: That's for sure.

CHAIRMAN GRIFFON: Yes. And is it the same -- I mean the approach would be the same for all General Steel cases, wouldn't it?

DR. MAURO: Yes, they have exposure matrix.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: They do not have any --

CHAIRMAN GRIFFON: Yes, yes, yes. We've been through the --

DR. MAURO: You got it.

CHAIRMAN GRIFFON: I'm not sure why we picked this one the first time through, but I would say pass on this one.

DR. ULSH: Pass on 169?

CHAIRMAN GRIFFON: Yes. 545, General Atomics?

MS. BEHLING: No, we have not done one of those.

CHAIRMAN GRIFFON: Okay. This is overestimating missed photons and unmonitored. This references Site Profile. Am I right about that? It's the best I can understand it.

MR. HINNEFELD: I believe we have a Site Profile for General Atomic.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: I am fairly sure you do.

CHAIRMAN GRIFFON: I guess I have no objection to looking at this. Not sure if this -- perhaps this individual does not need data. I'm not sure if you have any personal injury data for this site, or if it's more of just Site Profile data.

MR. HINNEFELD: You know, I'm not real familiar with the site.

CHAIRMAN GRIFFON: Right. I think we -- I guess we should --

MR. HINNEFELD: Although we do have an SEC class for it.

CHAIRMAN GRIFFON: It doesn't overlap this time period, does it?

MR. HINNEFELD: I don't know.

DR. ULSH: Do you have the time period on that?

MR. HINNEFELD: Chances are that General Atomics is in the SEC, although the SEC lists certain buildings. You know, the

definition of a class with a certain building, and it's during the 60s.

CHAIRMAN GRIFFON: And this person has no indicated building, right?

MR. HINNEFELD: So, I -- this may not be in this claim. This case may not have done into the class.

CHAIRMAN GRIFFON: Well, I say vote it in for now.

DR. MAURO: This is John. I just noticed there is a General Atomics under the SEC package, but not under the Site Profile for the AWE or the regular one. So, I don't know if there's a special exposure -- if there is a Site Profile for General Atomics.

MR. HINNEFELD: Yes, there is one. There's one on our website.

DR. MAURO: Okay. I just went on the website, too, to find that.

MR. HINNEFELD: Yes, Wanda just pulled one up.

DR. MAURO: Okay. I see they're

on the SEC but not the Site Profiles.

MEMBER MUNN: Approved September 26th, 2008.

DR. MAURO: Okay.

MEMBER MUNN: One hundred forty-three pages.

DR. MAURO: You got it. Okay.

MR. SIEBERT: Number 45.

CHAIRMAN GRIFFON: All right. I know, I was thinking case number. I'm looking at 610 now as the next one, another Savannah River, another best estimate.

MEMBER MUNN: Why not? If the Board wants to check it out.

CHAIRMAN GRIFFON: Yes, we can always look at total number of Savannahs later. So, I would say leave it on for now.

MR. KATZ: So, that's number three?

CHAIRMAN GRIFFON: Three or four of those. Next one is 694. This one is over 45 percent. It's certainly in the later years

of Hanford.

MEMBER MUNN: Well, it's a best estimate.

CHAIRMAN GRIFFON: And it is a best estimate. I say take it, include it. Savannah River, 733. Not as interesting to me. Measured and missed, I guess. Pass on that one. Got a lot of Savannahs.

Another General Steel. Now, this one I can see maybe more -- it is General Steel again, but as Ted was saying, we had a reason for including these when we first went through them. It's the same model. It's Appendix BB to TBD-6000. This one is 49.14, and 24 years. It looks like pretty close to the cut off. I would say we could at least include that one.

All right, here is a Rocky Flats non-SEC model, right? So, I think that's part of the reason we picked this one. 540 I was saying keep it in.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: The next one is maybe -- yes, it is in the covered period for LANL, 288. Short time period, but short time period working there, but beyond the SEC-covered period.

MEMBER MUNN: That's a best estimate too.

CHAIRMAN GRIFFON: And best estimate, yes. I would say yes, include it. That's 288. Do we have a running tab?

MR. KATZ: Yes. We're up to -- that's 19 by my count.

CHAIRMAN GRIFFON: All right, so we have several more pages. Okay, 681, very close to the cut off. Sandia, we might've done some cases, but I don't think many. The best estimate is based on environmental -- or that's actually because of the job title, buyer and cash buyer, whatever that means. Buying cash?

MEMBER MUNN: You said 19 or 18?

CHAIRMAN GRIFFON: I would say

include that one, 681. So, this must be a non-SEC cancer on the next one, 661.

MR. HINNEFELD: Could have it for medical benefits.

CHAIRMAN GRIFFON: Okay. Either way, it looks like an interesting case to look at. It's pretty close to the 50th percentile. Best estimate and measured and missed uranium. Anyway, that's 661. 484: This is cited as Ames Lab, but it also has Jayhawks Works.

MR. HINNEFELD: That's Spencer Chemical.

CHAIRMAN GRIFFON: Okay. Have we done Spencer Chemical?

MS. BEHLING: No, we haven't.

MEMBER MUNN: I don't think so.

CHAIRMAN GRIFFON: It looks like a combination of sites.

MEMBER MUNN: Sure does.

CHAIRMAN GRIFFON: Okay, 484, include that I would say. Next is number 719,

best estimate and missed plutonium/uranium.

MEMBER MUNN: This is an interesting combination of job titles if ever I've seen one.

CHAIRMAN GRIFFON: Oh, yes. What do people think on that one?

MEMBER MUNN: We've done a lot of that both on that site and that type of cancer.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: I can see passing on that one. How about 570?

MS. BEHLING: We have done one from this facility just recently.

CHAIRMAN GRIFFON: And what was the method of dose reconstruction, do you know?

MS. BEHLING: It was just a recent case. I'm not sure. I'll have to look.

CHAIRMAN GRIFFON: This would be S50 --

MR. HINNEFELD: S50 is part of an

SEC class, and we can't really do anything. This would just have medical probably.

CHAIRMAN GRIFFON: I see it says, external can't be reconstructed. Neither can --

MR. HINNEFELD: Internal?

CHAIRMAN GRIFFON: Yes. So, there's nothing for us to review really.

MR. HINNEFELD: No, not from there.

CHAIRMAN GRIFFON: Okay. All right, W.R. Grace, Kathy?

MS. BEHLING: I don't think we've done anything.

MEMBER MUNN: It's best estimate.

CHAIRMAN GRIFFON: Yes, it is best estimate, unmonitored uranium/plutonium so the exposure matrix says. That's interesting.

MEMBER MUNN: External cancers.

CHAIRMAN GRIFFON: Yes, yes. That's true. We're really reviewing the -- we -- we do those mini-Site Profile reviews on

those.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Let's make a note of that, though, Wanda. You're right. If we have a more interesting cancer that we can use as part of the model, that would be preferable.

All right, 629, have we done that site?

MS. BEHLING: No.

CHAIRMAN GRIFFON: Thirty-eight years of experience.

MR. HINNEFELD: There's a class. So, there may not be any.

Yes. I mean it would've been paid through the class, but -- probably. But there may not be a component. CHAIRMAN GRIFFON: Yes. It says, cannot be reconstructed for SAM laboratory as overestimate. Unmonitored for external.

MR. HINNEFELD: SAM stands for Special something Materials.

CHAIRMAN GRIFFON: All right, we're going to pass that one for now. 744 is Alcoa.

MS. BEHLING: I don't see that on my list.

MR. HINNEFELD: Looks like it's a specific appendix to 6001.

CHAIRMAN GRIFFON: Appendix R, okay.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: So, include it? Sounds like a lot of work for John coming up.

DR. MAURO: I love it.

CHAIRMAN GRIFFON: I was waiting for your response.

DR. MAURO: I had to pick up the handset.

CHAIRMAN GRIFFON: Making sure you're out there. Okay, 358, Pacific Proving Ground. Have we --

MS. BEHLING: I don't see that on our list here.

DR. MAURO: I don't recall. I would remember Pacific Proving Ground.

MR. HINNEFELD: There is a class for that.

CHAIRMAN GRIFFON: There is a class, and the internal cannot be reconstructed with it. Is that -- and the other is an overestimate. Doesn't seem like it's anything site-specific that we're going to be reviewing.

MR. HINNEFELD: There might. We get exposure records sometimes. Not for every case, but we do get exposure records.

CHAIRMAN GRIFFON: Yes. It's one year of experience, malignant melanoma. I don't know, what do people think? It could go either way.

MEMBER MUNN: Well, it's pretty hot out there.

DR. MAURO: Is this a partial where we only do external but not the internal?

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: What do you think for this one?

MEMBER GIBSON: Leave it in.

CHAIRMAN GRIFFON: Leave it in? Okay, that was 358. Okay, 666.

MEMBER MUNN: Ooh, never do that one.

CHAIRMAN GRIFFON: Yes, Stu voted for that one.

MR. HINNEFELD: I can't vote on that. That's a --

CHAIRMAN GRIFFON: Let the record show Stu did not vote on that.

MEMBER MUNN: And Wanda said, ooh.

CHAIRMAN GRIFFON: 666, we're voting it in. Nice number, too. 517 is --

MS. BEHLING: We've done one of these, and John --

CHAIRMAN GRIFFON: Oh, yes, Electromet.

DR. MAURO: Electromet is undergoing extensive review, as you can imagine.

CHAIRMAN GRIFFON: And it's a 6001, I think.

DR. MAURO: 6001, yes.

CHAIRMAN GRIFFON: Got a co-dependent, and we just brought it up on that subcommittee. So, let's skip that. 648, Simonds Saw, I know we've done that one. Why did we pick it, you might ask. We've done at least one on Simonds Saw, right, Kathy?

MS. BEHLING: Three, and I see we've done based on TBD and IMBA. So, three. And it looks like we did from the Site Profile.

MEMBER MUNN: All estimates.

CHAIRMAN GRIFFON: Yes. So, I don't think we're going to gain much review on this.

MEMBER MUNN: Probably not.

CHAIRMAN GRIFFON: Skip that one.

208, this one looks new.

MS. BEHLING: We haven't done any of these.

CHAIRMAN GRIFFON: The job type is -- this is estimated based on HASL-40.

MEMBER MUNN: Environmental hazards.

CHAIRMAN GRIFFON: Well, we haven't reviewed that HASL-40. I mean, I don't think. So, I think it's worth looking at. Now, I'm back to Savannah River, 016.

MEMBER MUNN: Another thyroid.

CHAIRMAN GRIFFON: Another thyroid at Savannah River. Again, administrative sort of job type.

MEMBER MUNN: Missed dose, more ambient, environment stuff. I'd pass on it.

CHAIRMAN GRIFFON: Yes, I don't think there's going to be much exciting in the records on that, although 47th percentile.

MEMBER POSTON: I don't know how you get to 47.

CHAIRMAN GRIFFON: I know.

MEMBER MUNN: Overestimate.

MEMBER POSTON: Is that primarily it?

CHAIRMAN GRIFFON: Well, it doesn't say overestimate.

MEMBER MUNN: It says environmental.

CHAIRMAN GRIFFON: Environmental, yes.

MEMBER MUNN: And measured and missed onsite ambient.

CHAIRMAN GRIFFON: I mean we could review it from that standpoint, too. I think that's fair, then.

DR. ULSH: All right, is that it?

CHAIRMAN GRIFFON: Let's include it, then, because it does raise the question of how do you get that close to 50 percent.

DR. MAURO: What site is this?

MR. KATZ: 016, Savannah River site.

DR. MAURO: And the only exposure was environmental?

MEMBER MUNN: It appears to be. Onsite ambient.

MR. HINNEFELD: On the internal. There is an external record.

MR. SIEBERT: If it's the thyroid, there may be a chance.

DR. MAURO: Yes, yes.

CHAIRMAN GRIFFON: Yes. All right, next is -- last one is Ames Lab. Is this the last one?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Okay.

MS. BEHLING: I don't see any Ames Lab on our list.

CHAIRMAN GRIFFON: We haven't done Ames Lab? Open a 250-day question, right?

DR. MAURO: That's right.

MR. HINNEFELD: There's been a lot of discussion about Ames. I'm not sure --

CHAIRMAN GRIFFON: All right,

let's do one.

MEMBER MUNN: It's a best estimate.

CHAIRMAN GRIFFON: Yes. Let's include 036. All right, and how many total do we have, Ted?

MR. KATZ: I have 29, but Wanda is too high. She has more than I have.

MEMBER MUNN: I don't know.

MR. KATZ: I may have missed one or two.

MS. LIN: I have 29.

MR. KATZ: You have 29? Okay.

MEMBER MUNN: I have 32, one including a maybe and one including a NIOSH check.

MR. KATZ: Did you have 29, John?

MEMBER POSTON: I have 29.

CHAIRMAN GRIFFON: And I have 30, just to confuse us even more.

MEMBER MUNN: I have 30 also, if I exclude the NIOSH.

CHAIRMAN GRIFFON: I'll run down the list I have again. 680, 117, 138, 525.

MR. KATZ: I don't have that one.

CHAIRMAN GRIFFON: 657, 137, 753.

MR. HINNEFELD: That may have been the difference.

MR. KATZ: Yes, that's the difference.

CHAIRMAN GRIFFON: 620, 564, 587, 572, 596.

MR. HINNEFELD: No, 396.

MEMBER MUNN: 396 is the one that NIOSH is checking.

MR. KATZ: I wrote it as 596, too.

CHAIRMAN GRIFFON: 596.

MEMBER MUNN: 596 is --

CHAIRMAN GRIFFON: 396 you're checking, yes.

MR. HINNEFELD: Oh, we're checking on that.

CHAIRMAN GRIFFON: I thought that was an SEC, yes.

MEMBER MUNN: Yes, and then 596 is on the list.

CHAIRMAN GRIFFON: Right. I didn't include the two NIOSH checks.

MR. KATZ: Yes, I didn't either.

CHAIRMAN GRIFFON: And 364.

MEMBER MUNN: What about 748?

MR. KATZ: No.

MEMBER MUNN: You said no?

CHAIRMAN GRIFFON: We changed that because it was a good reason.

MEMBER MUNN: Okay.

CHAIRMAN GRIFFON: Kathy said we had one of them already. So, 364, 690, 545. I'm sorry.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: Okay, 610, 694, 460, 540, 288, 681, 661, 484, 754, 744, 358, 666, 208, 016, 036. All right, that gives us 30 with two NIOSH checks, and we'll bring that back.

MR. HINNEFELD: We're checking on

396 for SEC. What was the other one we were checking?

DR. ULSH: 604.

CHAIRMAN GRIFFON: 604 is right, yes.

DR. MAURO: Mark?

CHAIRMAN GRIFFON: Yes?

DR. MAURO: Just stepping back a little bit, I know you folks like to try to do 60 per year. Where would it be with these? These plus, I guess, 47 that are in -- it really straddles two years. I don't know how many of those would be -- like for example, we got 60 in for last year, but part of that 47 goes to last year.

Where I'm headed with this is with this 30, plus maybe ten or so from the group that was just finished, we're not up to 60. If you do want to reach 60 this year, you probably want to do more than 30 now. Because I'll tell you what's going to happen.

We'll look at the 30 here within a

month or a few weeks. Usually it takes three or four months to move these out. So, the next time we did another 30 or 20, or whatever number to bring us to 60, that will happen this year. And I mean we're fine. This is going to fly very nicely, but just to alert you, you probably won't reach 60 this calendar year.

CHAIRMAN GRIFFON: Well, let's bring that up at the full Board meeting, John.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: If the full Board wants to immediately ask NIOSH to give us another list, then we can try to address it with the Board.

DR. MAURO: Yes. I just wanted to alert you.

CHAIRMAN GRIFFON: I know it's pushing it. I understand.

DR. MAURO: You know what would be helpful? I know those 47 sort of straddle 2009-2010. Some of them go to filling up the

60 for 2009 out of the 47, and some of those 47 could go towards 2010.

So, we've got an idea of how many we'd fall short this year to 60 if we only do these initial 30.

CHAIRMAN GRIFFON: Yes, okay. I think we can -- I don't feel comfortable adding any more on than we have right now.

DR. MAURO: No, I understand.

CHAIRMAN GRIFFON: Right.

DR. MAURO: I understand.

CHAIRMAN GRIFFON: We'll take it up at the full meeting.

DR. MAURO: Sure.

CHAIRMAN GRIFFON: All right, can we take a five-minute break, and then come back?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Five to ten, you guys on the phone.

(Whereupon, the above-entitled matter went off the record at 1:37 p.m. and

resumed at 1:50 p.m.)

MR. KATZ: Okay, we're starting up again.

CHAIRMAN GRIFFON: All right, John and Kathy, are you still with us?

MS. BEHLING: I'm still here.

CHAIRMAN GRIFFON: All right.

DR. MAURO: Still here.

CHAIRMAN GRIFFON: We're going to go back to the eighth set and make some headway. So, probably about four o'clock, we'll break off. So, if everybody can go back to the eighth set again; we left off -- Doug, help me out. 164.1, correct?

MR. FARVER: Correct.

CHAIRMAN GRIFFON: Okay, so you can take it from there.

MR. FARVER: 164.1, inappropriate method used for assigning core dose. As it turns out it looks like it was an error in the workbook, where an additional factor of 1.3 was being used, which I guess, if that's

correct then the concern would be, has that been corrected and did it affect other cases.

CHAIRMAN GRIFFON: So, it was an error in the workbook? Not the --

MR. FARVER: I believe. That's how I'm reading the response.

CHAIRMAN GRIFFON: Okay. So, how do we -- this goes back to that tracking-it-through question.

DR. ULSH: Well, tracking it through; do you mean like in terms of the dose reconstruction?

CHAIRMAN GRIFFON: In terms of the other cases we've done using this tool.

MR. SIEBERT: Well, assuming it was fixed, which I can't go back and look, if it's an overestimate, it's applying an extra factor of 1.3. So, it's not like we go back to do a PER.

CHAIRMAN GRIFFON: Okay. You're right. So, it is an overestimate. So, that wraps it up for this.

MR. FARVER: Probably should still verify that it was corrected.

CHAIRMAN GRIFFON: Right, right. But it wouldn't require a PER. So, we should verify that the workbook was fixed. You can go ahead on the next one.

MR. FARVER: Okay, 164.2, inappropriate method used for assigning missed dose. It goes back to the l over d over 2 question. It shows an increase. So, it increased the dose by -- I don't know, 150 millirem. And this is not an issue anymore, I believe, because --

MR. SIEBERT: One thing I'd like to find out; I think we should remove the first two words of the NIOSH response because we don't necessarily agree it's an issue because it occurred prior to the l over d over 2 method being implemented.

So, I don't see it as an error. It's just we did look at it, what kind of an impact it would have, if it had been in place,

and it had no changes.

CHAIRMAN GRIFFON: Okay, thanks.

MR. FARVER: So, 164.3 --

CHAIRMAN GRIFFON: So, there's no -- so, it's done, right? Closed, no further action.

MR. FARVER: 164.3 has to do with assigning missed neutron dose. This is -- I would bet this is a Y-12 case.

MR. SIEBERT: Identical issue, Doug.

MR. FARVER: Same issue, different person. Also appears to be a machinist, worked in many areas.

CHAIRMAN GRIFFON: So, this is really referred to the -- are we again referring this one to the Site Profile?

MR. FARVER: I would, just because it goes back to the Report 0033 statement about doses prior to 61.

CHAIRMAN GRIFFON: You don't have any disagreement with the way they did it?

It's just that --

MR. FARVER: They followed the --

CHAIRMAN GRIFFON: Yes, they followed --

MR. FARVER: They followed the report.

CHAIRMAN GRIFFON: Right, right. All right, and which one -- I'm just -- I want to make sure I copy the same referral. We transfer it to the Site Profile.

MR. FARVER: 163.3 was the other one.

CHAIRMAN GRIFFON: Okay, thanks. 163.3?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: But it was also 163 something else.

MEMBER MUNN: 163.3.

CHAIRMAN GRIFFON: All right, go ahead.

MR. FARVER: 164.4, the DR did not include U-235 exposure in the dose assignment

or consider possible additional thorium exposures. As for the thorium, this is almost like it's a Site Profile issue, I would think, but I don't guarantee that.

MEMBER MUNN: Well, the PER is being evaluated.

CHAIRMAN GRIFFON: Right.

MR. FARVER: And I believe the 235 exposure that's discussed is talking about full body counts, or actually lung counts. And what NIOSH did is they assessed the dose based on bioassay results, urine bioassay. So, now, I concur with their response.

CHAIRMAN GRIFFON: I guess the only issue would be what is -- do we have a number on that PER? I mean is that on our list of --

MR. HINNEFELD: I'm not sure how far along that is, to be honest with you.

CHAIRMAN GRIFFON: Right.

MR. SIEBERT: Remember these responses were written two years ago.

MR. HINNEFELD: I'll have to go back and find out. That may be something that we need to pick up with the Y-12 Site Profile review. It might be something for that, that issue, to make sure that thorium exposures are properly addressed. I don't know how else to phrase it.

CHAIRMAN GRIFFON: Right. Part of the justification for the class was thorium, right?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Because that was in the early -- I'm trying to remember.

MR. HINNEFELD: There is a thorium class at Y-12 for some period of time. I forget when it was, though. I don't remember a lot about it.

This goes to Y-12 Site Profile more than anything.

CHAIRMAN GRIFFON: I believe so.

MR. HINNEFELD: The thorium portion of it.

CHAIRMAN GRIFFON: If the case is redone, though -- this PER review is already -- I mean this is two years ago.

MR. HINNEFELD: It's not familiar to me.

CHAIRMAN GRIFFON: It could've been reevaluated by now.

MR. HINNEFELD: It may have been. I mean we can go back and look at that.

CHAIRMAN GRIFFON: So, maybe NIOSH should pull the case and see if the thorium was reevaluated.

MR. HINNEFELD: Yes.

DR. ULSH: Check status of the Y-12 for --

MR. HINNEFELD: Yes, and this case in particular. Was this case reevaluated?

MR. SIEBERT: I'm checking right now. That claim has not been touched since this final version.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: Okay, so it hasn't

been reworked. So, we know that. We need to figure out what happened to all the Y-12 thorium. That's not familiar to me.

CHAIRMAN GRIFFON: Maybe next time we'll decide if we want to shift it to the Site Profile group.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: But for now, respond back here. I have nothing more on that, unless Scott, do you have any -- are you looking at something?

MR. SIEBERT: I'm looking at the PER at that time. I'm looking at the PER right at -- PER 0031. The response we wrote up is there was no substantial change due to it, listed thorium 232, 228. I can look up the actual PER.

Y-12 TBD revisions. Yes, this was covered under the Y-12 TBD revisions. It was reviewed under the PER for those revisions.

CHAIRMAN GRIFFON: Okay, so it's in the Site Profile revisions?

MR. SIEBERT: There was a Site Profile revision, and a PER in 2007 that came out of that. And this was evaluated under that PER, and determined to have no effect.

CHAIRMAN GRIFFON: Okay, all right.

MEMBER MUNN: So, it's done?

CHAIRMAN GRIFFON: It's done, but we haven't looked at the Site Profile. It's a Site Profile issue, right? Or, a PER issue. If that's on our list of -- do you have a number for the PER?

MEMBER MUNN: He said 0031.

MR. SIEBERT: PER 0031.

CHAIRMAN GRIFFON: Thirty-one?

MR. SIEBERT: Yes.

DR. MAURO: That's not among the list of five you recently got.

CHAIRMAN GRIFFON: Okay. But we selected off a large list, right? So, this could be in future --

MR. HINNEFELD: It could come up

in the future.

CHAIRMAN GRIFFON: But I would say we should at least refer it to the Site Profile Work Group, which doesn't exist.

DR. ULSH: So, transfer to Y-12 Site Profile?

CHAIRMAN GRIFFON: Yes, yes.

MR. KATZ: We can set that back up.

MEMBER MUNN: We are transferring it to them so they can take a look at the Site Profile issues with respect to thorium; is that --

CHAIRMAN GRIFFON: We're transferring it to the Site Profile group to address the change that was made in the Site Profile on how to reconstruct thorium, right? I mean this case, it'll close -- it'll transfer in this case.

MEMBER MUNN: Okay. The case has been redone, we just heard.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: And the PER has been done. We've just heard. And yet we're holding this open even though the case has been redone and the PER has been done.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: I think -- we haven't looked at it yet, but I think the PER 0031 would be the place we could do it. I feel that way because apparently --

CHAIRMAN GRIFFON: It would make more sense. It's on the list.

MR. HINNEFELD: There were some recognized -- there were some re-revised Y-12 Site Profiles. Those reasons affect this case, but that revision was made. The PER was redone. This case was looked at under the PER. So, it would seem to me that PER 0031, in some review of that, which we expect would happen at some time.

MEMBER MUNN: Yes. That makes sense.

CHAIRMAN GRIFFON: I guess that

was my question. It makes more sense, but I wasn't sure if that was -- since it's not in our list of PERs to review, I didn't know where I was --

MR. HINNEFELD: I think that was just because Procedures hadn't got to it.

MEMBER MUNN: We can always start making a new list anytime.

CHAIRMAN GRIFFON: But are we recommending that the Procedures group should include this one in their PER?

MR. HINNEFELD: It seems to me it fits better there.

CHAIRMAN GRIFFON: Yes, it does.

MR. HINNEFELD: It seems to fit better in the procedures group.

CHAIRMAN GRIFFON: I just didn't want to refer it to a list of PERs that then the Procedures group says, oh, we don't want to review this one.

MR. KATZ: The Procedures group doesn't choose the ones in the first place.

The full Board does.

CHAIRMAN GRIFFON: Yes, the full Board. Yes, but I mean if we thought from this case that this should be one of them, I think we'd say that somehow.

MEMBER MUNN: We could put it in the report to the Board a recommendation that they --

CHAIRMAN GRIFFON: Okay. I just wanted to -- yes.

DR. ULSH: Okay, so what status should we record for this?

CHAIRMAN GRIFFON: Well, the case is closed. I think it's closed, and we're referring it to the PER review under the procedures. PER 0031.

MEMBER MUNN: PER 0031?

CHAIRMAN GRIFFON: PER 0031.

MEMBER MUNN: I hope we're recommending to the Board. Let's recommend to the Board at the next meeting.

MR. KATZ: Recommend to the Board

a review of this PER.

CHAIRMAN GRIFFON: All right, all right.

MEMBER MUNN: Include this PER.

CHAIRMAN GRIFFON: Okay, got it. All right, Doug.

MR. FARVER: Finding 165.1, inappropriate factor used to convert electrons to organ dose. Basically, a factor of 2.04 correction factor was used when, during 1958, the correct factor should have been 2.86, and this has to do with a parameter in the workbook, the calculation for INEEL calculation workbook under lookup parameters. It was in the 1.20 version, and it still appeared in the 1.76 version.

MEMBER MUNN: And so?

CHAIRMAN GRIFFON: So, it doesn't have an affect on this case.

MR. FARVER: Well, I just --

CHAIRMAN GRIFFON: We need NIOSH to check, yes.

MR. FARVER: Correct. It's a small change, but has it been corrected? Does it need to be corrected? It's -- the workbook is just selecting the wrong parameter, and it's an underestimate.

MR. SIEBERT: Well, I'm talking while I'm muted and you're probably not hearing me. Sorry about that.

CHAIRMAN GRIFFON: That's the way it works.

MR. SIEBERT: The other thing I want to point out is 1958, I believe, is when they changed dosimetry in the middle of the year. So, that factor is appropriate for the first portion of the year, and the larger factor is appropriate for the second half of the year. But I don't remember exactly the breakdown.

MR. FARVER: It stops in March of 58, and then the higher one picks up at the end of March, I believe.

MR. SIEBERT: Right. So, I

believe in a situation like that what we'll normally do for the workbooks is use the larger of the two just for the full year, rather than trying to have somebody break out the different portions. But we can check to make sure that that's been changed.

MR. FARVER: That's a good idea. Don't use the smaller one.

CHAIRMAN GRIFFON: So, NIOSH will check to make sure the workbook has been updated.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Okay, go ahead.

MR. FARVER: 165.2 -- no. Yes. It's basically the same thing, only it has to do with missed organ dose.

CHAIRMAN GRIFFON: All right, so again NIOSH will check that.

MR. FARVER: It's a workbook issue.

CHAIRMAN GRIFFON: All right, go ahead.

MR. FARVER: 165.3, neutron organ dose calculation in error. I used a dosimeter bias of 1.6, although when you look in the workbook, they don't multiply it by 1.6. They divide it by 1.6, which underestimates that dose by about 50 percent.

MR. SIEBERT: We're going to have to get back to you on that one and look at workbooks.

CHAIRMAN GRIFFON: Yes. How did the error result in a more claimant-favorable dose assignment? That's NIOSH's response.

MR. SIEBERT: If it used -- it was multiplied by the factor of 1.6 for bias, then it would be an overestimate. What that's saying is it's dividing. So, we'll have to look at that.

MR. FARVER: Okay, all right.

CHAIRMAN GRIFFON: So, NIOSH will review.

MR. FARVER: 165.4, neutron missed skin dose calculation in error. I believe

that's another workbook error.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: Is it the same workbook?

MR. FARVER: It's the neutron dose.

MR. HINNEFELD: Should be. I don't know if it's the same workbook.

MR. FARVER: No, I don't think so. This looks like this is a different workbook. This is the complex-wide best-estimate external tool 1.1.

CHAIRMAN GRIFFON: Complex-wide. Your second question is, does it affect --

MR. FARVER: Let me find it. Oh, no, that's the bladder dose. Hang on. I'm one finding behind. Neutron skin dose, this goes back to the INEEL calculation workbook. This is where he used a dosimeter correction factor and applied it to a missed dose, which I don't believe it's appropriate to use the correction factor for a missed dose.

MEMBER MUNN: I agree. That is not.

MR. HINNEFELD: Not if you published the limit of detection correctly.

MR. FARVER: That's what it comes down to.

MEMBER MUNN: The action was to revise the TBDs that weren't consistent with it.

DR. ULSH: It looks like the action item is for us to check the status.

CHAIRMAN GRIFFON: Yes, I guess so. The question is -- it's one thing if the Site Profile is wrong. I guess it's more important if the workbook was wrong, right?

MR. FARVER: Correct. I believe it was the workbook that was in error.

CHAIRMAN GRIFFON: The workbook, then. Does it impact other --

MR. FARVER: Yes.

CHAIRMAN GRIFFON: So, you've got the action right, Brant?

DR. ULSH: Yes.

MR. FARVER: And then 165.5, uncertainty improperly calculated for medical organ doses. It was at 20 percent instead of 30 percent.

CHAIRMAN GRIFFON: So, NIOSH agrees with this, right?

DR. ULSH: Yes.

MR. FARVER: 166.1 --

CHAIRMAN GRIFFON: Wait. Is there -- I mean was this a case-specific thing, or a workbook thing?

MR. FARVER: I believe this was case-specific.

MEMBER MUNN: It says, improperly calculated. So, that must mean --

MR. HINNEFELD: So, it's no further action, right?

MEMBER MUNN: No further action, yes.

DR. ULSH: The only thing that concerns me there is our response doesn't say

it should've been -- it says, should've been 30 percent, not 20 percent.

MEMBER MUNN: Yes.

DR. ULSH: There was no effect. That part is not there.

CHAIRMAN GRIFFON: Yes, that part is not there. Yes, I think you'd need to close that just to make sure.

DR. ULSH: Yes.

CHAIRMAN GRIFFON: But likely that's true.

MR. FARVER: And I don't know if it was a workbook or a --

MR. HINNEFELD: Follow up on that to see if it was a workbook error.

MR. FARVER: Since you're checking that workbook anyway. It is not clear. I know sometimes they'll use the workbook, and sometimes they won't.

Okay, 166.1, failure to use glove-box factors in assigning recorded photon dose.

MEMBER POSTON: They're all the

same, the next four.

MR. FARVER: Photon, missed photon, neutron and it looks like this is neutron. Yes, so we can just hit the next four with one swipe here.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Apparently, there was a statement in the report, which I'm trying to find.

CHAIRMAN GRIFFON: The statement in the report indicating the employee worked in glove boxes throughout his employment is erroneous. That might've just said he worked in glove boxes, but couldn't have done it before this time frame. Is that what you're saying?

MR. HINNEFELD: The conclusion was he did not during that time frame because the glove box was --

CHAIRMAN GRIFFON: Right. He might've worked 60s through 80, and said, yes, I worked at them all the time. It really

didn't happen until after a certain time, right? Is that what you're saying?

MR. HINNEFELD: That's our argument. Don't have any evidence for our argument, but that's our argument.

MR. FARVER: I'm trying to find the quote from the -- okay. Here's the statement right from the DR. It was also assumed that the employee worked in glove boxes throughout the employee's employment.

MR. HINNEFELD: So, it's from the DR?

MR. FARVER: Yes. So, it's kind of weasely words.

MR. HINNEFELD: Kind of really not true. It really wasn't assumed that he worked in the glove box throughout his employment.

MR. FARVER: And that's probably what the finding was based on: that statement.

MR. HINNEFELD: Yes, yes.

CHAIRMAN GRIFFON: Okay, I think that's closed. We understand it, right?

MR. FARVER: Yes, I understand it.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: 166.5, failure to account for all medical dose. Apparently, additional X-rays were identified prior to approval of the dose reconstruction and did not get considered.

DR. ULSH: It looks to me like we need to check the status and make sure the additional X-rays are now included.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Right, right.

MEMBER MUNN: A reassessment.

MR. FARVER: Now, it's another question; should he have caught this before it was signed off?

DR. ULSH: Our response says we should've.

CHAIRMAN GRIFFON: You have a QA thing there?

MR. FARVER: Yes. 166.6 --

CHAIRMAN GRIFFON: We're not even

going to check the determinant?

DR. ULSH: We should make sure that those additional X-rays are in there.

MR. FARVER: 166.6, the CADW data is not consistent with the IREP input entries. Let me get some more information on this here quick.

CHAIRMAN GRIFFON: I'm assuming from this language that it didn't affect the outcome, but it doesn't really say that.

MR. HINNEFELD: You should check that again. It's the same claim. We should check that.

CHAIRMAN GRIFFON: It is the same claim.

MR. HINNEFELD: Yes. We'll check the intake out of the IREP.

MR. FARVER: Yes. That's what it comes down to.

MR. HINNEFELD: Yes.

MR. FARVER: There's a missing intake. I know a lot of times I'll go cut and

paste numbers from, like, the CADW reporting to an IREP and things do get missed.

CHAIRMAN GRIFFON: Last is an observation. This is the Super S observation, right?

MR. FARVER: That's our general Super S observation.

CHAIRMAN GRIFFON: Right.

DR. ULSH: Scott, I don't know if you have the ability to check real quick and see if this one was reevaluated for Super S.

MR. SIEBERT: That's exactly what I'm doing. Hold on a second. I already started to look at the X-ray, but that was going to take me a little bit too long. It was not needed to be because it appears in the rework compensable.

CHAIRMAN GRIFFON: So, it was compensable before Super S was included. Is that what you're saying?

MR. SIEBERT: Yes.

CHAIRMAN GRIFFON: Why was it

reworked before Super S?

MR. SIEBERT: Just a second. I'm looking through this one.

CHAIRMAN GRIFFON: Okay. Maybe you can just provide that as a -- we don't need all of it right now, I guess. And maybe if these other things were considered, it kicked it over.

MR. HINNEFELD: It could've been an additional cancer, and that was enough to kick it over.

CHAIRMAN GRIFFON: True. That's true. Several reasons.

MR. HINNEFELD: Lots of reasons.

CHAIRMAN GRIFFON: Don't want to speculate.

MR. HINNEFELD: Lot of possibilities for reworked cases.

MR. SIEBERT: There was a change in cancer information.

CHAIRMAN GRIFFON: That's more likely.

MEMBER MUNN: Besides, it says all DRs with potential impact are being redone.

CHAIRMAN GRIFFON: Right. But in that case --

MR. HINNEFELD: They still needed to check the workbooks out.

CHAIRMAN GRIFFON: Yes. External should've been -- yes.

MR. HINNEFELD: You don't need to verify, you don't need to see that all these things were taken into account, because the rework was comp. You still need to check the workbooks to see if they've been corrected.

CHAIRMAN GRIFFON: Right. All right, we're onto 167, right?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Doug?

MR. FARVER: Okay, I have the wrong document open. No wonder it didn't match. It has to do with selecting the correct recorded photon dose uncertainty, and we contend that it should be 30 percent. They

say they pulled it right from the table.

So, I'm going to look at that table right now because I thought I looked at it. No, I'll stand by. It says that -- we agree. They chose to correct one. I'm not sure where our reviewer got the 30 percent from.

DR. ULSH: Maybe QA?

MR. FARVER: Could be.

CHAIRMAN GRIFFON: So, SC&A accepts the NIOSH response?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: And that's no further action, right?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: We like those completely closed ones, right? This is -- that was 167.1. 167.2?

MR. FARVER: All right, I understand where that 30 percent came from. If you go later on into the Savannah River document, where it talks about assignment of

external doses for monitoring data for best estimates, measured doses are treated as a normal distribution to standard deviation of 30 percent. But in parenthesis, it says, or other appropriate value that may be provided in section 5.

So, if you didn't have a value in section 5, you used 30 percent. That's where the 30 percent came from.

MEMBER MUNN: Was there a value in section 5?

MR. FARVER: Yes, there was. There was a 25 percent. 167.2, it looks like our same l over d, our l over d over 2.

CHAIRMAN GRIFFON: We asked the question earlier on Savannah River to --

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Under the DCF and LOD, whether they had any overall affect, right?

MR. HINNEFELD: Yes, we were talking about that earlier. LOD over 2, you

know, counting that is -- not for your missed dose but missed dose isn't exactly a wash. It's hard to predict which way it's going to go. It's not changing things a lot.

MR. FARVER: That refers back to 164.2, where we had a discussion before about the LOD over 2.

MR. HINNEFELD: Right.

MR. FARVER: Okay, so we can close that.

CHAIRMAN GRIFFON: Closed, no further action on this one. Twenty-three?

MR. FARVER: 167.3, failed to consider unmonitored neutron dose. And this is our friend neutron dose.

Let's see if I summarized it. Well, TIB-7 was published -- this was another one of these cases where TIB-7 was published two years after the dose reconstruction. But even if you look at TIB-7, there's -- that's quoted over there about the claimant-favorable weight-of-the-evidence approach, with

particular -- the source of information identified in Section 2.1, blah, blah, blah.

According to the CATI report, the EE was assigned to P reactor during 53 to 59, and I believe this is Savannah River. Yes. Concerning the reactors, the Technical Basis states that fission neutrons are also a concern. So, if you apply the claimant-favorable approach, we feel that they should've been assigned a dose from 53 to 59, unmonitored neutron dose.

MR. HINNEFELD: Well, I mean, we can go out and pull out the case and compare it to TIB-7 --

CHAIRMAN GRIFFON: This was before TIB-7.

MR. HINNEFELD: The thing to recall though, the reactor neutron dose -- I think it's correct it's Savannah River -- provides a neutron dose in some areas.

So, just being assigned to the reactor area does not mean that you're exposed

to neutrons. And I believe we put some job titles somewhere that include the types of job titles that you would think would be exposed when they're assigned to the reactor. It's a relatively short list.

So, we should go review that against those things. We can have Tim take a look at TIB-7 again to see if that's what we think is correct today, compared to what we thought was correct when we wrote it. Tim's been doing a lot of research on this matter. I don't know if he's been working on this or not, but he has been doing a lot of research.

MR. FARVER: Apparently, the EE was monitored for photons during that time period also.

MR. HINNEFELD: Well, they wore a photon badge. I mean they were -- that's for sure. They may have worn a neutron badge, but there is a certain expectation that these -- people who did this kind of work, Tim called

it a crane bay was where you were liable to have neutron dose in the reactor area.

MR. SIEBERT: He's a project engineer.

MR. HINNEFELD: Yes, these were like rad techs. I think reactor operators. Maybe a couple others were the job titles that you would expect to -- well, Tim is a lot smarter about Savannah River today than he was several years ago, so we'll see what he thinks.

MR. FARVER: And I think a lot of this hinges on what was in TIB-7.

MR. HINNEFELD: Yes.

MR. FARVER: About that claimant-favorable weight-of-the-evidence approach.

MR. HINNEFELD: Yes.

DR. ULSH: So the action item is for us to respond to your comment?

MR. HINNEFELD: Yes.

MR. FARVER: 167.4 is a failure to assign correct occupational medical bills from

53 through 59. This might be one of those cases where at the time this was performed, then it was correct.

CHAIRMAN GRIFFON: Was it corrected in the TBD? Reworded in the --

MR. FARVER: Let's see.

DR. ULSH: That is probably out of the occupational section of the DR.

CHAIRMAN GRIFFON: Under DR? Right, right.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: It would be there.

MR. FARVER: It was about her choosing the -- instead of choosing the remainder, they chose the thyroid, I believe.

MEMBER MUNN: So is the action to check to see if that rewording has occurred?

CHAIRMAN GRIFFON: No, I don't think they would -- they wouldn't reissue a report. This is the DR report.

MEMBER MUNN: Yes, I know. Put a

note in the file or something?

DR. ULSH: I think that would be a possibility. What we're saying here is that we did the dose reconstruction right. It's just that we described what we did wrong.

MR. HINNEFELD: Described what we did wrong.

MEMBER MUNN: Yes.

MR. HINNEFELD: I mean it's a QA concern. It's listed as a QA. It's the kind of thing that we have to address in our action to QA, actually, because a number of the QA findings speak to that.

MR. FARVER: Okay.

MR. HINNEFELD: You know, saying you did one thing when in fact you calculated something else.

MR. FARVER: Yes.

DR. ULSH: So, is there an action item to check that, or are we closing it? What's the status?

CHAIRMAN GRIFFON: I think it's

closed. I guess Wanda makes a good point though that is it somehow noted in the case file so that in the event this person gets cancer, gets reassessed or whatever. You know.

MR. SIEBERT: This has been reassessed since.

CHAIRMAN GRIFFON: It has been?

MR. HINNEFELD: I'm having trouble figuring out where we'd put it in the case file where it would come up.

MEMBER MUNN: And I am not familiar enough with the protocol.

CHAIRMAN GRIFFON: Yes. When it was reassessed, the reissue -- you reissued a DR report to the individual?

MR. SIEBERT: Yes.

CHAIRMAN GRIFFON: And did that have any change in this language? Possibly not, because this hasn't come up yet.

MR. SIEBERT: Checking now.

CHAIRMAN GRIFFON: Okay.

DR. ULSH: Oh, I see why it was reassessed. It was for Super S. That's the one, right?

CHAIRMAN GRIFFON: That may take us to the next one. I'll fill that one out now. It has been reassessed. Did it end up being compensable after Super S? Yes, yes. I see, 47 percent.

MR. SIEBERT: The way this version states is the current dose was assigned based on the remainder dose. It stated specifically in the X-ray medical dose portion.

CHAIRMAN GRIFFON: So, it was changed correctly, right?

MR. SIEBERT: Yes.

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: And you wanted me to check Super S?

DR. ULSH: Well, we -- two lines down, we say that it was reassessed for Super S.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: Mark had a question. Did that change the compensability though?

MR. SIEBERT: Does specifically have Super S in it. Let me check the -- no.

DR. ULSH: Still non-comp?

MR. SIEBERT: Still non-comp.

CHAIRMAN GRIFFON: Okay. All right, then 167.5? Four is closed. Yes, no further action on four.

MR. FARVER: 167.5, unable to match derived internal doses. And what this comes down to is there's -- if you use different CADW versions, you can get different results.

For example, I give an example there. Version 6.0 produces results for this case, but about 14.3 percent higher than 4.3. So, I'm just kind of pointing out where the differences are. It's not so much -- it's just more of a statement, saying, this is what can happen when different versions are used.

Now, since the CADW Version 6.0 is

14 percent higher in this case, it's probably going to be higher than the version that was used to calculate this person's doses, because I don't think they had 6.0 back then when this dose assessment was done.

CHAIRMAN GRIFFON: It was all reworked in 2008, right?

MR. FARVER: It should've been corrected.

CHAIRMAN GRIFFON: Yes. Do we need just to review that and make sure?

MR. HINNEFELD: I think that we need to understand what changed from 4.6 to 6.0 --

MR. SIEBERT: I'm not aware of anything that would make a difference like that.

MR. HINNEFELD: Okay. Well, what we need to do is find that because that then becomes, rather than -- rather than just sort of a version change on an existing package, make an upward revision in the doses turned

out by that workbook, which means you got -- you ought to reconsider at least some cases --

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Whatever was done with the old ones.

CHAIRMAN GRIFFON: Yes, I agree.

DR. ULSH: So, for 167.5, we'll respond.

MR. SIEBERT: Let me ask this. Can we get the files that Doug ran so that we know -- we can compare the version he's talking about?

MR. FARVER: Doug didn't run these.

MR. SIEBERT: Oh, I'm sorry.

MR. FARVER: So, that makes it a little more difficult.

MR. SIEBERT: That's always my answer. I didn't recollect this. But whoever ran it, if we could get the files where this comparison was made, that would give us a starting point to make sure we're working from

the same place.

MR. FARVER: Well, I mean I think if you just take your files, and then run them with different versions, you can compare the versions.

MR. HINNEFELD: I mean, we could do that. We could run -- I guess we still have CADW 4.3, right? Don't know?

CHAIRMAN GRIFFON: If you're not getting a big difference, then that's --

MR. SIEBERT: I don't know if we can go back in time and recreate the software that existed at that specific time. I'd have to talk to Keith about it.

MR. FARVER: I would think you'd have some sort of version control on software.

MR. HINNEFELD: Check with Keith and see what we can do there.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: It's probably an issue of getting the first finding. Is the calculation not with SC&A anymore, or not on

the project anymore?

MR. FARVER: I'll talk to the person who did it.

MR. HINNEFELD: All right. Because I mean to me, that's relatively -- yes, check with Keith by all means to figure out if version 4.3 is around anymore.

MR. SIEBERT: Right. I'll take care of it. We're finding out what we can.

MR. FARVER: It could be just the issue with thorium doses. We mentioned in our review this has occurred several times, mainly for thorium dose calculations where we see differences.

MR. SIEBERT: If we're talking thorium, that's a different issue because, remember thorium, the DCF -- yes, the organ doses for thorium had to account for -- we had to remodel all thorium doses. You can't run thorium through IMBA because it does not handle the movement of thorium in your body appropriately. You get very large doses that

you shouldn't be because it's carrying things through. So, thorium maybe is a different issue.

DR. ULSH: No, no. I think if I understood Doug's comment, he was saying this CADW issue might just apply to thorium. Is that what you were saying?

MR. FARVER: It might because the reviewer mentions that this has occurred several times, mainly with thorium dose calculations, where we received a difference in the CADW values in the versions.

DR. ULSH: Do you understand, Scott?

MR. FARVER: So, there might've been some change in the thorium calculations between 4.3 and 6.0.

MR. SIEBERT: I have somebody looking at this right now.

MR. FARVER: Obviously, the concern would be if you have someone close to 50 percent --

MR. SIEBERT: There is no thorium in CADW for this case. Did I actually understand that? Honestly, it would make life so much easier. We need to have the files from whoever did the comparison. I'm afraid we're going to be chasing our tails without necessarily being able to recreate numbers.

MR. FARVER: I'll try to get them, or get something that looks like them.

CHAIRMAN GRIFFON: I believe that is a primarily SC&A action for now, with potential follow up by NIOSH. Okay, but I would say also that you don't have to -- I mean this always applies. You don't have to wait to bring them to subcommittee. You can just exchange them with Scott.

MR. FARVER: Exchange them with Scott.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Okay, make sure you make copies for Brant. Give them at least to Brant as well.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: I've seen it before where there's differences between versions.

CHAIRMAN GRIFFON: Yes, okay.

MR. FARVER: In this case, it happened to be 14 percent, which I just wanted to bring up because at some point, that could be significant to a case. But I'll work to get you those files. We're down to 168.

DR. ULSH: Would we agree that Tab 167 observation is closed then?

CHAIRMAN GRIFFON: Yes.

DR. ULSH: Okay.

MR. HINNEFELD: It already has been reevaluated.

DR. ULSH: Just crossing the Ts.

CHAIRMAN GRIFFON: 168.1 then.

MR. FARVER: Okay, 168.1, neutron organ dose calculation in error, and this also goes for 168.2, the missed neutron dose. The dose reconstruction, when it was performed, they considered the energy fractions twice is

what it amounts to. It was already contained in one factor, and then they applied them again. So, it's in essence applying them twice.

CHAIRMAN GRIFFON: NIOSH agrees it's an overestimate. Won't affect the compensability, right? Is that right?

DR. ULSH: Yes.

CHAIRMAN GRIFFON: No further action, right?

MR. FARVER: No further action.

CHAIRMAN GRIFFON: 168.2

MR. FARVER: 168.2, yes, that's the same as 168.1. 168.3, DR does not account for all of the medical dose. This kind of gets complicated because the individual indicates in the interview that he took some X-rays to the doctor. So after looking at everything, I agree with their response.

CHAIRMAN GRIFFON: All right, so that's closed.

MR. FARVER: And 168.4, the -- let

me make sure of this. Typically, the medical doses are multiplied by a factor of 1.3, and that's taken from, in this case, the site document for Mound, where it says, for actual dose calculations, reconstructor should assume the normal distribution with an uncertainty of plus or minus 30 percent at the 99 percent confidence interval. However, reconstructor should use only positive uncertainty and multiply the doses listed in tables 3-4 through 3-11 by a factor of 1.3, to include uncertainty at the 99 percent confidence level.

And our issue was that they did not multiply by a net factor of 1.3 as stated in the Mound Technical Basis. And it still goes back to that document that says -- that's what the document says to do.

CHAIRMAN GRIFFON: The interesting thing is that you've never seen --

MR. FARVER: Well, we've seen this before in other cases where it's not optional.

They do it.

MR. SIEBERT: The correct best estimate method for doing X-rays is normal distribution with 30 percent error.

MR. FARVER: According to PROC-0061?

MR. SIEBERT: Yes.

MR. FARVER: Yes, and I agree that's what that says.

MR. SIEBERT: Let me finish. And there were times early on where the TBD authors would put a comment like this that it should be done this way, and what they were trying to point out is it could be used as an efficiency method as an overestimate.

They may not have stated that because they may not necessarily have understood that from a dose reconstruction point of view when we were running the DRs, but from a dose reconstruction point of view, normal distribution, when it's 30 percent, would always be best estimate. I mean 1.3

factor is for convenience for overestimating, and we don't even do it now.

MR. HINNEFELD: So, then it's really -- the findings then is against the Site Profile?

MR. FARVER: Yes, correct.

MR. SIEBERT: Agreed. And we have been changing the Site Profile to pull that type of information, that type of wording out.

DR. ULSH: Okay, now I'm -- the Mound Site Profile is one of the early ones that had been written. Since it's under active consideration by an SEC working group, I'm certain that it has not been revised. When it is, then we might want to make that change in the Site Profile.

MR. FARVER: So even PROC-0061 says, dose reconstruction should assign the doses from the TBD as a normal distribution. Well, if you go back to the TBD, the TBD says, multiply by 1.3.

MR. SIEBERT: Well, that's not a

dose. That's direction on applying a correction factor.

MR. FARVER: I think you understand how that could get confusing.

MR. SIEBERT: Oh, I agree, and that's why we're pulling that wording out.

MR. FARVER: That's fine.

MR. HINNEFELD: Right.

MR. FARVER: I don't mind as long as you're consistent in both documents. That's all.

DR. ULSH: Okay, so, it sounds like there should be an action item to include in the next revision with the TBD a correction to the language.

MR. SIEBERT: I'm looking at it now because it has been looked at since.

DR. ULSH: You say it has or has not?

MR. SIEBERT: It has. It was updated in 2009. What work section is that in, Doug? Too many documents open.

MR. FARVER: I know what you mean. What section of the Mound document?

MR. SIEBERT: Yes.

MR. FARVER: Well, it's going to be section -- what? The medical dose under 3. So, it's -- yes, TKBS0016-3, Section 3.5.

MR. SIEBERT: Okay, yes, it still needs to be updated because for actual dose reconstruction, reconstructor should assume a normal distribution with an uncertainty of 30 percent. And it goes onto say, however, reconstructions should use only the positive uncertainty and multiply the doses by 1.3 to include uncertainty.

So, it's stating actually two opposite things in that last -- that last sentence should be changed.

MR. HINNEFELD: Yes.

DR. ULSH: Okay, so we'll commit to changing the language in the TBD.

CHAIRMAN GRIFFON: Yes, that's what I put. Closed case. NIOSH is -- will

change section 3.5 of the medical section of the TBD. That okay?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: 168.5?

MR. FARVER: I'm going to take that back, and say I'm not sure about that one.

DR. ULSH: 168.5?

MR. FARVER: 168.5. What it comes down to is, we contend it should be used as one dose conversion factor, and you contend it should be a different one.

DR. ULSH: But neither one of those is actually what was used in the DR, right?

MR. FARVER: Let's see.

DR. ULSH: I think it says in the DR, underestimated dose. That leads me to believe that we didn't have the right --

CHAIRMAN GRIFFON: Oh, yes. NIOSH says --

MR. FARVER: Okay, that's right.

I was reading a different one. Yes, apparently used the deep dose equivalent instead of the ambient dose equivalent.

DR. ULSH: It sounds like from our response here two years ago that we agreed that the DR was incorrect. We don't necessarily agree with the changes that you suggested, but we agreed that there was something wrong in the DR.

MR. FARVER: Yes.

DR. ULSH: So, if this has not been revised since this was written, then this seems like a case where we need to put -- another case where we need to put a note in the file that the next time this is opened, this needs to be corrected.

MR. FARVER: All right. I'm just thinking, is this a workbook issue or is this a cut and paste issue

DR. ULSH: That I don't know.

MR. FARVER: This is -- I think we'll hold this open because I don't know.

The wrong values were used, but were they manually entered, or was it just a workbook doing on its own?

CHAIRMAN GRIFFON: Well, I'm going to turn this back over to you guys to answer. Right, SC&A?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: You want to look back at this?

MR. FARVER: Yes. This is going to take some more digging on this one. And 168.6 is an erroneous IREP entry for ambient dose.

MR. SIEBERT: Can I go back to .5? Whose responsibility was it to do something on this one?

MR. FARVER: Mine.

DR. ULSH: SC&A's.

MR. SIEBERT: Okay, that's the wrong answer, but okay.

MR. FARVER: I thought you'd like that one. Apparently there was an entry

number 22. It was an erroneous entry and should not have been included. It appears to be from a previous calculation.

CHAIRMAN GRIFFON: And it would only decrease?

MR. FARVER: Yes. It's not so much a dose concern as it is it should've have been there.

CHAIRMAN GRIFFON: A QA?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: So, no further action, right?

MR. FARVER: 168.7, not properly addressed radiological exposure in T building. This goes back to information that's contained in the CATI interview. It does more or less come down to a judgment call. The employee had one bioassay. It was a termination plutonium bioassay and it was equal to the decision level.

In our opinion, we believe he should've at least assessed the determination

sample at the decision level. But also in the CATI, the person reported names of four coworkers and seven supervisors. So if there was really any question about exposures in T building, they gave you a list of people to contact.

And we've talked about this before, where people provide names of co-workers and supervisors, and -- and we believe it should be looked into if there's any question.

CHAIRMAN GRIFFON: Where did this person work? It says, T building.

MR. FARVER: Mound.

CHAIRMAN GRIFFON: No, I know Mound. But it says, T buildings and environmental dose was assigned as the NIOSH response. So, it -- the job type must not have been like an operator, I'm guessing anyway.

MR. HINNEFELD: We'll have to just go pick it up.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: I mean SC&A has written essentially a rejoinder to put in our initial response. So, we'll have to go -- it'll be our action to go look at this.

MR. FARVER: Laboratory technician, foreman and manager.

CHAIRMAN GRIFFON: Alright. Shall we just plunge ahead, or do you want to take five? Anybody need a five-minute break? That's 169 we're on?

MEMBER MUNN: Well, there's always a good break before long stuff like this.

CHAIRMAN GRIFFON: All right, let's take a break.

(Whereupon, the above-entitled matter went off the record at 2:52 p.m. and resumed at 3:02 p.m.)

MR. KATZ: We're back. We're back again, folks on the phone.

CHAIRMAN GRIFFON: All right, we're picking up on the next case, the eighth

set matrix, number 169, finding 169.1. Doug?

MR. FARVER: Oh, yes. We do have that one.

MR. HINNEFELD: Yes, we -- didn't we just talk about this?

MR. FARVER: We just talked about this. This is a Mound case again, and this has to do with that no statement in the Mound Technical Basis.

CHAIRMAN GRIFFON: Okay, so, it's the same as the last one?

MR. FARVER: So it's the same as --

CHAIRMAN GRIFFON: 168.1? Or no --

DR. ULSH: No, it's 168.4, I think. And we committed to change the language in the TBD at the next revision.

MR. HINNEFELD: Yes.

MR. FARVER: Then 169.2, the method used for deriving environmental doses is not described or referenced and could not be reproduced. Now, this case also is Mound and Rocky Flats. The Mound portion of the

environmental dose we could find because that was included in the workbook.

The Rocky Flats information, we just -- there was not a workbook included that showed how that was calculated, and it did not appear to be consistent with the Technical Basis, Attachment B tables. So, apparently, there was another spreadsheet or something that was used and was not included in the records.

Oh, and the other thing is it was -- instead of being the 250 keV photon, it was assigned as 15 keV.

DR. ULSH: Well, it was assigned as electrons --

MR. FARVER: Yes. It was a mistake in the assignment of the interview. So, the first is, we don't know where it came from, and then you had the little mistake on the assignment.

CHAIRMAN GRIFFON: So, the assignment -- to me, the assignment thing

definitely is a small QA thing. But you didn't know where it came from --

MR. FARVER: Yes. Was there a spreadsheet that was missing?

CHAIRMAN GRIFFON: Yes, that seems a little more important and may require a follow-up. I don't know.

DR. ULSH: Wait a minute. I don't know. I can't get from our response -- it says the intent was to use -- and then it lists a worksheet.

MR. FARVER: Well, yes. See, in our review we state we believe you were trying to use the maximizing assumptions from the internal ambient dose summary Version 1.0 worksheet.

DR. ULSH: We agree that we were.

MR. FARVER: But that was not included. That was just a guess. That wasn't included in the files. We just found that worksheet, and it appears that that's what was used.

CHAIRMAN GRIFFON: But NIOSH is agreeing. They reviewed it, and they --

DR. ULSH: Yes. We say, what, did we use the wrong worksheet or something, or --

MR. FARVER: No, it wasn't included in the files.

DR. ULSH: Okay. Alright.

CHAIRMAN GRIFFON: It was bad.

MEMBER MUNN: He's just saying new eyes would not be able to figure out where that came from.

CHAIRMAN GRIFFON: So then in that case, it's no further action, I guess. It's a QA error.

MR. FARVER: Right.

CHAIRMAN GRIFFON: But no further action?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: And then the Super S observation 169, no action.

CHAIRMAN GRIFFON: Was it done?

Oh, currently being --

DR. ULSH: Well, that was two years ago.

CHAIRMAN GRIFFON: Yes, that was two years ago. So it should've been done.

DR. ULSH: Do you want Scott to check on it? He seems pretty quick on that.

CHAIRMAN GRIFFON: He's probably doing it now.

DR. ULSH: Scott, are you checking 169 to see if it's been revised for Super S?

CHAIRMAN GRIFFON: He left.

DR. ULSH: Because you gave up on him.

(Laughter.)

MR. SIEBERT: The darn mute button.

MR. KATZ: Come again, Scott, please?

MR. SIEBERT: That's 169; is that right?

DR. ULSH: Yes.

MR. HINNEFELD: The first thing

was he said he was trying to talk with the mute button on. That darn mute button, or something like that.

CHAIRMAN GRIFFON: Go ahead, Scott, if you -- are you looking?

MR. SIEBERT: Okay, I'm looking here.

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: Okay. Yes. Yes, it was considered.

CHAIRMAN GRIFFON: It was considered, okay. Did it affect the case?

MR. SIEBERT: You keep asking me questions, don't you? Let's see. Still non-comped.

CHAIRMAN GRIFFON: Okay.

DR. ULSH: So, the action item is closed?

CHAIRMAN GRIFFON: Yes. All right, Doug?

MR. FARVER: 170.1, NIOSH assigned a quarter dose less than the missed dose

value. This is the LOD over 2 concern we've talked about before and has been corrected.

CHAIRMAN GRIFFON: Okay, that's no further action.

MR. FARVER: Correct. 170.2, failed to consider unmonitored missed neutron dose for two time periods. Like we talk about so often, this is always a judgment call about neutron exposure. When do you assign it? When do you not?

This is just another case, only this is -- the person worked at X-10 and Y-12. So, I tried to state our case on -- which is basically just quoting from the DR Report, and I don't know that you can come up with a good answer on this either way on these type of questions.

DR. ULSH: Well, it seems like we've got two options. Either we go back and digest what you've written and respond again, or we say to the Subcommittee, you've got both positions. It's a judgment call.

MR. HINNEFELD: Well, I think, yes, the first thing, I guess, would be to go back and, you know, to react to this. It becomes a pretty broad question. Are we going to try to -- any kind of recommendation about a resolution is going to be a pretty broad recommendation about dealing with neutron -- potential neutron doses at X-10, right?

MEMBER MUNN: Well, as Brant points out, ultimately it is a judgment call.

MR. FARVER: It is, and you're looking at a PoC of about 43 percent.

CHAIRMAN GRIFFON: But I guess if it's a judgment call, part of what we have to look at is, is NIOSH being consistent in the way they're evaluating these cases. I guess that's part of the formula.

MR. HINNEFELD: Yes.

DR. ULSH: Well, it seems like consistently not applying it.

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

MR. HINNEFELD: Well, I think the first action is to go back and see what we want to say in reaction to SC&A's reaction to our initial response. To me, it speaks to the instance of is there -- is the -- the instructions out there for doing dose reconstruction at Y-12, are those as suitably prescriptive or as prescriptive as they can be?

And so, to me, it's a broad -- you know, a resolution of a disagreement like this, a judgment call resolution should be in the Site Profile. And what is -- what's the appropriate -- what is the appropriate guidance, and the appropriate, consistent way to treat claims? I think it's important that you treat the claims consistently.

MR. FARVER: A neutron dose was assigned here for a period.

MR. HINNEFELD: Yes.

MR. FARVER: Up through 1961, but not before 51 and not after 62.

MR. HINNEFELD: To me, it really gets to the Site Profile and the guidance that is given to the dose reconstructor so things are done consistently. Whatever is done is done consistently, and certainly that is a purview of the Board to make recommendations and provide advice on, given what we know about X-10 and the program, and all the evidence at hand. Is this suitably prescriptive?

To me, it speaks to X-10 guidance, X-10 Site Profile, in order to really get to a resolution of something that you consider a judgment call.

MR. FARVER: And a lot of times, you don't have a good work history of whoever does the work.

CHAIRMAN GRIFFON: Yes. Well, that's the other thing. If it's suitably prescriptive, or, in the cases where you don't have enough information --

MR. FARVER: Then what do you do?

CHAIRMAN GRIFFON: -- what is NIOSH doing? Is it always erring on the side of the claimant, or is it not necessarily that --

MR. HINNEFELD: Yes, absolutely. I mean, to me --

CHAIRMAN GRIFFON: -- Done that way, so we need to extend that --

MR. FARVER: Or should there be a somewhere in the middle?

CHAIRMAN GRIFFON: Yes, yes. I think we're saying the same thing.

DR. ULSH: So, the action item is for us to consider SC&A's response?

MR. HINNEFELD: The first thing is to consider this response, and see how we want to structure it. And I would -- I would really view this as -- you know, if, in fact, we're at this situation, well, it's a judgment call, you could do this, you could do that, it almost is something you want -- I would rather get into Site Profile-specific guidance. I

would rather have some specific -- as much specificity in the directions for the dose reconstruction as possible, and there may be work, some recommendations along those lines. I don't know if there's X-10 -- I think there's an X-10 Site Profile review. I'm not sure.

MEMBER MUNN: Well, the rationale that you gave sounds perfectly reasonable.

MR. HINNEFELD: As long as we're consistent in that. You see where I'm getting at?

MEMBER MUNN: Yes.

MR. HINNEFELD: I want to make sure we have a consistent understanding and a common understanding, and the Board's advice on that area, I think, is worth a lot.

MEMBER MUNN: They identified, what, site practices, and on that basis made the judgment with respect to neutron dose. It appears -- and SC&A has some problem with that response? Did I miss a paragraph somehow?

MR. FARVER: I guess what we're saying is, the other time period should be considered, because we don't really know -- if we are still in the reactors division --

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: See, I think some of this comes down to -- like this issue comes up. I mean, it's on the flip side, but, I mean, SEC evaluations we do, can you really place people in buildings at times with certain job titles? And that gets tricky, we've found, in our SEC definitions.

So, how can we be so precise in neutron dose assignment? That's the question I would have. And if you're not sure, then do you err on the side -- you know, do you -- I guess that's my question. And I see all, sort of all of these have the same theme.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Do you use the judgment of job title and the fact that, you know, you didn't think this laborer or

whatever would likely be near areas where they'd be neutron-exposed? That may be a good assumption, but I guess we need to -- extend the ground rules, yes --

MR. FARVER: On the other hand, that's what we point out in the finding, that neither the DOE records nor the CATI are time-period-specific concerning work locations or job functions. Therefore, it's not obvious that he had potentially -- potentially exposed to neutrons during the course of employment outside of the period of 52 to 61.

So, you don't know if he had potential or not. So, what do you do?

MR. HINNEFELD: Yes. I think -- well, let us react to that initially.

MR. FARVER: Our position is, you should've considered it for the entire period he had assigned, for periods when it could not be reasonably demonstrated that he was not potentially exposed.

CHAIRMAN GRIFFON: Where is the

guidance for the dose reconstructor when they have to look at this? It's under the Site Profile or where?

MR. HINNEFELD: It should be some -- I don't know, maybe Scott can weigh in on this. But there should be some vehicle that translates the Site Profile information.

CHAIRMAN GRIFFON: Right.

MR. SIEBERT: I can't tell you. X-10 is not one of my sites.

MR. HINNEFELD: But there should be some guidance to the dose reconstructor, whether it's in a -- whether a workbook provides some information, or whether there's a set of instructions to go with the workbook.

CHAIRMAN GRIFFON: Well, this goes back to my, does this case not include those instructions, I guess.

MR. HINNEFELD: Yes. And does that go in there -- so, we'd have to go -- we got to go reconstruct that, really.

CHAIRMAN GRIFFON: Yes. Right,

right.

MR. HINNEFELD: Are we legal?

MR. KATZ: Jenny is carrying the water for me.

MR. HINNEFELD: All right.

MEMBER MUNN: Okay.

CHAIRMAN GRIFFON: Motion to reassign DFO? No. Alright.

MR. SIEBERT: I was just going to go home early.

CHAIRMAN GRIFFON: Yes, I know, that's what I was thinking too, but I just missed my flight, so I can stay for a while.

(Laughter.)

MEMBER MUNN: So, NIOSH is responsible for --

MR. SIEBERT: I do have to check out, though.

CHAIRMAN GRIFFON: I was thinking by four, but we can break up quarter of four, that's fine. We'll get as far as we get. I mean, this is an ongoing body of work, right?

We've got 12 sets out there.

MR. SIEBERT: How about quarter after three, Mark?

CHAIRMAN GRIFFON: How about 17 after three? Okay, let me get the action here. NIOSH will respond to this --

MR. HINNEFELD: Yes, respond to this reaction --

CHAIRMAN GRIFFON: But also to the general --

MR. HINNEFELD: I think our response, Brant, needs to really speak to the general --

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: -- general question here of, how can we provide sufficiently distinct guidance and things like on the dose reconstruction, sufficient prescriptive? And is it appropriate to sufficiently prescribe --

MEMBER POSTON: Well, I would expect that you should find neutron doses in second period 6230. Everybody wore the same

badge, and you have MTA film as well as beta-gamma film.

MR. HINNEFELD: And so, then, if everybody wore an MTA badge, would there be -- would everyone have had the potential who -- everyone who wore an MTA badge had the potential to be neutron exposed?

MEMBER POSTON: Well, I mean there was -- at that time at Oak Ridge National Lab, there were reactors every damn place.

MR. HINNEFELD: And there were people, probably, who moved freely around the lab. Once you're in the lab -- you know.

MEMBER POSTON: Yes.

MR. HINNEFELD: Job assignments can take you a number of places.

MEMBER MUNN: That's what the badge is for.

MEMBER POSTON: That's why everybody's badge was MTA film. Everybody wore the same badge. Nowadays, it wouldn't be that way, I'm pretty sure. There's only one

reactor operating in that --

MR. HINNEFELD: Okay.

MEMBER MUNN: So, there shouldn't be a great deal of concern over whether a person was or was not exposed?

MR. HINNEFELD: We may be calling at some point during this to figure out -- maybe you can let us know on that.

DR. ULSH: At the risk of prolonging this even more, I know at Mound, at least during a certain time period, everyone wore an MTA badge, but the MTA film was only read if the photon dose was so high. So, even though you had it, were issued it, it wasn't read unless there was some indication.

CHAIRMAN GRIFFON: Necessarily read or recorded, right.

MEMBER POSTON: That may have been the same way at Oak Ridge. I can't say that it was or was not. I just know that everybody had the same badge.

CHAIRMAN GRIFFON: Right, right.

MEMBER POSTON: I know mine got read because I was exposed to neutrons.

(Simultaneous speaking.)

CHAIRMAN GRIFFON: Hey, whoa.

MR. HINNEFELD: I'm sorry.

CHAIRMAN GRIFFON: This is one of those sidebar conversations.

MR. HINNEFELD: I was trying to determine whether my absence really required the -- I think the meeting can continue in my absence for a few minutes.

CHAIRMAN GRIFFON: Yes. I think we'll --

MR. HINNEFELD: Running out, yes, okay.

CHAIRMAN GRIFFON: -- we'll retire by 4:00, anyway, so -- okay.

MEMBER POSTON: Are you caught up? Are you caught up?

CHAIRMAN GRIFFON: Yes, 170.3.

MEMBER POSTON: Okay.

MR. FARVER: Okay, 170.3, failure

to consider all classes of solubility in strontium and provide supporting references. I believe this statement is made in our review about Type S solubility, and it's not considered -- now I'm going back to the finding, and the finding in the original document is a little -- the information is a little different than what's in the matrix.

MEMBER POSTON: The SC&A response is a little strange.

MR. FARVER: I'm not surprised. I wrote it.

MEMBER POSTON: Well, I'm just -- I mean, as you well know, there's no difference between DWI and FS.

MR. FARVER: I understand that.

CHAIRMAN GRIFFON: Right.

MEMBER POSTON: And also both ICRP-30 and ICRP-60 say the same thing about the solubility classes.

MR. FARVER: I understand that. It's nomenclature.

MEMBER POSTON: Yes. And so --

MR. FARVER: That's all that was. I was just pointing out that --

MEMBER POSTON: Do you just need clarification? Is that what you're asking for?

MR. FARVER: Well, I think part of it has to do with the supporting files that may not have been included, and --

MR. SIEBERT: Well, I can tell you strontium is either Type F as in fast, or S as in slow. And the only Type S strontium there is is strontium titanate.

MR. FARVER: I understand.

MR. SIEBERT: Which is a very unusual thing. So, the question really for this is determining, is strontium titanate appropriate for X-10? And I honestly just can't answer the question of -- that question off the top of my head.

MR. FARVER: It might be even simpler than that because it looks like,

according to the DR report, there's a statement in there that says, the inhaled material was assumed to be of Type F solubility, as this assumption is expected to maximize the internal dose. And it's referring to strontium-90.

DR. ULSH: And what's the organ? Well, I mean if it's not lung, then assuming Type F would maximize --

MR. FARVER: It is colon.

DR. ULSH: Okay, well, then assuming Type F, even if it was Type S, is a maximizing assumption.

MR. FARVER: Maybe.

CHAIRMAN GRIFFON: Maybe. But nonetheless, scientifically not supportable may be right, is that what you're --

MR. FARVER: Well, if you're telling me that the only Type F out there is titanate --

CHAIRMAN GRIFFON: Type S.

MR. FARVER: Well, I'm saying that

the DR says it's Type F solubility.

CHAIRMAN GRIFFON: Okay.

MEMBER MUNN: Then it can't be strontium titanate.

MR. HINNEFELD: We're not aware of any strontium titanate, I think.

CHAIRMAN GRIFFON: But that's the Type S one, right?

MR. HINNEFELD: Yes. And so, that's why we used F.

MEMBER POSTON: Everything except strontium titanate is F.

MR. HINNEFELD: Is F. And we used F. That's why we used F, because there's not actually a requirement to do all topical solubility classes. The requirement is to do the feasible solubility classes. And if S is not feasible, there's no need to do it.

MEMBER POSTON: What's the -- help me with my anatomy and physiology. Is the colon the lower large or upper large intestine?

MR. HINNEFELD: No.

MR. SIEBERT: The colon is the amalgam of upper and lower large intestine.

MEMBER POSTON: It's together?

MR. SIEBERT: Yes.

MEMBER POSTON: Okay.

MR. SIEBERT: It's not averaged. It's a weighted average in the table.

CHAIRMAN GRIFFON: But nonetheless, even if S was more claimant-favorable, there's no reason to pick S if you don't have that compound. Right, right.

MEMBER MUNN: It's not feasible.

MR. FARVER: Disregard my response.

CHAIRMAN GRIFFON: Yes. Okay.

DR. MAURO: I think the -- this is John. I think the confusion from looking at it is that apparently there's a language in TKBS-00125, that says, all DWNY will be considered in most limiting use. The reality is, when it comes to strontium, you wouldn't

do that. You would just assume it's type F.

CHAIRMAN GRIFFON: Yes, I guess understood there is all forms are present.

DR. MAURO: Yes, but in the case of strontium, they're not. As a general statement it's probably true when you're dealing with a lot of other radionuclides.

CHAIRMAN GRIFFON: Yes, yes.

DR. MAURO: I think that's what happened here, and they used Type F as in Frank, which is the appropriate one to use.

MR. FARVER: When I wrote that, I misread this whole thing completely.

CHAIRMAN GRIFFON: I'm going to delete your response --

DR. MAURO: Okay. How about we withdraw it?

CHAIRMAN GRIFFON: -- SC&A agrees -- yes, withdrawn.

MEMBER POSTON: I was just trying to figure out why the colon was the organ, when I would have expected it to be the

marrow.

DR. ULSH: Well, it's going to be wherever the cancer occurred.

MEMBER POSTON: Oh, so it's got to be where the cancer is, so even though it's a minor consideration --

MR. HINNEFELD: Minor consideration.

MEMBER POSTON: -- from a dosimetry standpoint.

DR. ULSH: We always calculate the dose to the target organ, which is the organ where the cancer occurred in.

CHAIRMAN GRIFFON: That's not the limiting organ, obviously, yes.

MEMBER POSTON: Right. It's not the limiting organ. Not even close.

CHAIRMAN GRIFFON: Right. Okay, so SC&A agrees with the --

MR. FARVER: Yes. That's my fault. My bad.

CHAIRMAN GRIFFON: That's all

right. And no further action. Obviously. Okay.

MR. FARVER: On 170.4, failed to include all years in europium intake. This is a wording in the DR Report, where the wording says it was considered for the entire period of employment, which is not what was done, and apparently is not what should've been stated.

MR. HINNEFELD: So, the words in the dose reconstruction --

MR. FARVER: Were incorrect.

MR. HINNEFELD: Okay.

MR. FARVER: We've had this happen before, same deal. So closed. 170.5 is where we questioned the MDAs for bioassays value, if they were correct or not. NIOSH gives a very good explanation, and we concur with their response. Closed.

CHAIRMAN GRIFFON: All right.

MR. FARVER: 170.6 is very similar to 170.4, only this concerns uranium instead of europium, and it has to do with the text in

the DR report.

CHAIRMAN GRIFFON: So, this person worked before 52, right? That's the notion. And it said for all his employment --

MR. FARVER: Correct.

CHAIRMAN GRIFFON: Before 52 -- okay, got it.

MR. FARVER: The uranium intake is --

CHAIRMAN GRIFFON: Yes. Tab 170, this is the Super S, Scott?

MR. SIEBERT: I'm checking. Yes, it was considered.

CHAIRMAN GRIFFON: And remained the same?

MR. SIEBERT: You know, you'd think I would remember that you're going to ask me that every single time. Yes. Still non-comped.

CHAIRMAN GRIFFON: All right, 171.

MR. FARVER: 171.1, this is the LOD over 2 for missed dose. And, like they

state, the case was worked prior to the decision to change methods. So, this is closed also.

CHAIRMAN GRIFFON: The next one has no NIOSH response.

MR. HINNEFELD: Well, we're not going to talk about it today, since we have nothing --

CHAIRMAN GRIFFON: The next two, yes.

MR. FARVER: I agree with their response. (Laughter.)

MR. FARVER: 171.4, failed to correctly assign coworker doses for unmonitored years. Now, you're going to have to go back and look at -- first also look at what we wrote in our report because it's kind of complicated.

This goes over many nuclides and many years, and sometimes it was done by bioassay, you assign dose. Sometimes coworker dose was assigned. Sometimes environmental

dose was assigned. Certain combinations, sometimes none of any, and it gets very convoluted. For certain time periods, we believe the coworker doses should have been assigned.

DR. ULSH: So, the status on that was for NIOSH to consider SC&A's response?

CHAIRMAN GRIFFON: Yes.

MR. FARVER: And we're basing that on, number one, OTIB-34, where -- where it says, where records of monitoring are incomplete or unavailable, whether for discrete periods or for the entire period of employment, then you should assign coworker data.

And then also there's a statement in there from OTIB-60. But anyways, it's a little convoluted around certain dates and certain periods.

CHAIRMAN GRIFFON: All right.

MR. FARVER: 171.5, failed to address different solubility types.

Basically, the different solubility types were not included in the -- in the files.

DR. ULSH: I see from the title of the file, does that indicate strontium uranium?

CHAIRMAN GRIFFON: Looks like it.

DR. ULSH: It fits the strontium thing, is that the same as the previous --

CHAIRMAN GRIFFON: Strontium would only have one.

DR ULSH: Yes, that would be one, but obviously uranium --

CHAIRMAN GRIFFON: And uranium might have more. 171.6?

MR. FARVER: NIOSH failed to completely address contamination incident in the CATI report. The one big question is, is 3022 located near 3019, where there was a nearby incident that went out and apparently they had an excursion, and it did contaminate the streets and buildings and so forth. I couldn't find a location of 3022.

DR. ULSH: Too bad Bob's not still here.

MEMBER POSTON: He wouldn't know, that's an X-10 site.

MR. FARVER: I know where target 19 is -- was. I think it's still there. And then I did put a little blurb in there about the 3019 explosion. I think a lot of that hinges on where that building was.

CHAIRMAN GRIFFON: Okay, so if we could figure that out might be the first follow-up, right? If that supports NIOSH's case, then they can let us know.

MEMBER POSTON: Would you like for me to find out where it is? I could find out where it is pretty quickly.

MEMBER MUNN: That would be nice.

MEMBER POSTON: One of my classmates was one of the HPs involved in the 3019 incident.

MEMBER MUNN: So he'll know if they're different places.

DR. ULSH: Can we put you down for that action item?

MEMBER POSTON: I'll send him an email and call him.

MEMBER MUNN: That would save a lot of effort, I think.

CHAIRMAN GRIFFON: Well, I'll put it down as a NIOSH action, but if you have information that you're sitting on, you can relay it.

MEMBER POSTON: It'll be Monday before I can call him.

CHAIRMAN GRIFFON: I don't think NIOSH is going to find this out till Monday.

DR. ULSH: We can wait.

MEMBER POSTON: The whole place will be shut down waiting for my answer.

(Laughter.)

MR. FARVER: The observation next is the standard Super S.

CHAIRMAN GRIFFON: Scott?

MR. FARVER: Scott?

CHAIRMAN GRIFFON: Number 2 parts.

MR. SIEBERT: That'll teach me to be paying attention to something else.

CHAIRMAN GRIFFON: Case 171, Super S.

MR. SIEBERT: 171?

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: To the union question first, still not done. And yes, it was considered.

CHAIRMAN GRIFFON: Okay.

MEMBER MUNN: Very good.

CHAIRMAN GRIFFON: And 172.1?

MR. FARVER: Now, here something strange happens. For the next six findings, we agree with NIOSH.

DR. ULSH: Oh, wow.

CHAIRMAN GRIFFON: We might get through this yet. Looks like it.

MEMBER MUNN: Excellent.

CHAIRMAN GRIFFON: The first one NIOSH is agreeing with you anyway, right?

MR. FARVER: Yes, there's some mistakes is what a lot of this amounts to.

CHAIRMAN GRIFFON: So no further action on that. Oh, that was 172.1. There was only one finding for that case, right? 173.1, the finding is correct. DR was favorable to the claimant. So, you answered the question on whether it changes the status. So, I don't think there's any further action there.

Okay, 173.2? It doesn't really answer that question of, did this change anything.

DR. ULSH: It seems -- our response on this seems to say that the IREP input sheet does not match the description in the report, but it doesn't tell which one is the correct one. If the one in the IREP is correct --

CHAIRMAN GRIFFON: Right. That's the question, yes.

MR. FARVER: There's a little more

description in our review where it says the -- and it gives the file name where the missed dose is for the 250 keV photons are correct in this file workbook, but they're not the same in the IREP table. It appears the workbook doses, which already account for 95 percent energy distribution, were then multiplied by 0.95. And before it was put in the final IREP table.

CHAIRMAN GRIFFON: So, the IREP numbers would be lower then?

MR. FARVER: So it used the energy twice.

CHAIRMAN GRIFFON: Oh, so the IREP numbers are more claimant-favorable, or less?

MR. FARVER: The IREP ones would be five percent low.

CHAIRMAN GRIFFON: Yes, by 0.95. So, that could be -- that should be followed up on, anyway.

MR. HINNEFELD: Yes, we should just follow up on all these, and make sure.

CHAIRMAN GRIFFON: Yes, yes, right. I mean sometimes you address it, but this one -- 173.3, same thing, right, Stu? It's a NIOSH action.

MR. HINNEFELD: I mean, there's a string of them here where we're --

CHAIRMAN GRIFFON: Just wanted to keep my notes. 173.4 says SC&A accepts NIOSH's response.

MR. FARVER: And this has to do with LOD over 2 values again.

CHAIRMAN GRIFFON: Okay, so no further action. Next one, 173.5? Again, check on this for the magnitude, right?

MR. HINNEFELD: I don't quite understand that one.

CHAIRMAN GRIFFON: I'm not sure I understand that.

MR. HINNEFELD: We're going to have to -- let's feel that out a little more, okay?

CHAIRMAN GRIFFON: Okay.

MR. FARVER: Yes, 173.5 is a

little confusing.

CHAIRMAN GRIFFON: And NIOSH is going to follow up on that. I was onto 174.1. It looks like in this case, there's no further action because you increased it, right? It was an error but it increased the dose.

MR. HINNEFELD: An error upward.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: And which was that, 174.1?

CHAIRMAN GRIFFON: Yes. Now we're onto 174.2.

MR. FARVER: Unless that was a -- is that a workbook issue?

CHAIRMAN GRIFFON: Error calculation in workbook, yes. Okay, so NIOSH will check to see whether the workbook was corrected. Strike that. No further action. We're getting there. 174.2?

MR. FARVER: 174.2, the methods for determining missed photon dose is not

scientifically sound. Now, this finding is taken directly from review of the Site Profile for Portsmouth, where this -- there were some concerns about dosimetry there.

CHAIRMAN GRIFFON: This person worked at obviously a couple sites, right? I'm gathering, because I see K-25 on the other one. So, must be. Yes.

MR. FARVER: Well, this is a Portsmouth case. The other one was a different case, 173.

CHAIRMAN GRIFFON: 174.1 we just did. It says, the dose in K-25 error calculation.

MR. FARVER: Wrong one again. No, he worked at Portsmouth, but apparently they used the K-25 error workbook.

CHAIRMAN GRIFFON: Can I ask an obvious question on that one, too? Is there not a Portsmouth workbook or --

MR. HINNEFELD: We'll have to find out.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: There might not have been at the time.

CHAIRMAN GRIFFON: Right, right. Okay, go ahead. I'm sorry to interrupt there.

MR. FARVER: So, 174.2 and 174.3 are essentially just quoted directly from the -- the Site Profile review. The finding in the Site Profile review.

CHAIRMAN GRIFFON: Okay.

DR. ULSH: Is the action item for NIOSH to respond to these?

MR. FARVER: Well, I would just turn these over to Site Profile.

CHAIRMAN GRIFFON: Yes. They're being handled in the Site Profile review.

MR. FARVER: Because they're the exact same findings.

CHAIRMAN GRIFFON: So, these are transfers, right? Is that the way it works? That does make sense to me. I always hesitate at the end of the day when I'm getting tired.

Does that make sense? Transfer, yes.

DR. MAURO: And I think there's a Site Profile review meeting for Portsmouth, K-25 and Paducah coming up pretty soon.

CHAIRMAN GRIFFON: Oh, yes. That's right. The new established group.

DR. MAURO: Exactly. The lead on that is Henry.

CHAIRMAN GRIFFON: Pretty small site. Should go pretty quickly.

DR. MAURO: Yes.

MR. FARVER: So, that takes us down to 174.4. DR does not account for all occupational medical dose. I just had a question about the hierarchy. And after a lot of digging, the hierarchy is pretty much described in, I think it's PROC-0061, where in this case, you would use the records first, and the TBD information.

So, instead of using a determination from the TBD or a table from the TBD that says it's annual, you would use the

actual records according to PROC-0061. So, I agree with their response. They were correct.

CHAIRMAN GRIFFON: It's closed. 174.5?

MR. FARVER: 174.5, Intake parameters incorrectly entered into the CADW. There's a little explanation over there. They divide it into a couple time periods, but the employee only worked for one quarter of 62. Therefore, he should've took 25 percent of the 1962 intakes and entered them into the workbook, but that's not what happened.

So, this is -- and there's the time period where it was not entered correctly, where the 25 percent was not entered correctly. And them also, there's a part where the units were incorrect.

The units were entered in dpm per day, and they should've been picocuries per day, which are going to give you two totally different doses.

CHAIRMAN GRIFFON: I agree with

the QA aspect of this, but you said you reran it. You saw the reruns, and it doesn't affect the --

MR. FARVER: Correct.

CHAIRMAN GRIFFON: But it is certainly a good example of a QA.

MR. FARVER: Yes, and that's all I was pointing out.

CHAIRMAN GRIFFON: Instead of N, I would just make it --

DR. ULSH: Now I'm with you.

MEMBER POSTON: All you have to do is look for the little squiggles.

CHAIRMAN GRIFFON: Yes, makes it easier. DR. ULSH: So, further action on this or no?

CHAIRMAN GRIFFON: I don't think so. None further. Close it. 174.6?

MR. FARVER: Question the assumption used for deriving internal doses are not scientifically sound or claimant-favorable, and they're corrected. It's a Site

Profile issue, and it's another finding from the Site Profile. So, it's a Site Profile issue.

CHAIRMAN GRIFFON: So, this is still Portsmouth?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: And we have this as a finding in the Site Profile Matrix? Is that -- do we know that, or --

DR. MAURO: No. I tell you, the best thing to do here is when these are transferred, it's probably a good idea to just let the -- in this case, let Henry Anderson know that we transferred it.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: I couldn't say offhand whether we caught this.

CHAIRMAN GRIFFON: Okay, all right.

MR. FARVER: Yes. Actually, it's one, two, three, four separate findings under the Site Profile review.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: So, the findings in the Site Profile include the things you found here?

MR. FARVER: Yes.

DR. MAURO: Okay.

MR. FARVER: All 174.6 is, is reprinting findings, four findings, from the Site Profile review.

DR. MAURO: Okay, now I understand. So, section 1.3 of the DR review was used to trigger these findings?

MR. FARVER: No. It was written up as a separate finding, but the findings are the same exact ones.

CHAIRMAN GRIFFON: They overlap, yes.

DR. MAURO: Okay, I got you.

CHAIRMAN GRIFFON: Alright.

MR. FARVER: Because it's spelled out in our audit.

CHAIRMAN GRIFFON: Okay, good.

MR. FARVER: So we don't need to track them.

CHAIRMAN GRIFFON: All right, we're onto a new case here, 175.1.

MEMBER MUNN: If you want to keep going.

CHAIRMAN GRIFFON: Yes, if we want to keep going. Stu gets to leave.

MEMBER POSTON: You don't have many more.

CHAIRMAN GRIFFON: Yes, we're so close to the end. Let's finish this up. I think we can finish it up.

MR. FARVER: 175.1, report does not properly account for all missed neutron dose. Apparently, additional information was provided by DOE in 2006 after the initial dose reconstruction was completed.

DR. ULSH: Well, given that this --

CHAIRMAN GRIFFON: It's under evaluation, right?

DR. ULSH: Well, our response, whenever this was written, was that it's being evaluated. I assume that was a number of years ago. It should've been by now.

MR. FARVER: Yes.

DR. ULSH: But I guess we can check -- check on the status.

CHAIRMAN GRIFFON: Yes, okay.

MEMBER POSTON: I guess I'm a little uncertain why this is a QA concern.

MR. FARVER: I don't know. I might've got cut-and-paste happy when I did that.

MEMBER POSTON: I mean -- I mean, if DOE gave some additional information after the initial evaluation was done, why does that make it a QA concern?

MR. FARVER: I think a lot of it comes down to dates, and when things were signed off. I don't remember.

CHAIRMAN GRIFFON: Well, we can take that out where it says, NIOSH --

MR. FARVER: In other words, sometimes a DR is completed, and then, we'll say two months later, it's signed off from a -- let's say from NIOSH. So, it's a matter of, did that fall in that window, and should it have been caught?

MEMBER POSTON: And in the interim, there may be additional information. Is that what you're saying?

MR. FARVER: Yes. I'll pull out that --

MEMBER POSTON: It's a concern. I'll agree with that.

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: The case was completed in 2005, and it appears there was additional information given in 2006.

MR. FARVER: Okay, I'll withdraw that QA.

CHAIRMAN GRIFFON: Yes, we can take that out.

MR. FARVER: That's fine.

MEMBER POSTON: Something needs to be done for that one.

CHAIRMAN GRIFFON: Right.

MR. FARVER: I figure if I put that comment in everywhere, I'm bound to get it right a few times.

MR. SIEBERT: This is a Brookhaven thing.

CHAIRMAN GRIFFON: All right, how about .2 for that?

MR. FARVER: Hypothetical internal dose model; did not apply the appropriate internal dose model. Okay, this is an OTIB-2 workbook issue, where they used a uranium non-reactor site instead of a uranium reactor site, and this is Brookhaven. So, it's a matter of which -- which button is correct.

DR. ULSH: It seems like a simple decision, but it's never as simple as it seems.

MR. FARVER: And it's probably not even important because this case is being

reworked, and will not use a hypothetical approach.

CHAIRMAN GRIFFON: But down at the bottom, it says, reevaluated. But then it says, the change indicated in the finding would not result in a large change. I guess that's just your experience with the two models, they're pretty --

MR. FARVER: Well, the -- the difference is less than 2 rem.

CHAIRMAN GRIFFON: Yes, okay.

MR. SIEBERT: And it was reworked back in 2009, still non-compensable.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: That's probably not a QA concern, either.

CHAIRMAN GRIFFON: So, what do we say about that first one then? We don't have to check the status of the revision, since it's been revised, right?

DR. ULSH: Yes, but we would have to determine whether or not the missed neutron

dose --

CHAIRMAN GRIFFON: Yes, yes, right. Okay, all right. And did -- did -- I mean the -- I guess that applies for the next one, too. Which internal dose model did you use when you revised it?

DR. ULSH: We'll check the status on both of those. Maybe 175.3 as well.

MR. SIEBERT: Yes, the rework gives OTIB-18 overestimates for internal versus OTIB-2. So, it wouldn't have that uranium reactor/non-reactor issue.

CHAIRMAN GRIFFON: Right.

DR. ULSH: All right, so does that change the status now? Can we close any of these?

MEMBER MUNN: It seems like we ought to be able to, since it's been reevaluated, and we know what happened.

CHAIRMAN GRIFFON: And OTIB-18 is another overestimating -- which one is that?

MR. SIEBERT: Sorry. That's an air

monitoring overestimate one. Air sampling programs.

CHAIRMAN GRIFFON: Oh, that they had an air sampling -- I mean this gets tricky because, well, it is a reevaluation.

MEMBER MUNN: It's been done.

CHAIRMAN GRIFFON: So to review that aspect would be reviewing a whole different case, really, you know?

DR. ULSH: Okay, so what status do you want to assign to this?

CHAIRMAN GRIFFON: I'm not sure. I'm not sure on that. I'm just not sure because if we -- I mean, I would have a question on the application of TIB-18 on whether it was done appropriately, but that really wasn't in the case that we were reviewing at the time we started this review.

MR. FARVER: Well, has this been reworked, or is this being reworked?

CHAIRMAN GRIFFON: It has been.

MR. FARVER: Then I think then we

just probably need to take a look at it, especially for the next finding.

MEMBER MUNN: That's SC&A's action then, isn't it, the rework?

CHAIRMAN GRIFFON: Oh, yes. If anything, it would be SC&A's action. I just didn't know.

DR. ULSH: So, 175.1, SC&A reviews the case?

CHAIRMAN GRIFFON: 175.2.

MR. FARVER: Two and three.

CHAIRMAN GRIFFON: Yes.

DR. ULSH: All right, then what happens to 175.1?

CHAIRMAN GRIFFON: I guess one also.

MEMBER MUNN: They all will be affected.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: So, there's no point in taking them separately until the rework is done.

CHAIRMAN GRIFFON: Yes. SC&A will review -- rework the case, right?

MR. FARVER: Okay. You just have to get me the files, provide the files --

DR. ULSH: Okay.

MR. FARVER: -- for the case.

DR. ULSH: I don't have any. Do we explicitly send them to you, or do you go into the AR?

MR. FARVER: It's probably best just to send it to me. I shouldn't need all of them, I wouldn't think. In other words, we already have the ones for DOE and DOL. I would just need the ones for the DR.

CHAIRMAN GRIFFON: What was the basis for the reworks, by the way?

MR. SIEBERT: Let me see.

CHAIRMAN GRIFFON: The only reason I ask is because when we're -- when we've had all these other ones that are reworked for Super S, we're not -- we're reviewing the Super S. You know, the application of that.

So, I'm just thinking of our own protocol, you know?

MR. SIEBERT: It was for Super S updates to the Site Profile.

CHAIRMAN GRIFFON: So, it was for updates to the Site Profile as well?

MEMBER MUNN: Well, yes. It says previously unavailable information is being evaluated.

CHAIRMAN GRIFFON: That's true. So, that's a little different.

MEMBER MUNN: That itself is a single trigger for this one.

CHAIRMAN GRIFFON: Okay.

DR. ULSH: So, SC&A review the revised cases, and NIOSH provide the files to SC&A?

CHAIRMAN GRIFFON: Yes. I think this is a unique circumstance, where --

MR. FARVER: This is a little different.

CHAIRMAN GRIFFON: Yes, the

broader Super Ss, we're not going to re-review all those.

MR. FARVER: No, no.

CHAIRMAN GRIFFON: This could be an endless cycle.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Right, right. Those get captured in the PER reviews. That's why we're doing that. Okay, all right.

MR. FARVER: 176.1 has to do with the photon certainty, and I did confirm that. So, we agree with your response.

CHAIRMAN GRIFFON: Okay, that's closed.

MR. FARVER: Closed. 177.1, inappropriate method used in determining shallow dose. This appears to go back to the review of the Paducah Site Profile finding 19. It's the same thing. So, I'll probably just turn this over to --

CHAIRMAN GRIFFON: Sixteen or 19?

MR. FARVER: Nineteen, I believe

is what I wrote. Nineteen.

CHAIRMAN GRIFFON: Okay.

DR. ULSH: So, is this a transfer to the Portsmouth?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Paducah, you said, right?

MR. FARVER: Paducah, sorry.

CHAIRMAN GRIFFON: That's the same group for all three. 177.2? We're close, Doug.

MR. FARVER: We're close, if I can just get the right file open. We'll wait until it opens. We're at 177.2, failed to address information in the CATI report.

DR. ULSH: We agree. We did some additional analysis. And it looks like you said you accepted it.

MR. FARVER: Yes.

DR. ULSH: There's some more stuff from the CATI.

MR. FARVER: I just quoted from

the CATI report what was in there. So, we'll look and see.

DR. ULSH: Okay, so we agree on that one?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Yes. And you agree Brant and -- I'm catching up here, but did it affect the outcome in any way?

DR. ULSH: It did not.

CHAIRMAN GRIFFON: No?

DR. ULSH: Total dose increased, but the compensability decision was the same.

CHAIRMAN GRIFFON: Is this also a Site Profile issue, 178.1?

MR. FARVER: Yes.

MEMBER MUNN: That was a transfer to Paducah.

CHAIRMAN GRIFFON: Well, is this 178, is that a Paducah one, or -- I see. And last but not least, SC&A accepts.

MR. FARVER: Failed to consider internal dose from recycled uranium. And it

was worked with -- in accordance with the existing technical documents at the time, and it's being reworked under PER-13, and we concur. I just didn't know what PER-13 was, because I didn't know where it was.

CHAIRMAN GRIFFON: What is PER-13?

MR. FARVER: The evaluation of impact changes to isotopic ratios.

CHAIRMAN GRIFFON: I guess we'll get that in the PER review. How did the -- when did the isotopic ratios change? Was that as a result of findings we made, or something you changed internally? I don't know.

DR. ULSH: I can't answer that. I don't know if Scott can. But just from the title of the PER, the isotopic ratios might've changed in response to recycled uranium.

DR. MAURO: Usually the introduction to the PER gives you a genesis of how this came about, or why the PER was prepared.

CHAIRMAN GRIFFON: You mean if I

read the document?

DR. MAURO: Yes. If you read it, right.

CHAIRMAN GRIFFON: No, all I have is a title here. I'm just trying to --

DR. MAURO: Yes, it might tell you the reason. It was triggered by this review, or triggered internally by their own, NIOSH's own, internal processes.

MR. SIEBERT: It was triggered by the biennial revision of the TBD section. So, it was on our side.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: Because I'm not sure we have concurrence on the ratio. I mean, I think that's probably the initial finding was, do we believe the ratios that were set and how they're used for recycled uranium, but I think that's a Site Profile issue.

DR. MAURO: Right.

MR. SIEBERT: This claim was done

appropriately per the dose reconstruction at the time.

CHAIRMAN GRIFFON: Per the -- at the time. Right. Got it.

DR. ULSH: So, was this a close, or is this a transfer to Paducah?

CHAIRMAN GRIFFON: I believe it's in the Site Profile findings anyway, but it's also a PER question here, I think. Right?

DR. MAURO: It's both. I don't know whether this -- again, I don't know whether this is in as one of the findings we made when we reviewed the Site Profile or not. You know, if it's not, then certainly it should be transferred to -- explicitly transferred, then, to Henry's group.

CHAIRMAN GRIFFON: Yes, I think we should transfer it, and I'll note it to Henry. Yes. The question though is the ratios being applied for recycled uranium. Okay, that's a wrap.

DR. MAURO: Congratulations. This

is quite a --

CHAIRMAN GRIFFON: We made it through the eighth, yes. That's been two years. Not bad. Anything else before we close? Kathy, I will contact you about just -- and I guess NIOSH is going to start that summary of the cases that we've looked at. But I also may need some other materials regarding our presentation at the Idaho meeting. So, I might contact you for some help there, and Doug.

MR. FARVER: Just to point that I just looked up our review of the Site Profile for Paducah, and there is one finding on the isotopic fractions of various enrichments, and there's another finding about the isotopic distribution of isotopes associated with recycled uranium.

DR. MAURO: There you go, Doug. It's there already.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: It is. And I

captured it here, too. Okay, so, I think, unless anyone has anything else?

MS. LIN: I guess I get to close the meeting?

CHAIRMAN GRIFFON: Yes, you get to close.

MS. LIN: All right.

CHAIRMAN GRIFFON: You can say, meeting adjourned.

MS. LIN: Okay, this is the Designated Federal Official here today. Thank you, everyone in the room and thank you, everyone on the phone. Meeting adjourned.

(Whereupon, the above-entitled matter went off the record at 4:06 p.m.)